

Published by
The Economic and
Social Research
Institute
4 Burlington Road
Dublin 4

Degrees of Equality: Gender Pay Differentials Among Recent Graduates

Helen Russell, Emer Smyth, Philip J. O'Connell

October 2005

DEGREES OF
EQUALITY:
GENDER PAY
DIFFERENTIALS
AMONG
RECENT
GRADUATES

HELEN RUSSELL
EMER SMYTH
PHILIP J. O'CONNELL

ISBN 0 7070 0240 0



THE ECONOMIC AND SOCIAL RESEARCH INSTITUTE



DEGREES OF
EQUALITY:
GENDER PAY
DIFFERENTIALS
AMONG
RECENT
GRADUATES

HELEN RUSSELL
EMER SMYTH
PHILIP J. O'CONNELL

*Copies of this paper may be obtained from The Economic and Social Research Institute
(Limited Company No. 18269). Registered Office: 4 Burlington Road, Dublin 4.
www.esri.ie*

Price €16.00

(Special rate for students, €8.00)

Helen Russell and Emer Smyth are Senior Research Officers and Philip J. O'Connell is a Research Professor at The Economic and Social Research Institute. This paper has been accepted for publication by the Institute, which does not itself take institutional policy positions. Accordingly, the authors are solely responsible for the content and the views expressed.

DEGREES OF
EQUALITY:
GENDER PAY
DIFFERENTIALS
AMONG
RECENT
GRADUATES

HELEN RUSSELL
EMER SMYTH
PHILIP J. O'CONNELL

© THE ECONOMIC AND SOCIAL RESEARCH INSTITUTE
DUBLIN, 2005

ISBN 0 7070 0240 0

ACKNOWLEDGEMENTS

This study was funded by the Department of Justice, Equality and Law Reform. We would like to thank the members of the project's Steering Group, namely: John O'Callaghan (Chair), Kathleen Connolly, and Niamh Allen (Secretary) all of the Gender Equality Division, Department of Justice, Equality and Law Reform, Sean Gannon, Careers Office, TCD, Jennifer Gyax, Higher Education Authority, Laurence Bond, Equality Authority and Mark Manto NDP/CSF Gender Equality Unit. The Steering Group provided valuable comments and practical assistance throughout the project.

The project could not have been successfully carried out without the assistance of the colleges whose staff were involved in the sampling and, in many cases, the circulation of questionnaires on our behalf. In particular we would like to thank Joan Gallagher from University College Dublin; Muireann Ní Dhuigneain and Kathleen Reddy from Dublin City University; Mary Sweeney from University of Limerick; Sean Gannon and Linda Gaughran from Trinity College Dublin; Seamus McEvoy from University College Cork; Loretta Jennings from NUI, Maynooth; Kendra Cassidy from NUI, Galway; Tagdh Ó'hÉalaithe and Louise O'Reilly from HETAC; and Barra Hanrahan from DIT.

We would also like to express our thanks to the respondents who gave their time in filling out the questionnaire.

Within the ESRI, we would like to acknowledge Shirley Gorby, Barra Casey, James Williams and the staff of the Survey Unit for their hard work in the preparation of the questionnaire, organisation of the fieldwork and processing the data. Thanks are also due to Deirdre Whitaker, Mary Cleary and Regina Moore for preparing the manuscript for publication. Valuable comments on earlier drafts were provided by our colleagues Tim Callan, Alan Barrett, Selina McCoy, Fran McGinnity and Brendan Whelan.

Responsibility for final content of the report remains solely with the authors.

CONTENTS

<i>Chapter</i>	<i>Page</i>
<i>Executive Summary</i>	i
1. GENDER PAY DIFFERENTIALS AMONG RECENT GRADUATES	1
1.1 Introduction	1
1.2 Explaining Gender Differences in Pay Levels	2
1.3 The Irish Context: Gender, Education and the Labour Market	4
1.4 The Gender Pay Gap in Ireland	6
1.5 Objectives of the Study	9
1.6 Outline of the Report	9
2. DATA AND METHOD: <i>THE GRADUATE FOLLOW-UP SURVEY 2004</i>	10
2.1 Introduction	10
2.2 The Survey	11
2.3 Selection Issues	13
2.4 Basic Demographics of the Recent Graduates	14
3. GENDER DIFFERENCES IN EARNINGS AND EMPLOYMENT	15
3.1 Employment Situation	16
3.2 Weekly Wages	16
3.3 Hourly Wages	18
3.4 Bonuses and Fringe Benefits	24
3.5 Conclusions	25
4. THE EFFECTS OF WORKPLACES AND PREFERENCES	27
4.1 Introduction	27
4.2 Recruitment Practices	27
4.3 Skills Matching	29
4.4 Pay and Promotion Procedures	31
4.5 Equal Opportunity Policies and Practices	32
4.6 Work Values and Preferences	34
4.7 Conclusions	36
5. EXPLAINING THE PAY GAP AMONG MALE AND FEMALE GRADUATES IN THE PRIVATE SECTOR	37
5.1 Explanatory Variables	37
5.2 Results	40
5.3 Labour Market Human Capital	42
5.4 Education-Job Match	42
5.5 Institutional Effects	43
5.6 Individual Preferences	44
5.7 Conclusions	47

<i>Chapter</i>	<i>Page</i>
6. CONCLUSIONS	49
6.1 Patterns of Rewards Among Male and Female Graduates	49
6.2 Subjective Satisfaction with Rewards	51
6.3 Explanations of Gender Differences in Earnings	51
6.4 Policy Implications	53
6.5 Longer Term Outcomes?	55
6.6 Conclusions	56
<i>References</i>	57
<i>Appendix A – Test of Selection Effects for Entry into the Private Sector</i>	60
<i>Appendix B – Questionnaire</i>	64

EXECUTIVE SUMMARY

The objective of this study is to examine the distribution of pay and other rewards among recent male and female graduates. In particular we set out to investigate the way in which earnings are influenced by educational characteristics, institutional characteristics, and individual work values and preferences, and to examine the role of gender in these processes.

By focusing on recent graduates we are applying a very stringent test of any persisting influences of institutional processes on gender differentials in pay. Among this highly educated group who are for the most part just embarking on their careers we would not expect to find significant differences in the earnings of men and women. Previous research has pointed to the arrival of children as a crucial event in creating a gap between the earnings of men and women. However, the vast majority of recent graduates do not yet have children and therefore the labour market attachment of recent male and female graduates is virtually identical. By selecting a group where gender differences in qualifications and labour market experience are minimal our study allows us to focus more clearly on other processes that may lead to differences in men and women's wages – namely the process of job selection and allocation (including subject choice) and institutional factors such as recruitment procedures, wage structures, promotion practices, and the gender composition of the workforce.

Our analysis is based on a new survey of graduates three years after graduation. We sampled those who graduated in 2001 and who had *entered the labour market by early 2002*. The survey was carried out in Summer 2004. Those who proceeded directly to further education courses or were otherwise economically inactive are not included in our sample.

Wages and Rewards Among Recent Graduates

Hourly Wages

- Across the labour market as a whole there is no overall hourly wage difference between male and female graduates three years after graduation. This compares to a gender pay gap among all employees in the wider economy of 15 per cent in the year 2000.
- However, there is a significant gap among graduates who enter the *private sector*. Among this group, women earn 8.2 per cent less than men per hour on average. This sector accounts for the majority of graduates: 74 per cent of male graduates and 59 per cent of female graduates.
- There is no significant hourly gender pay gap among graduates who enter the public sector.
- Graduates in the public sector earn significantly more per hour (and per week) than those in the private sector. Therefore, the over-representation of female graduates in the public sector counteracts their disadvantage in the private sector, leading to equality in the economy-wide hourly wage.

Weekly Wages

- Examination of weekly wages shows that female graduates earn 11 per cent less per week than male graduates. A significant weekly gap is present in both the public and private sector.
- This weekly pay gap emerges, not because a high proportion of female graduates are working part-time but because the weekly hours of female full-timers are significantly lower than those of male full-timers. Amongst full-time workers the weekly pay gap remains at 10 per cent.
- The weekly pay gap is important in terms of standard of living and control over resources.

Bonuses and Fringe Benefits

- A higher proportion of men than women received bonuses from their employers in the last twelve months. Amongst male graduates 42 per cent received bonuses compared to 32 per cent of female graduates. This was mainly but not entirely due to men's higher concentration in the private sector.
- The value of bonuses received is approximately 25 per cent higher among men.
- Adding annual bonuses to wages widens the annual gap in earnings between men and women by 1 per cent.
- Men in the public sector are more likely than women to receive occupational pensions and free/subsidised meals. There are no gender differences in access to additional fringe benefits within the private sector.

Training and Promotion

- Male graduates are more likely than female to have received employer sponsored training in the preceding two years.
- Men are more likely to have received a promotion with their current employer. This is due to the higher proportion of male graduates in the private sector where promotions are more common. There are no significant gender differences in promotion within the public and private sector.

These results show that while there is no overall hourly gender pay gap, a significant gap has emerged in the private sector only three years after graduation. There is also a substantial weekly pay gap, which means that there is a significant difference in the incomes of male and female graduates. Differences were also found on a range of additional compensation and non-financial measures and although these differences are relatively modest they invariably favour male graduates and so add to a picture of emerging inequality. It is important to understand the processes behind these emerging differences because they set the stage for longer-term careers.

**Explaining
Gender
Differences in
Pay**

In terms of explaining the patterns of gender differences in pay we examined five sets of processes. These were examined descriptively for both public and private sector employees (in Chapters 3 and 4) and tested systematically in our models of pay among graduates in the private sector (Chapter 5).

1. Educational human capital.
2. Job/education match.
3. Labour market human capital – work experience etc.
4. Institutional/demand side factors.
5. Preferences and values.

All five sets of variables influenced earnings levels but their role in explaining gender differences in the private sector varied. We focus here on their role in explaining pay differentials between men and women.

EDUCATION AND EDUCATION/JOB MATCH

Field of study has a strong influence on pay levels among graduates and on gender differences in earnings. The size of the gender pay gap does not vary greatly by field of study, however, the strong sex differences in subject choice mean that field of study nevertheless contributes to the size of gender pay differentials. For example, in the private sector, lower earnings for arts graduates mainly affect women while higher earnings for engineering graduates in that sector accrue mainly to men. Level of award and grade influence the gender pay gap in the private sector not because women's qualification are any lower than men's but because men get a higher return to postgraduate degrees and for first class honours. The match between current job and both the level and content of prior education (skills and subject) is strongly predictive of wages. The better the fit the higher the salary. However, the skills-match is the same for male and female graduates and so cannot explain the pay gap.

WORK EXPERIENCE

As in other studies of earnings there is a strong positive association between work experience and wages, while previous unemployment experience is associated with lower hourly wages. There are no significant differences in men and women's work histories so this cannot explain the pay gap in the private sector. However men in that sector receive a higher reward for every month of work experience than women.

INSTITUTIONAL EFFECTS

The key institutional influence on pay among recent graduates is location in the public/private sector and as mentioned above sector has a strong influence on gender pay patterns. Within the private sector, the gender composition of the organisations where graduates work was found to influence pay. Working in a female-dominated workplace decreased wages for both men and women but of course it was women who were most likely to experience this penalty. Equality policies were found to have a positive effect on earnings and to reduce the size of the pay gap in the private sector but this effect became insignificant when other organisational characteristics were held constant. Recruitment processes, promotion procedures and payment structures vary by sector. Recruitment procedures have no direct effect on gender pay patterns. In the private sector the gender pay gap is wider in firms without formal promotion procedures and those without incremental pay scales (Chapter 4). These factors, however, are not significant in the final earnings model (Chapter 5).

PREFERENCES/VALUES

Job preferences and work values are found to vary somewhat between men and women (e.g. men place a higher value on earnings and women on social values) and are found to influence earnings. However, they do not help explain gender differences in pay. Emphasis on social rather than material rewards enhances pay since it is associated with entry into the higher paid public sector. There is no evidence to suggest that women are more content with lower pay – female graduates were more dissatisfied with their earnings than male graduates.

Policy Implications

The smaller size of hourly and weekly gender pay differentials among recent graduates compared to all employees suggests that continued policy effort needs to be focused on addressing the wage penalty around motherhood. However, the patterns of inequalities found in the study suggest that there is also a need to focus on the processes of early career integration and career choices. The study highlights the need for action to address gender segregation and organisational practices. The relevant actors include schools, third level institutions, employers and government.

- The process that channels female and male graduates into different jobs begins as far back as the junior cycle of secondary school. Therefore, attention needs to be focused on giving students information about and access to a wide range of subjects at each transition point (junior cycle, senior cycle, college entry). Furthermore third level students need access to information on a wide range of employment opportunities.
- The results also suggest that employers and work organisations continue to play a role in reproducing gender segregation and gender inequality in the labour market.
- The absence of an hourly pay gap among public sector employees suggests that some characteristics of this sector lead to greater gender equality, these are likely to include formalised and transparent employment practices such as formal pay scales and recruitment/promotion practices and the operation of explicit equality policies.
- Gender inequality in access to and value of bonuses suggest there is a need to monitor these procedures and outcomes from an equality perspective.
- Gender differences in receipt of training also warrant further attention. There is currently significant national policy interest in increasing employer training as part of promoting a knowledge-based economy. It is important that policy initiatives in this area are monitored from a gender equality perspective to ensure equality of access.

1. GENDER PAY DIFFERENTIALS AMONG RECENT GRADUATES

1.1 Introduction

Despite the existence of equal pay legislation since the 1970s, there is a persistent gap in the earnings of men and women in Ireland. Recent research suggests that the economy-wide gap in hourly earnings between men and women is in the order of 15 per cent (Russell and Gannon, 2002). While significant progress has been made in measuring the size of the gap both within and across countries, it has proved rather more difficult to disentangle the processes that give rise to these gender differences. Two sets of explanatory processes have been emphasised: those relating to differences in individual (supply-side) characteristics and those relating to more structural or demand-side factors such as discrimination and segregation processes within the labour market. A central issue in the debate relates to the extent to which pay differences can be attributed to variation in men and women's work preferences.

The main aim of this study is to investigate the earnings of male and female graduates who obtained their awards in 2001. National studies of gender differences in pay have indicated a narrower pay gap between male and female graduates than is evident at other qualification levels as well as a narrower gender pay gap among the youngest age-group (Russell and Gannon, 2002). By studying third level graduates, we confine the comparison of pay levels to men and women with similar levels of education. By choosing recent graduates, we also minimise differences in labour market experience. Across the whole labour force, there is significant variation in the average labour market experience of male and female employees due to employment interruptions around childbirth and childrearing. Because we focus on graduates at the beginning of their careers, the majority will not have embarked upon family formation so we expect this factor to play a much less important role in influencing wage levels.

For these reasons, we would expect the gender pay gap among this group of graduates to be minimal, if not non-existent. By focusing on this group, we can focus more clearly on the way in which subject choice within higher education, recruitment/selection processes and occupational segregation shape the processes of early labour market integration and pay determination among graduates. The study thus allows for a very stringent test of any persisting influences of institutional processes on gender differentials in pay. Therefore, while the study concentrates on a selective, more highly paid section of the workforce, it provides a valuable contribution to the understanding of the overall gender pay gap in Ireland. Furthermore, given the rising levels of educational qualifications in the Irish workforce and the increasing demand for educated workers (Sexton *et al.*, 2002; Bergin *et al.*, 2003), it is of particular importance to examine the dynamics of pay determination in this growing sector of the economy.

1.2 Explaining Gender Differences in Pay Levels

There is still considerable debate about the factors which contribute to gender differences in labour market outcomes in general and pay in particular. Studies have focused on four sets of factors: educational qualifications (in terms of level and field of study); accumulated labour market experience; attitudes and commitment to paid employment; and institutional structures within the labour market. However, theorists have differed in the relative emphasis they place on each of these factors.

Across European countries, third level qualifications are found to confer significant advantages on young people in their early labour market career, advantages that persist into the later career. Those with tertiary qualifications are less likely to be unemployed, are less likely to enter low-skilled employment and more likely to enter professional employment, and have higher occupational statuses on entering the labour market than those with primary or secondary qualifications (Gangl, 2003a). Furthermore, those with higher education qualifications are found to be less affected by cyclical changes in aggregate economic conditions than those with lower qualification levels (Gangl, 2003b). Historically, therefore, gender pay differentials could be seen in the context of higher rates of university graduation among men than women. However, in recent decades, the proportion of young women going on to higher education has exceeded that for young men across many European countries, including Ireland (Müller and Wolbers, 2003; OECD, 2004). As a result, attention has moved away from *educational level* towards *type of education (field of study)* as a potential explanation for gender differences in labour market outcomes, including pay.

A number of different explanations have been proffered for the persistence of gender differences in course choice within higher education (and at earlier stages of the schooling system). Much research on choice of field of study has focused on the individual factors that shape educational decision making. From this perspective, gender differences in course take-up may reflect differences between young women and men in the extent to which they find certain subjects important, useful and/or enjoyable and the extent to which they (feel they) perform well in the subject (Eccles, 1994; Bandura *et al.*, 2001; Jonsson, 1999). These differences are seen as reflecting broader processes of socialisation into ‘appropriate’ gender roles. In contrast, other researchers have emphasised the broader context, such as schooling and labour market systems, within which individuals make decisions regarding their education (Laursen, 1993; Henwood, 1998). Thus, differences in field of study within higher education can reflect differences in the extent to which related subjects were made available to male and female students within secondary education along with the advice and encouragement they were given (NCES, 2000; Fouad, 1994; Ethington and Wolfle, 1988; Fontaine and Ohana, 1999). Furthermore, course choice will be influenced not only by cultural stereotypes regarding ‘male’ and ‘female’ jobs but by actual patterns within the workforce and students’ expectations about what jobs will be accessible to them (Gaskell, 1984), with highly gendered patterns persisting in the occupational aspirations of male and female students (Helwig, 1998; Miller and Budd, 1999). Regardless of the explanation for continuing gender differences in field of study within higher education, such patterns can be expected to impact on gender pay differentials given the variation in wage levels across different types of education.

As well as emphasising the role of differences in educational background in shaping pay levels, human capital theorists have also emphasised the extent to which variation in accumulated labour market experience (actual or projected) can result in a gender pay gap. From this perspective, it is argued that women’s current or anticipated involvement in childcare means that they invest less in education and training, are more likely to work part-time or intermittently and so fail to accumulate similar levels of labour market experience and job tenure as men (Becker, 1985). A key element of human capital theory is that these

features of women's working lives are seen primarily as a matter of choice and therefore any resulting inequality in rewards is not a policy problem. The role of preferences in producing unequal gender outcomes is also emphasised by Hakim (2002). She argues that many women have different work values than men, and by placing a higher priority on family they choose to invest less in work and are prepared to accept poorer working conditions, including lower pay (Hakim, 1991). Thus, women who are secondary earners are seen to value social and convenience factors more highly than material rewards when choosing jobs (Hakim, 1991). In contrast, men are seen to have more homogenous preferences and are assumed to be universally committed to employment and to prioritise their jobs above family and other life interests (Hakim, 2002).

Human capital and preference theories have been used to account for vertical gender segregation in the labour market: from this perspective, unequal employment commitment and human capital are seen as the main cause of gender differences in occupational advancement. Differences in men and women's preferences have also been used to account for horizontal segregation in the labour market. It is argued that women often prefer to work in female-dominated occupations because these jobs better facilitate part-time working and breaks in employment (Hakim, 1996). Similarly, Polachek (1981) argues that, because women anticipate more disrupted work lives, they will choose jobs that do not penalise such discontinuity and avoid jobs where the rate of technological change is high or ones that involve firm-specific training.

While few would argue that differences in individual characteristics such as education and work experience do not influence earnings differentials, the view that these patterns are shaped primarily by preferences is contested. It is widely argued that differences in men and women's labour market and educational human capital are shaped in part by the institutional and cultural context (see above; see also Rubery and Fagan, 1995; Buchmann and Charles, 1995). From this perspective, lower levels of labour market experience among women and shorter working hours reflect both institutional arrangements that fail to provide adequate support to working parents and prevailing gender norms that place greater responsibility for caring work on women.

Other demand-side factors, that have been argued to influence the gender pay gap and gender segregation, relate to direct and indirect discrimination on the part of employers. Prior to the early 1970s, direct discrimination was sanctioned in the form of policies such as the Marriage Bar. While these forms of discrimination are now outlawed, more subtle forms of differentiation and exclusion can still be at work (see O'Connor, 1996; Purcell and Elias, 2004; Collinson *et al.*, 1990). The demand-side approach also focuses attention on the historical evolution of different wage structures. From this perspective, it is argued that differences in pay between occupations arise not only from differences in the productivity and skills of the workers or in the demands of the job, but also from the relative bargaining strengths of different groups and from the social definitions of skill. Therefore, while men and women may choose to take different subjects or enter different occupations, differences in the rewards attached to these jobs is seen to be socially constructed rather than 'objective' (Crompton and Jones, 1984; Jenson, 1989; Walby, 1986; Phillips and Taylor, 1980).

Studies addressing these issues have commonly found that there is a wage penalty attached to working in a female-dominated occupation. It has been argued that this is due to the devaluation of women's work (England, 2000; Karlin *et al.*, 2002). Other institutional features operating at the level of the firm, sector or labour market that affect pay differentials are: whether the organisation is in the public or private sector; union presence; industrial sector; firm size; and regional location (Olsen and Walby, 2004; Simon and Russell, 2003; Gannon and Nolan, 2004).

The framework adopted in this study sees pay levels as being influenced by both ‘supply’ (human capital) and ‘demand’ (market and institutional) factors. We investigate a range of supply and demand factors which potentially impact on pay levels among graduates. Although all of the respondents in the study have third level qualifications, we would expect differences between graduates in pay depending on the level of the award and the discipline or field of study. Further variation in human capital and consequently pay differentials may also arise from differences in access to, and participation in, further training. Despite the fact that the majority of graduates will not have had children, there may still be gender differences in working hours. Evidence from the UK suggests that, even among recent graduates, there are significant differences in the hours worked by men and women (Purcell and Elias, 2004). Similarly, we expect that demand-side factors, such as recruitment processes; pay policies; sectoral location (in terms of public/private and industry); and the gender composition of the workforce, will influence pay levels. The potential impact of attitudes to work and preferences on pay will also be explored among our sample of graduates.

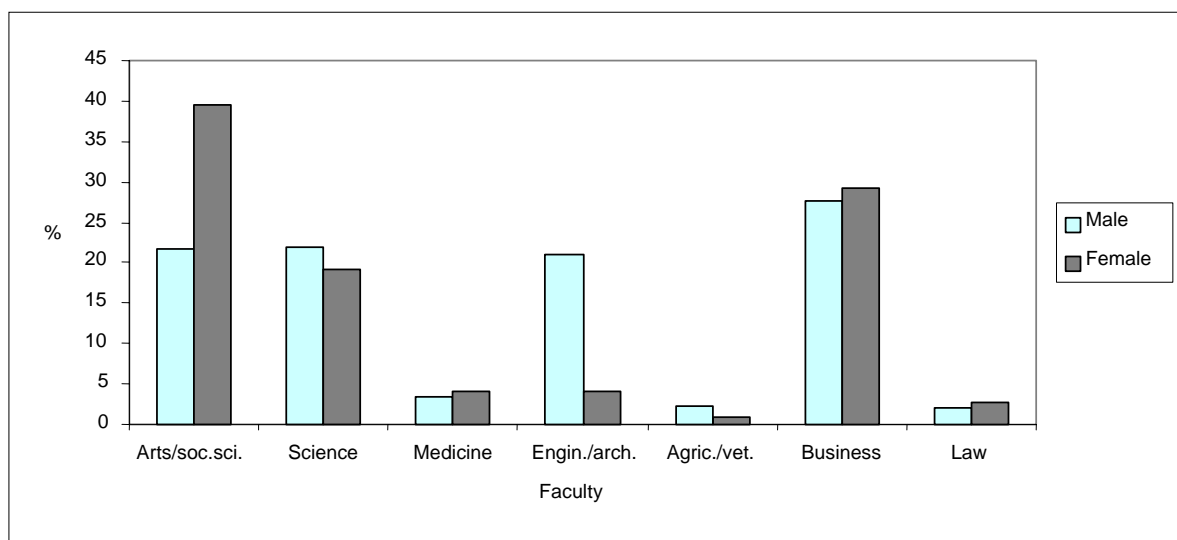
**1.3
The Irish
Context:
Gender,
Education and
the Labour
Market**

Before moving on to look at existing research on the nature of the gender pay gap in Ireland, it is worth placing this research in the context of recent trends in participation in higher education along with patterns of gender segregation within the workplace.

HIGHER EDUCATION

The number of enrolments in higher education has increased rapidly throughout Europe since the 1960s. Ireland has seen a dramatic expansion in participation in third level education in recent decades with the number of full-time enrolments within the third level sector more than doubling between the mid-1980s and 2003. Increases in tertiary education participation rates have been particularly marked among young women, with female entry rates exceeding male rates from the early 1990s onwards (Smyth and Hannan, 2000). In 2002/3, women made up 54 per cent of all those in full-time higher education in Ireland (Department of Education and Science, 2003) with a higher proportion of female graduates for all third level qualifications with the exception of advanced research programmes (OECD, 2004).

In spite of changes in participation in higher education by gender, considerable differentiation persists in the kinds of courses taken by male and female students. Figure 1.1 indicates the gender distribution across different faculties of degree graduates based on the 2001 First Destinations Survey. It indicates that women are over-represented in arts and social science courses while men are highly over-represented in engineering courses. Gender differences in course take-up are greater when more detailed course titles are considered with considerable variation in the area of science, for example. These patterns are consistent with those found in many other Western countries. European countries differ in the extent of educational segregation by gender within the tertiary sector but certain regularities are evident, with health/welfare, education and arts courses dominated by women and engineering courses dominated by men (Smyth, 2002).

Figure 1.1: Distribution of Men and Women Across Faculties for Undergraduate Degrees**(Proportion of Each Gender in Each Faculty)**

Source: First Destinations Survey, 2001.

HIGHER EDUCATION AND THE LABOUR MARKET

In keeping with the pattern found in most other European countries, higher education graduates are found to make a relatively smooth transition into the labour market in Ireland with a quicker entry into employment and higher occupational statuses than among those with second level qualifications (Hannan *et al.*, 1998; Gash and O'Connell, 2000). However, there is evidence of some 'turbulence' in the early labour market career. In the late 1980s and early 1990s, many Irish graduates entered jobs for which they were 'over-qualified', that is, jobs that were commonly held by those with Leaving Certificate qualifications (Hannan *et al.*, 1998). However, over their first few years in the labour market, graduates tended to be upwardly mobile out of these jobs and the relationship between educational level and occupational status became stronger over the initial period in the labour market (Hannan *et al.*, 1998; Gash and O'Connell, 2000). The impact of third level qualifications persists into adult life with analyses of Census of Population and Quarterly National Household Survey data indicating that adults with third level qualifications have higher employment levels, greater participation in continuing education and training, and improved access to 'high quality' jobs (in terms of skill levels) than those without third level qualifications (Smyth and Byrne, forthcoming). Having a third level qualification would appear to confer advantages in early labour market integration to both male and female graduates; Gash and O'Connell (2000) found no marked gender differences in the transition to employment among graduates but they indicated that women were more likely to have held multiple jobs than their male counterparts.

GENDER SEGREGATION IN THE LABOUR MARKET

Despite very significant increases in female labour market participation in recent years, the Irish work force is still highly segregated by gender. Table 1.1 (from Fahey *et al.*, 2000) shows that personal service work, clerical and associate professional occupations are highly feminised, while skilled production work along with transport and maintenance occupations are highly male dominated. The figures for 1997 show that women have made significant inroads into a number of traditionally male-dominated occupations, for example, management and security. However, women also increased their

share of a number of female-dominated occupations, notably sales-work, clerical and personal service occupations. Therefore, while increased female participation has reduced segregation in some occupations, it has enhanced segregation in others. Using a much more detailed occupational classification of 216 non-agricultural occupations, Hughes (2002) found that 41 per cent of women were working in female-dominated occupations (where over 80 per cent of the occupational group were female) while 55 per cent of men worked in male-dominated occupations. Moreover, despite the changes outlined above, women remain concentrated in a relatively small number of occupations across the workforce as a whole. In 2001, 50 per cent of working women were employed in clerical, sales or personal service activities, the same proportion as in 1971 (Corcoran *et al.*, 1996; Hughes, 2002).

Table 1.1: Female Share of Employment Within Occupational Categories 1971-1997

	1971	1981	1986	1990	1997
All Employment	26.4	28.9	32.1	33	38.3
Personal Service (catering, cleaning, etc.)	77.4	71.9	73.1	71.6	75.9
Associated Professionals ¹	64.0	68.0	69.3	73.0	66.6
Clerical workers	59.4	65.9	68.5	69.8	73.5
Professionals	42.4	39.6	42.8	42.2	43.8
Sales Workers	38.7	40.3	42.7	41.9	53.0
Skilled production workers	32.9	20.3	22.6	17.3	15.4
Production Operatives	30.7	24.9	28.0	27.8	30.5
Managers/prop	18.7	17.7	18.5	22.5	29/33
Agric. Workers	9.1	6.6	7.1	7.9	8.7
Foremen/Supervisors Man.	8.4	8.0	10.3	16.4	
Security workers (inc. gardaí)	2.5	3.1	4.0	4.9	10.0
Labourers	0.9	0.9	1.7	2.6	4.4
Transport/communications	0.6	1.1	1.8	2.1	5.6
Skilled maintenance	0.0	0.4	0.6	2.4	2.7

Source: Fahey *et al.* (2000).

¹ Includes occupations such as nursing, physiotherapy and computer programming.

As well as horizontal segregation in terms of occupational groups, there is also evidence of considerable vertical segregation within occupations. For example, women are severely under-represented in the very top layers of professional and managerial occupations (Ruane and Sutherland, 1999) and in the health services (O'Connor, 1995). Even within the highly feminised retail sector, women were significantly less likely to be in managerial or administrative positions than men (Indecon, 2002). A similar pattern is noted in the IT/Electronics sector, Local Government and Food Manufacturing (Indecon, 2002).

Recent trends in terms of rising female participation in higher education and the labour market alongside persisting occupational segregation by gender could be expected to have distinct, if not countervailing, effects on relative pay levels among women in paid employment. Existing research on the gender pay gap in the Irish context is outlined in the following section.

1.4 The Gender Pay Gap in Ireland

Recent research by the ESRI suggests that an average pay gap of 15 per cent persists in the hourly wages of men and women (see Table 1.2). This figure has declined from 20 per cent in 1987 but remained almost unchanged between 1997 and 2000. The research shows that the size of this gap varied between occupational groups, sectors, and age groups and between individuals with different educational qualifications but, even within sub-groups, the gap rarely fell below 10 per cent (Russell and Gannon, 2002). The main exception to this

pattern occurred among the 17-24 year age group, where the gender wage gap fell below 5 per cent. While the wage gap for those with no educational qualifications was just over 30 per cent, women with degrees earned 15 per cent less than men with a similar level of qualifications.

Table 1.2: Gender Wage Gap in Ireland 1987-2000, Living in Ireland Surveys

	F/M Ratio	Hourly Wage	
		Male	Female
1987	80.1	4.27	3.59
1994	82.8	7.71	6.38
1997	85.0	8.88	7.55
2000	85.1	10.28	8.75

Source: Fitz Gerald *et al.* (2004), Table 3.4.

Research has also sought to identify the sources of the pay gap between men and women (see, for example, Barrett *et al.*, 2000). Much of the investigation has taken the form of decomposition analysis which breaks down the wage gap into the part attributable to differences in the characteristics of male and female workers (usually confined to human capital factors such as education, work experience, and time out of the labour market) and the portion due to differential rewards for the same measured characteristics – the ‘unexplained’. This unexplained portion of the pay gap is commonly attributed to the effects of discrimination and other processes (such as occupational segregation) which result in men and women with the same measured characteristics having jobs that pay differently. However, other theorists (such as Hakim, 1991) have argued that part of the unexplained gap is due to differences in preferences. The results of this research suggest that differences in time out of the labour market and employment experience make a significant, and increasing, contribution to the gender pay gap in the Irish context (Fitz Gerald *et al.*, 2004). However, this is clearly not the whole story since the unexplained proportion has also grown from 29 per cent in 1997 to 39 per cent in 2000.

Indecon (2002) examined gender pay differentials within four sectors: Retail; IT/Electrical & Electronics; Food Manufacture and Local Government. In the retail sector, it was found that two-thirds of women earned less than €18,000 per annum compared to less than a third of men but no adjustment was made for hours worked. In the IT sector, earnings are only reported for *industrial workers* within the sector; these figures show an hourly gap of between 11 and 28 per cent but these figures cannot be generalised to workers in the sector not involved in manufacturing. In the food manufacturing sector, the gap in hourly earnings was estimated at 20 per cent. In the local government sector, it was found that 51 per cent of female employees earned less than €30,000 per year compared to 35 per cent of male employees. While the authors point to factors such as vertical segregation within sectors; gender differences in applications for promotion; human resource practices and working arrangements; and hours of work in contributing to this gap, there is no systematic analysis of the links between these factors and pay levels, or of the relative importance of these influences. It is interesting to note that employers in the IT sector in the study perceive that there are poorer promotion opportunities and career opportunities for women than men in the sector, suggesting a self-fulfilling prophecy.

There is also evidence of gender pay differentials among recent graduates. The Higher Education Authority First Destination Report suggests that gender pay gaps in annual earnings are present even in initial employment (HEA, 2002). Gash and O’Connell (2002) found a wage gap of 18 per cent in gross *monthly* earnings six years after graduation, ranging from 5 per cent among those with sub-degrees to 20 per cent among those with degrees and 22 per

cent among post-graduates. Only 11 per cent of the sample had children, suggesting that factors other than ‘time out of the labour market’ were shaping gender differences in pay. The authors suggest that differences in working time and in occupational positions contribute to the gender pay gap. The study found little variation in the relevance of education to graduates’ current occupation but men were more likely to indicate that they were over-qualified for the job. This suggests that skill mismatch does not make a major contribution to the gender pay gap among graduates.

Comparing the pattern among Irish graduates to that evident in the British context, research on earnings among graduates in the UK found a 15 per cent difference in the *annual* earnings of men and women working full-time (Elias *et al.*, 1999). The gap fell to 10 per cent when subject, age, social background and grades were controlled. Returning to the same group seven years after graduation, it was found that the gap had widened to 18.5 per cent (Purcell and Elias, 2004). The most important factors influencing the gender differences were found to be weekly hours worked, job sector,¹ gender segregation within the workplace, and degree subject. Within disciplines, it was found that the gender pay gap was 20 per cent for humanities graduates, 22 per cent for law graduates and 10 per cent for engineering graduates (*ibid.*, p. 21).

Cross-national evidence suggests that the overall gender pay gap is relatively wide in Ireland (see Table 1.3). Analysis of the European Community Household Panel by Barrett *et al.* (2000) shows that the mean gap in gross hourly wages was the second widest of the ten countries covered. Plasman *et al.* (2001) included a broader range of countries and found Ireland had the fifth widest gap in net hourly pay. Simon and Russell (2003) compare the gender pay gap in the private sector across 15 countries; in this analysis Ireland has the fifth widest gap.

Table 1.3: Cross National Differences in the Gender Pay Gap (Female Hourly Pay as a Proportion of Male Hourly Pay)

	ECHP 1994	ECHP 1995	ESES 1995
	All Employees	All Employees	Private Sector
	Gross %	Net %	Gross %
Italy	94.3	94.3	80.6
Portugal	92.2	98.5	71.7
Denmark	89.1	88.6	85.9
Greece	88.4	84.6	75.1
Belgium	87.8	91.3	83.8
Spain	85.9	89.1	75.5
Luxembourg	84.9	82.6	84.1
France	83.9	86.5	79.1
Ireland	80.8	82.6	73.6
UK	73.9	79.3	72.2
Netherlands		80.9	70.6
Germany		73.0	75.1
Austria		81.6	76.4
Finland		85.0	81.6
Sweden			87.4

Note: ECHP refers to the European Community Household Panel Survey while ESES refers to the European Structure of Earnings Survey.

Sources: Barrett *et al.* (2000), Plasman *et al.* (2001), Simon and Russell (2003).

ESES: Excludes public sector; agric./fishing, other social and personal services; small firms < 10 employees. Portugal, Finland and Austria excludes part-time workers.

¹ Industrial sector and public versus private sector were both important. Public sector jobs paid 10 per cent less than private sector and female graduates were over-represented in the public sector (*ibid.*, p. 12).

1.5 Objectives of the Study

On the basis of existing research on gender pay differentials in the Irish context along with the broader theoretical debate about the explanation for such differences, this study set out to address the following research questions:

- What is the distribution of earnings (and other rewards) among male and female graduates three years after graduation?
- How are earnings influenced by qualification level, grade and field of study, and to what extent is this process gendered?
- How segregated is the graduate labour force after three years, as measured by sector, occupational level and gender composition of the immediate workplace of male and female graduates?
- What is the role of this segregation in explaining any differences in pay among graduates?
- What is the effect of other institutional factors such as recruitment and human resource practices, and the match between job and skills, on gender differentials in graduate pay?
- Is there evidence that male and female graduates have different work values or job preferences? And if so, is there a relationship between preferences and rewards in terms of pay?

1.6 Outline of the Report

The report is structured in the following way. Chapter 2 describes the new survey of graduates conducted for this study. It outlines the methodology used, including the sampling methods and weighting procedures, and provides information on the response rates. In Chapter 3, we provide a description of the hourly and weekly pay levels among male and female graduates and explore wage differences by discipline and occupation. The chapter also looks at the distribution of additional compensation such as bonuses and fringe benefits. In Chapter 4, we assess the extent to which work preferences and institutions influence pay levels. Here we explore the role of initial employment integration, work values, skills-match, and institutional factors (such as human resource practices and the gender composition of the workplace) in explaining wage differentials. In Chapter 5, we investigate the sources of the hourly pay gap among graduates in the private sector. Chapter 6 outlines the main conclusions of the study and highlights the implications for policy development.

2. DATA AND METHOD: *THE GRADUATE FOLLOW-UP SURVEY 2004*

2.1 Introduction

This study seeks to examine the earnings of recent graduates from Irish higher education institutions. By focusing on those who are highly qualified and who have entered the labour market in recent years, we can minimise some of the human capital differences that are believed to have influenced the gender pay gap in the wider labour market.

The population for the study consists of all those who received awards from higher level educational institutions in Ireland in 2001 and who were participating in the labour force in the Spring of 2002. Each year the Higher Education Authority (HEA) produces a report on the first destinations of those who have received higher education awards in the previous year. The First Destinations Surveys provide valuable information on the labour market situation of graduates, disaggregated by discipline and award level, and, for those entering employment, by occupation. For those entering employment the HEA reports contain some information about salary levels for male and female graduates. However, the information on earnings is limited in a number of important respects. First, salaries are grouped into pre-coded categories of annual earnings. This prevents precise measurement of the size and distribution of the gender pay gap, which requires detailed information on hourly earnings. Annual information disguises variation due to hours of work and periods of employment over the year,² while the income groups do not supply sufficient information about differentiation within these pay-brackets. Second, there is a high level of non-response for the item on salary (HEA, 2002; HEA, 2003). The present study entails a follow-up survey of those graduates who were identified as labour market participants in the 2002 survey of 2001 graduates.

We selected 2001 graduates because we are interested in analysing gender patterns in the early stages of career before issues such as interruptions in career for family and child caring become important. The 2001 graduates have been in the labour market for three years and, therefore, we avoid some of the temporary stop-gap jobs that respondents might enter while they search for a career job.

² The survey contains information on whether the respondent was working full-time or part-time however the exact number of hours is not recorded, at least in the published data (HEA, 2002).

Table 2.1: Results of the 2002 First Destinations Survey of 2001 Graduates

	Total Awards	Response Rate %	Number of Respondents	Number of Respondents in Labour Force
1 year Certificate	305	62.3	190	68
Nat Certificate	7,528	70.9	5,023	1,285
Nat Diploma	7,031	68.8	4,318	1,477
Primary Degree	17,438	75.0	13,080	8,175
Higher Degree	3,693	66.7	2,462	2,071
Higher Dip. Education	936	71.6	670	605
Primary Degree Education	1,025	57.6	590	558
Postgrad. Dip. Education	270	39.6	107	107
Postgrad. Diploma	2,348	68.7	1,614	1,302
Total	40,574	69.1	28,054	15,648

2.2 The Survey

There were a total of 40,574 awards in third level education in 2001 and the First Destinations Survey received responses from 28,054. The “First Destinations” report indicates that a total of 15,648 respondents reported that they were active in the labour force, that is either employed or actively seeking employment, at the time of the survey in April 2002. This is the population for our follow-up survey and we drew a sample from this group. For most award levels we considered that a 66 per cent sample would generate sufficient cases to support analysis. However, in the case of undergraduate certificate and diploma awards, from the Institutes of Technology, we increased the sampling proportion to 75 per cent in order to take account of the diversity of fields of study and levels of award at his level. This sampling approach generated a sample of over almost 9,700 individuals.

The survey was administered by post in two waves and we relied on the kind co-operation of a number of individuals in the administrative and careers offices of the participating higher education institutions. The sample was drawn randomly from the records relating to the population of interest. In most higher education institutions, data protection regulations were interpreted to mean that the names and addresses of graduates could not be identified to the ESRI research team. It was therefore necessary to rely on the higher education institutions to draw the samples. Higher education institutions were, therefore, asked to select two out of every three cases, or three from every four, depending on the sampling fraction required, from an unstructured list of those identified as labour market participants in the 2002 survey. It was not considered feasible to attempt to stratify the sample by any additional variable, for example, faculty. The questionnaires were then posted out in two waves between May and November 2004.

Table 2.2: Patterns of Response to the Graduate Follow-Up Survey 2004

Institution	Sample	Number Completed	Per Cent Completed
Dublin City University	722	165	22.9
Dublin Institute of Technology	840	246	29.3
HETAC	2,625	760	29.0
NUI, Maynooth	429	168	39.2
NUI Galway	828	199	24.0
Trinity College Dublin	832	208	25.0
University of Limerick	947	267	28.2
University College Cork	1,178	343	29.1
University College Dublin	1,293	441	34.1
Total	9,694	2,797	28.9

Table 2.2 summarises the response patterns to the survey. Overall, questionnaires were completed and returned in respect of 29 per cent of those sampled. The resulting data were re-weighted to render them representative of the population – i.e. those identified as participating in the labour force in the 2002 First Destinations Survey. In respect of recipients of degree-level awards, or higher, we had access to detailed information that allowed us to weight the data by gender, level of award, faculty and higher education institution.³ In respect of undergraduate certificates and diplomas, awarded by HETAC and DIT, we had somewhat less detailed information, so we weighted the data by gender, level of award, and field of study.

Table 2.3 shows the representativeness of the Graduate Follow-up Survey. The first two columns show the distribution of all 2001 award recipients in the labour market and the distribution of respondents to the First Destinations Survey who indicated that they were participating in the labour market in 2002. The third column shows the distribution of graduates achieved in the Follow-up survey. This distribution is comparable with the population, participants in the labour market from the First Destinations Survey. The main difference between the two distributions is that the proportion of sub-degree awards in the Follow-up is somewhat smaller than in the First Destinations Survey, and the proportion of postgraduate degrees is about 4 percentage points higher. The final column in Table 2.3 shows the distribution of Follow-up survey respondents after re-weighting. Here we can see that the distribution is very close to the distribution of the population from the First Destinations Survey in column two.

Table 2.3: Representativeness of the Graduate Follow-Up Survey 2004

	2001 Award Recipients in Labour Market in 2002	FDR Survey Respondents in Labour Market	2001 Awards, Graduate Follow-up Survey 2004 Unweighted	2001 Awards, Graduate Follow-up Survey 2004 Weighted
	%	%	%	%
Certificate	9.1	8.6	6.7	8.9
Diploma	10.7	9.4	7.9	9.7
Degree	52.9	55.8	53.9	54.0
Postgrad. Diploma	13.4	12.9	13.3	12.5
Postgrad. Degree	13.9	13.2	17.4	14.2
Total	100.0	100.0	100.0	100.0
N of Cases	22,424	15,648	2,750	2,750

The questionnaire was divided into five sections as follows:

Section A: Education and Professional Qualifications.

Section B: Work Values and Labour Force Status.

Section C: Current Job.

Section D: Employment History.

Section E: Background Demographic Details.

A copy of the questionnaire is included as Appendix B to this report.

³ Some teacher training colleges were not included in the survey but this was taken into account in the re-weighting by field of study. The Royal College of Surgeons was also not included, although this is unlikely to influence the findings given that a substantial proportion of its graduates are foreign nationals who do not enter the Irish labour market.

2.3 Selection Issues

In the analyses that follow we make a number of important selections. First, we exclude those working outside Ireland as we are primarily interested in wage formation and gender inequality within the Irish labour market. Second, we exclude full-time students who had part-time jobs. Third, we exclude those who are self-employed. Additionally, respondents who were not in paid work (for example the unemployed, those in home duties, students) will not have reported any earnings and are therefore also excluded from the analysis of earnings.

In comparing earnings between men and women it is often important to consider differential labour force participation. The potential problem is that, if rates of labour force participation differ between genders, these may reflect unobserved differences that could also influence earnings. In the wider population the lower participation rate of women compared to men may reduce the male-female wage differential if labour market participation is higher among more highly motivated women or women with other unobserved characteristics that are rewarded in the labour market (see for example, Barrett *et al.* (2000)). Given that our study focused on relatively recent graduates, the vast majority of whom were also recent entrants to the labour force, we do not expect substantial gender differences in labour force participation. Indeed, one of the motivations for the design of this study is that it allows us to examine gender wage patterns before differences in labour force participation, and career interruptions related to family formation, emerge.

Table 2.4: Labour Force Participation by Gender and Level of Award 2002

	Male Labour Force Participation in 2002 %	Female Labour Force Participation in 2002 %	Female Share of Graduates in Labour Force in 2002 %	Female Share of Graduates In 2001 %
Sub degree	31.7	27.6	46.5	50.0
Primary Degree	63.5	61.7	55.5	56.2
Postgrad. Diploma	75.9	83.7	63.7	61.5
Higher Degree	84.7	83.7	54.0	54.3
Higher Diploma, Education	80.5	84.5	80.9	80.1
Postgraduate Degree, Education	89.6	95.9	79.9	78.8
Postgraduate Diploma Education	100.0	100.0	89.7	89.7
All Graduates	54.4	56.6	56.4	55.4

Source: Derived from "First Destinations Reports" (2001), www.heai.ie.

Table 2.4 examines patterns of labour force participation between males and females by levels of award in the 2002 First Destinations Survey of 2001 graduates. There is no evidence to suggest that women are less likely than men to participate in the labour market. On the contrary, the overall labour force participation rate among recent female graduates was just under 57 per cent, compared to 54 per cent among males. Women accounted for 55 per cent of all graduates in 2001, which reflects both higher rates of female entry to higher education as well as higher rates of female graduation from the sector.⁴ Females accounted for 56 per cent of 2001 graduates participating in the labour force in 2002. The female share of labour force participants fell below 50 per cent only among those with undergraduate certificates and diplomas. These patterns of entry to the labour force would therefore suggest that there are no substantial gender differences in the labour market behaviour of recent graduates. We return to these possible selection issues in Chapter 3, where we

⁴ For example, females accounted for over 52 per cent of all new entrants to higher education in Ireland in 2003, Fitzpatrick Associates and O'Connell (2005).

discuss employment patterns at the time of our follow-up survey in 2004, and in Appendix A, where we examine whether gender differences in propensity to work in the public versus private sector could influence gender wage differentials.

2.4 Basic Demographics of the Recent Graduates

Well over half of all recent graduates participating in the labour market were aged less than 25 years of age at the time of the survey in 2004. Another third were aged between 26 and 30 years of age. About 6½ per cent were aged over 36 years. These were mature students, many of whom would already have accumulated substantial labour market experience.

Table 2.5: Age-Group of Graduates by Gender 2004

	Male	Female
	%	%
< 25 years of age	52.7	57.2
26-30 years of age	34.5	32.1
31-35 years of age	6.2	4.3
> 36 years of age	6.6	6.5
Total	100.0	100.0
Average age	27.0 yrs	26.7 yrs

Source: Graduate Follow-Up Survey 2004.

Table 2.6: Marital Status of Graduates by Gender 2004

	Male	Female
	%	%
Married	10.1	9.6
Living with a partner	15.2	20.5
Separated/divorced/widowed	0.1	0.8
Single	74.6	69.1
Total	100.0	100.0

Source: Graduate Follow-Up Survey 2004.

The vast majority of recent graduates were single, three-quarters of all males and over two-thirds of all females. About 20 per cent of women were living with a partner, compared to 15 per cent of males, and about 10 per cent of each were married.

Table 2.7: Family Status of Graduates by Gender 2004

	Male	Female
	%	%
Dependent children (%)	7.1	7.6
of which		
Number of children:		
One	41.9	64.4
Two	28.6	16.7
Three or more	28.6	18.9
Total	100.0	100.0
Youngest of which:		
Pre-school (<5 years)	69.4	53.8
School-going (6-17 years)	29.0	39.6
Adult (18+ years)	1.6	6.6
Total	100.0	100.0

Source: Graduate Follow-Up Survey 2004.

Only about 7 per cent of our recent graduates reported that they had dependent children. Of those who did, 42 per cent of males and 64 per cent of females had just one child. Almost 28 per cent of fathers indicated that they had three or more dependent children, compared to 19 per cent of mothers. There was, of course, a strong correlation between age and presence of dependent children: those with multiple children, and those with children in the older age groups, were themselves overwhelmingly in the older age category.

3. GENDER DIFFERENCES IN EARNINGS AND EMPLOYMENT

In this chapter we look at a range of statistics that can be used to explore gender differences in the graduate labour market. Our primary focus is on pay, as this is the most fundamental element of employment rewards. However, there are a number of additional rewards that form part of the total compensation package, including bonuses and fringe benefits, which provide a more comprehensive picture of the quality of jobs. As we outlined in the literature review, gender segregation is likely to be a key element in any explanation of pay differentials in the labour market. Therefore, we also wish to establish the extent of gender differentiation in the sectoral locations of recent graduates.

We begin by examining pay. We look at two different measures of earnings – weekly and hourly – since each have differing advantages. Weekly wages provide essential information about the actual incomes earned by individuals and thus serve as an important indicator of economic well-being. Indeed, in UK research, gender differences in annual earnings among graduates have been found (Purcell and Elias, 2004). However, hourly wage data, because they represent standardised units, may provide a more appropriate measure of the economic returns to work among different groups, particularly between men and women. This is because there are important differences between the hours of work typically worked by men and women, so standardising by hours worked allows comparison on the basis of equivalent units. It should of course be noted that, because of this, comparing hourly pay represents a more stringent test of gender-based wage differences.

On the other hand, for salaried employees, a category which would include many if not most graduates, remuneration is on a monthly or annual basis and is not directly related to the actual number of hours worked. Examining weekly pay also avoids some of the problems associated with the measurement of usual hours of work. In common with other labour force and employee surveys, respondents were simply asked to record how many hours per week they normally worked, including regular overtime. This is intended to reveal total hours regardless of contract stipulations; however, it appears some respondents report contract hours, some respondents might include break-times while others will exclude them. Evidence from time-use diaries has revealed respondents regularly over-report paid work hours, in particular those working long hours (Williams, 2004; Robinson and Bostrom, 1994). Time diaries reveal that those working over 55 hours per week were much more likely to intersperse non-work activities like shopping, exercise and medical care throughout their working day (Gershuny, 2003). It should also be acknowledged that there may be some inaccuracies in the measurement.

We begin by considering graduates' employment situation at the time of the survey in mid- to late-2004. We then look at weekly wages to assess graduates' financial well-being. We turn next to a detailed examination of hourly pay,

which, as noted above, has the advantage that it is standardised in terms of the unit of work supplied, so it facilitates comparison between men and women, as well as other groups. Finally, we look at bonuses and other fringe benefits that reflect additional aspects of the quality of jobs.

3.1 Employment Situation

Our sample consisted of those who were recorded as labour force participants in the 2002 First Destinations Survey.⁵ Two or so years later, over 90 per cent were in the labour force. About 84 per cent of both men and women were working as employees. This is important since it suggests that, for recent graduates, there are no underlying differences between men and women in participation as employees in the labour force. There were gender differences in self-employment: almost 6 per cent of men, but only 2 per cent of women, were self-employed. Just over 3 per cent of male graduates were unemployed, compared to 4 per cent of female graduates. Women were more likely to have returned to full-time education: 6 per cent of women were students, as were 4 per cent of men. It should be noted that the gender balance of our sample – 57 per cent are female – mirrors the gender balance of the outflow of graduates from third level education and of graduate entrants to the labour force (see Table 2.4).

Table 3.1: Current Employment Situation

	Male	Female	All
Working as an employee	84.0	84.4	84.3
Self employed (including farmer)	5.7	2.1	3.7
Unemployed	3.3	4.0	3.7
Student	4.4	6.2	5.4
Training programme/Employment scheme	1.4	1.0	1.2
Other	1.2	2.2	1.8
Total	100.0	100.0	100.0
N of cases	1,166	1,536	2,702

Source: All tables in this chapter are based on the *Graduate Follow-Up Survey 2004*.

Withdrawal from the labour force was very rare among this highly qualified group of mainly young people. In the remainder of this study, we focus on the 2,117 graduates who were working as employees in Ireland at the time of the survey.⁶

3.2 Weekly Wages

We start by looking at weekly wages, which provide us with a direct assessment of financial well-being. Table 3.2 shows weekly wages by gender. Men earn, on average, €660, women €590, about 11 per cent less.

Table 3.2: Average Gross Weekly Wages by Gender

	All €
Male	660.67
Female	590.19
Female/Male Ratio	0.89***
N of Cases	2,029

*** p<.001.

⁵ The results reported in this and all other tables in Chapter 3 are weighted to render them representative of the population of graduates that was active in the labour force in 2002.

⁶ We excluded almost 200 graduates who were working in other countries at the time of the survey, given that the core focus of the study is the gender wage gap among graduates in the Irish labour market. Variation in the number of cases reported in the tables is due to missing values.

Table 3.3: Average Gross Weekly Wages by Gender and Public/Private Sector

	Distribution		Mean			F/M Ratio
	Male	Female	Male	Female	All	
	%	%	€	€	€	
Public sector	25.7	41.0	778.91	662.44	700.02	0.85***
Private sector	74.3	59.0	619.65	537.99	577.36	0.87***
All	100.0	100.0	661.18	588.77	619.70	0.89***
N of cases	884	1,200				

*** p<.001.

The weekly wage gap is maintained across the public and private sectors, 13-15 per cent in each. Males in the public sector are the highest paid group, earning an average of €779 per week (Table 3.3). Women in the private sector are the lowest paid, earning €538 per week, on average. Overall, graduates working in the public sector earn about 20 per cent more than those in the private sector. This finding of a public sector wage premium is consistent with other research of public-private wage patterns in Ireland (Boyle, McElligot, and O'Leary, 2004; Casey, 2004). The sectoral distribution of graduates is strongly gendered: almost 75 per cent of men work in the private sector, where the gender gap is greater, compared to less than 60 per cent of women.

Table 3.4: Average Weekly Wage by Level of Highest Award

	Distribution		Mean			Female/Male Ratio
	Men	Women	Men	Women	All	
	%	%	€	€	€	
Certificate	5.5	5.2	480.68	426.69	450.29	0.888^
Diploma	9.6	7.3	569.92	454.23	509.88	0.797***
Primary Degree	49.4	45.5	638.72	583.56	608.02	0.914***
Postgrad. Diploma	14.1	21.5	638.06	612.18	620.55	0.959
Postgrad. Degree	21.4	20.5	822.65	674.89	739.18	0.820***
Total	100.0	100.0	660.67	590.19	620.12	0.893***

*** p < .001, ^ p < .10.

Table 3.4 shows the distribution of graduates and average weekly earnings by level of higher education award. While there is broad similarity in the distributions for men and women, men are somewhat more likely to have earned an undergraduate diploma, while women are more likely to have earned a post-graduate diploma. At this level of award, women predominate in education as well as in business-related fields of study.

The pattern of weekly wages is strongly related to level of award, *within gender*. So, among males, the higher the level of award the higher the income. This pattern is also true among women. However, at every award level, men earn more per week than their female counterparts. We find statistically significant gender gaps in weekly wages at sub-degree diploma, and primary and postgraduate degree levels. The greatest gender wage gap is at the sub-degree diploma level, where women earn 20 per cent less than men.

Table 3.5 outlines the hours of work reported by male and female graduates. We define part-time hours as less than 30 hours per week. We make an exception to this rule in respect of teachers, where we define those working less than 22 hours per week as part-time. Amongst teachers in our survey 27 per cent reported their normal hours of work as 22 hours. This corresponds to the contractual teaching hours of *full-time* secondary teachers, but does not include additional hours spent on preparatory work and assessment. Women work significantly shorter hours per week, even in full-time jobs, a pattern that

is partly sectoral; that is, it reflects the lower hours among education workers. It is also possible that there are reporting differences among men and women.

Table 3.5: Hours of Work by Gender

	Men	Women	All
	%	%	%
Part-time < 30 hours	3.1	6.3	4.9
Teachers 22-29 hours	2.6	5.2	4.1
30-35 hours	9.8	16.9	13.9
36-40 hours	44.6	47.4	46.2
41-50 hours	31.0	20.2	24.8
Over 50	8.9	4.0	6.1
Total	100.0	100.0	100.0
	Hours	Hours	Hours
Mean Hours Per Week	41.3	38.0	39.4***
Mean Hours Full-timers	42.1	39.3	40.5***
Mean Hours Private Sector	42.1	39.9	41.0***
Mean Hours Public Sector	38.9	35.3	36.5**
Mean Hours Public Sector (excl teachers)	42.4	39.1	40.3***

*** p < .001. ** p < .005.

Private sector employees report substantially longer working hours, on average than those in the public sector, and this inter-sectoral difference is statistically significant. However, when we exclude teachers from the analysis, the hours gap between public and private sectors is eliminated. The gender difference in working hours is maintained in both public and private sectors.

Table 3.6: Average Gross Weekly Wages by Gender

	All	Full-Time Workers
	€	€
Male	660.67	669.69
Female	590.19	601.47
Female/Male Ratio	0.89***	0.90***

*** p < .001.

Table 3.6 shows weekly wages by gender for both all and full-time workers. If we confine the analysis to full-time workers, as defined above, the gap in weekly pay between male and female graduates narrows marginally to 10 per cent. Given the virtual equality in average hourly wage rates reported later in this chapter, the weekly wage gap is principally due to differences in working hours, with male graduates working longer hours, on average, than female graduates.

3.3 Hourly Wages

While weekly wages provide essential information about economic well-being, hourly wage data provide a more appropriate basis for comparing economic returns to work among different groups. This is because, as we have seen, there are important differences between men and women in the hours of work, so standardising by hours worked allows comparison on the basis of equivalent units. It should, of course, be noted that, because of this, comparing hourly pay represents a more stringent test of gender-based wage differences. Given that our analysis focuses on gender differences among relatively recent graduate entrants to the labour market, and therefore a group which will have experienced less of the institutional and labour force participation patterns that are believed to give rise to gender-based wage differentials later in career and life cycle, we should not expect to observe substantial differences in hourly earnings between men and women.

Table 3.7: Average Gross Hourly Wages by Gender

	€
Male	16.27
Female	16.19
Female/Male Ratio	0.996
N of cases	2,001

Table 3.7 shows average hourly wages among men and women. A small number of respondents reported net income, after tax and social insurance contributions, but not gross income. We adjusted reported net income to generate estimated gross income on the basis of standard income tax liabilities. The table indicates that, overall, there is virtually no difference in hourly pay. On average, male graduates earned €16.27 per hour, compared to €16.19 among females.

When we disaggregate hourly earnings by public versus private sector in Table 3.8, we find that women earn about 4 per cent less than men in the public sector and about 8 per cent less than men in the private sector. This differential in the gender pay gap is to be expected since public sector organisations are more likely than private sector firms to have developed personnel policies and to utilise standardised pay scales that apply equally to men and women. Previous work on Irish pay differentials has also found lower pay gaps in public than the private sector for all employees (Russell and Gannon, 2002). Given that teachers reporting very low working hours represented a substantial proportion of all public sector employees (about 30 per cent), we also examined average gross hourly wages for public sector workers, excluding teachers. We found that the average gross hourly wage was €18.55 for males and €17.30 for females, generating a 7 per cent wage differential that is statistically significant at the 5 per cent level. The other striking feature of Table 3.8 is that it reveals that graduates working in the public sector earn substantially more on average per hour than those in the private sector. In this respect, the Irish graduate labour market differs significantly from that in the United Kingdom, where private sector earnings among graduates are higher (Purcell and Elias, 2004).

Table 3.8: Average Gross Hourly Wages by Gender and Public/Private Sector

	Male	Female	All	Female/Male Ratio
	€	€	€	
Private Sector	14.69	13.49	14.07	0.918***
Public Sector	20.77	19.97	20.23	0.961
Public Sector, Excluding Teachers	18.55	17.30	17.70	0.930*
All	16.27	16.19	16.23	0.996

*** p<.001. * p<.05.

Table 3.9: Hourly Wages by Occupation

	Distribution		Mean			F/M Ratio
	Male %	Female %	Male €	Female €	All €	
Senior Officials/Legislators	8.6	9.3	17.78	14.08	15.56	0.792*
Professionals	61.0	56.3	17.30	18.76	18.10	1.085*
Technicians/Assoc Prof.	15.3	16.3	14.85	14.11	14.40	0.950
Clerical	6.7	11.1	12.35	11.77	11.96	0.953
Other	8.4	7.1	12.80	10.46	11.54	0.818
Total	100.0	100.0	16.27	16.21	16.24	0.996

** p < .05.

As might be expected, graduates are concentrated in a fairly narrow range of occupations, those towards the upper echelons of the occupational structure. Almost 60 per cent of all graduates are in professional occupations, and there are also substantial proportions working as senior officials, legislators and managers, and as technicians and associate professionals. Gender wage differences by occupation are mixed. Male senior officials and managers earn about 21 per cent more than their female counterparts.⁷ However, female professionals earn about 8 per cent more than males. This effect is mainly due to the strong predominance of females among teachers, whose hourly pay is comparatively high. Excluding teachers, there is no significant difference in average hourly pay between men and women in professional occupations.

Table 3.10: Average Gross Hourly Wages by Gender and Economic Sector

	Male	Female	F/M Ratio
	€	€	
Farming/fishing	11.13	15.38	too few
Traditional manufacturing & utilities	14.25	14.27	1.002
Hi-tech manufacturing	15.40	15.01	0.974
Construction	14.42	17.26	too few
Retail/wholesale	12.95	12.44	0.960
Hotels & restaurants	11.88	10.66	too few
Transport & communications	14.13	13.98	too few
Financial services	15.94	14.03	0.881*
Real estate & business activities	15.10	13.43	0.889*
Public administration	17.78	15.51	0.873*
Education	24.46	23.91	0.977
Health & Social Work	19.86	18.57	0.935
Other Services	15.14	14.16	0.935
All	16.28	16.22	0.996

(Too few = <25 cases in a cell)
* p < .05.

Table 3.10 shows average gross hourly wages by economic sector. Disaggregating the data across 14 economic sectors as well as by gender results in some cells having a small number of cases. Where the number of cases in a cell drops below 25 cases, we consider that there are too few cases to support analysis. The table reveals that there are statistically significant differences between male and female hourly wages in three sectors.⁸ The gender wage gap is greatest in public administration, where males earn, on average, €17.78 and women earn €15.51 and where the female/male earnings ratio is .873. In fact, the vast majority of cases in public administration are in the public sector, so the general equality of hourly wages in the public sector does not hold true in public administration. The gender wage gap is also high in financial services (where the female/male earnings ratio is .881) and in business services and real estate (where the ratio is .889).

Hourly wages in education are substantially above those in other sectors, with males reporting hourly earnings of €24.46 and women €23.91. This is mainly due to teachers, many of whom report that they work 22 hours per week, reflecting the contractual maximum number of teaching hours. Actual

⁷ Further analysis of the data shows that male senior officials have substantially longer tenure in the current job than their female counterparts (39 versus 25 months, on average).

⁸ Note that “Public Administration” differs from the “Public Sector”, since the latter includes doctors, nurses, teachers etc. working in Health and Education etc. “Public Administration” is restricted to the civil service and defence.

hours worked may exceed this, but the small value of reported hours in the denominator yields a high average hourly wage.

Table 3.11: Average Hourly Wages by Gender and Field of Study

	Distribution		Mean		F/M Ratio
	Male	Female	Male	Female	
	%	%	€	€	
Arts	7.7	15.7	15.73	15.23	0.969
Science	8.0	9.7	16.81	16.66	0.991
Engineering & Architecture	25.9	4.0	15.23	15.46	1.015
Social Science	3.0	9.1	18.94	17.74	0.937
Business Studies	27.2	31.3	14.63	13.67	0.934*
Computers & Information Technology	15.4	8.2	16.61	15.51	0.934
Medicine, Nursing, Veterinary	3.0	4.8	21.78	20.73	0.952
Law	2.9	3.1	18.43	12.74	0.691*
Education	5.3	11.1	23.70	23.88	1.008
Other	1.7	2.8	15.25	14.40	too few
Total	100.0	100.0	16.29	16.20	0.994

* $p < .05$.

Table 3.11 shows the distribution of graduates and average hourly wages by field of most recent higher education award. There are interesting gender differences in the distribution of graduates. Business subjects were the most common for both men (27 per cent) and women (31 per cent). Over a quarter of men studied engineering and architecture, compared to only 4 per cent of women, and 15 per cent of men studied computers and information technology, compared to 8 per cent of women. Almost 16 per cent of women studied arts compared to 8 per cent of men, and 11 per cent of women studied education, twice the male rate.

There is a very substantial gender pay gap among law graduates, with females earning less than 70 per cent of their male counterparts. There is also a gender pay gap among graduates in business studies, among whom the female-male ratio is .934. Hourly wage rates among graduates in education are the highest, again because of the low hours reported by teachers. Hourly wages in medicine, nursing and veterinary are also high (€21.78 among men, €20.73 among women).

The human capital approach would lead us to expect that earnings are positively related to the level of award because those with higher educational attainment are believed to be more productive and wages are related to the marginal product of labour. Table 3.12 shows a familiar 'step' pattern in earnings: the higher the level of award the higher the hourly wages. The lowest hourly rate is earned by women with Certificate level awards. The highest hourly rate is earned by males with postgraduate degrees. In general, men receive a somewhat higher return to higher levels of award. For example, men with postgraduate degrees earn about 80 per cent more per hour on average than those with undergraduate certificates. The corresponding premium for post-graduate degrees among women is 60 per cent. The gender pay gap is statistically significant at two award levels: undergraduate diplomas and postgraduate degrees.

Table 3.12: Average Hourly Wages by Gender and Level of Highest Award

	Male	Female	Ratio
Certificate	11.49	11.24	0.978
Diploma	13.17	12.17	0.924*
Primary Degree	15.25	14.93	0.979
Post-graduate Diploma	17.38	19.91	1.146
Post-graduate Degree	20.68	18.09	0.874*
Other	14.73	14.47	0.983
Total	16.27	16.19	Too few

* p < .05.

Table 3.13: Hourly Pay by Gender and Grade Level in Last Award

	Distribution		Mean			Ratio
	Male	Female	Male	Female	All	
	%	%	€	€	€	
Not applicable	11.5	13.3	17.79	16.92	17.26	0.952
Pass	20.1	13.1	14.05	13.79	13.92	0.982
Honours	50.5	55.4	16.23	16.24	16.23	1.001
First Class Honours	17.9	18.2	17.92	17.31	17.57	0.966
Total	100.0	100.0	16.27	16.19	16.22	0.996

It is also useful to look at the impact of grades or exam results. Table 3.13 shows the distribution of graduates and average hourly earnings by grade level in last award. Women tend to earn higher grades than men: 74 per cent of women achieved honours grades, compared to 68 per cent of males. Table 3.13 also suggests that grade matters to income, although it does not appear to affect the gender wage gap. A relatively high proportion of graduates do not report grades. This is particularly true at postgraduate level, where grading is less prevalent.

Table 3.14: Hourly Pay by Gender and Previous Experience of Unemployment

	Distribution		Mean			F/M Ratio
	Male	Female	Male	Female	All	
	%	%	€	€	€	
Never Unemployed	49.2	47.8	16.97	16.82	16.88	0.991
Some Unemployment	50.8	52.2	15.56	15.62	15.60	1.004
Total	100.0	100.0	16.27	16.19	16.22	0.996

Labour market experience may also influence wages. Table 3.14 shows average hourly wages by whether or not the respondent experienced unemployment prior to their current job. Those who have never experienced unemployment show higher hourly wage rates than those who have, a result that suggests that unemployment may have “scarring” effects later in an individual’s career. There is no evidence, however, to suggest that previous experience of unemployment has an impact on the gender wage gap. We also looked at such scarring effects within the private sector, but found no gender differences.

Table 3.15: Average Gross Hourly Wages by Gender and Contract Type

	Male	Female	F/M Ratio
	€	€	
Temporary	15.76	16.81	1.066
Permanent	16.60	15.74	0.948*
Total	16.28	16.19	

* p<.05.

Most of the sample of graduates are relatively recent entrants to the labour market, within the previous three years or so, and many have not, as yet, secured permanent contracts. About 60 per cent of our sample of employees reported that they were on a permanent contract and another 35 per cent on a fixed term contract or on probation. Table 3.15 suggests that there is little difference in hourly wage rates between those on permanent and temporary contracts: the average for women is almost 7 per cent higher than among males, but the difference is not statistically significant. Men on temporary contracts earn about 5 per cent more than women, and this difference is statistically significant.

Men tend to report somewhat longer periods of tenure in the current job, and tenure in a current job also has a positive effect on hourly pay.⁹ For example, all those with 5 or more years' tenure with their current employer earn, on average, €22, compared with an average hourly rate of €15 among those who have been in their current job for less than 12 months. However, tenure does not appear to have any significant influence on the gender pay gap. The gap among those with 5 or more years tenure in the current job appears large, but the difference is not statistically significant due to a small number of cases with this length of tenure.

Table 3.16: Hourly Pay by Gender and Tenure in Current job

	Distribution		Mean			F/M Ratio
	Male	Female	Male	Female	All	
	%	%	€	€	€	
Less than 12 months	26.2	31.7	14.91	15.36	15.19	1.030
1-2 years	16.5	18.5	15.73	15.53	15.61	0.987
2-5 years	52.0	45.7	16.25	16.53	16.40	1.017
5+ years	5.4	4.2	23.74	21.04	22.36	0.886
Total	100.0	100.0	16.27	16.19	16.22	0.996

Table 3.17: Hourly Pay by Gender and Experience Before Current Job

	Distribution		Mean			F/M Ratio
	Male	Female	Male	Female	All	
	%	%	€	€	€	
Less than 12 months	37.9	34.5	15.47	15.79	15.64	1.021
1-2 years	21.8	16.8	15.69	17.17	16.45	1.095
2-5 years	30.5	37.1	16.03	15.34	15.60	0.957
5+ years	9.7	11.6	21.33	18.65	19.67	0.874*
Total	100.0	100.0	16.27	16.19	16.22	0.996

* p < .05.

⁹ The approximately 5 per cent of graduates with tenure in excess of 5 years in current job participated in third level education as mature students.

More general work experience, such as that acquired in a job or jobs prior to an individual's current job, may also be expected to influence their earnings. Table 3.17 provides support for this. On average, those with 5 or more years of previous experience earn about €4 per hour more than those with less than 12 months experience in a previous job. Substantial previous experience does appear to influence the gender wage gap: men with 5 or more years experience in a previous job earn about 13 per cent more than women with similar experience.

3.4 Bonuses and Fringe Benefits

Rewards from work are not confined simply to wages. Overall, about 35 per cent of all employees receive bonuses from their employers. This is much more common in the private than the public sector, although certain occupations in the commercial semi-state sector can also receive bonuses.

Table 3.18: Receipt of Bonus from Employer in Last 12 Months by Gender and Public/Private Sector

	Male	Female
	%	%
Public Sector	12.4	7.6*
Private Sector	51.7	48.1
All	41.6	31.5

* $p < .05$.

Table 3.18 shows the gender distribution of bonuses received in the last 12 months. Men were more likely to receive bonuses than female graduates in both sectors. Overall, about 42 per cent of men, compared to 32 per cent of women, received a bonus in the previous 12 months.

Table 3.19 looks at the value of bonuses among those who reported that they had received a bonus. As might be expected, bonuses are generally larger in the private than the public sector. There is also a strong gender pattern: on average, the value of bonuses received by women are about 25 per cent less than those received by men. The 'bonus gap' is particularly marked in the public sector (38 per cent), although this difference is not statistically significant due to the small number of cases of public sector employees receiving bonuses in the sample.

Table 3.19: Average Value of Bonuses by Gender and Public/Private Sector, Among Those Who Receive Bonuses

	Male	Female	All	F/M Ratio
	€	€	€	
Private	2,905	2,218	2,559	0.764*
Public	2,523	1,567	1,973	0.621
All	2,877	2,156	2,510	0.749*

* $p < .05$.

Table 3.20: Average Annual Gross Earnings + Bonus by Gender and Sector

	Male	Female	All	F/M Ratio
	€	€	€	
Gross Annual Earnings				
Private Sector	32,183	28,150	30,123	0.875***
Public Sector	40,408	34,407	36,344	0.851***
All	34,309	30,727	32,273	0.896***
Gross Annual Earnings + Bonus				
Private Sector	33,590	29,192	31,344	0.869***
Public Sector	40,693	34,522	36,513	0.848***
All	35,425	31,388	33,131	0.886***

*** $p < .05$.

Table 3.20 shows average annual gross earnings and gross annual earnings plus bonuses.¹⁰ Bonuses increase the gender wage gap slightly. The effect of bonuses is to increase the gender wage gap by one percentage point, on average across all sectors of the economy, and by 0.6 of a percentage point in the private sector. Given that bonuses are substantially more common in the private than the public sector, they also narrow the public-private sector pay gap, although the gap remains substantial and significant: when we add the value of bonuses to annual income the public/private sector wage ratio decreases from 1.20 to 1.16.

Overall, there are virtually no gender differences in entitlement to employer-provided occupational pensions. However, while there is near gender equality in the private sector in entitlement to such pensions, men are more likely to be entitled to employer-provided pensions in the public sector. Men in the public sector are also more likely to report that they benefit from free or subsidised meals and to be enrolled in a private health scheme.

Table 3.21: Percentage of Respondents in Receipt of Specified Fringe Benefits from their Employers, by Gender and Public/Private Sector

	All			Private			Public		
	Male	Female	All	Male	Female	All	Male	Female	All
	%	%	%	%	%	%	%	%	%
Occupational Pension	52.0	50.4	51.1	46.5	44.6	45.5	67.7	58.7	61.6
Company Car or Van	7.0	2.3	4.3	8.6	3.5	6.0	2.7	0.6	1.3
Free/Subsidised Transport	22.8	18.9	20.5	22.1	17.3	19.6	23.9	21.2	22.0
Free/Subsidised Meals	33.2	30.9	31.8	33.6	36.7	35.2	32.7	22.5	25.7
Accommodation/Housing	5.0	1.9	3.2	4.0	1.7	2.8	8.0	2.3	4.1
Private Health Scheme	30.8	25.3	27.6	37.0	37.5	37.2	12.9	8.5	9.9
Subsidised Loans	8.8	8.2	8.4	10.0	11.3	10.7	4.9	3.7	4.1
Other Benefits	6.2	5.3	5.7	7.4	8.1	7.7	3.5	1.5	2.1

Table 3.22: Per Cent of Respondents Who Received Employer-Sponsored Training in Past Two Years

	Male	Female	All
	%	%	%
Public Sector	50.5	44.2	47.3
Private Sector	56.4	48.8	51.3
All	52.1	46.1	48.6

Men are substantially more likely than women to have received training provided or paid for by their employer in the past two years, and the gender gap in participation in training is greatest in the private sector where 56 per cent of men received training compared to 49 per cent of women. These differences are important because work-related training can influence subsequent earnings as well as job-security and career prospects.

3.5 Conclusions

This chapter has explored differences in weekly and hourly earnings as well as in other aspects of job quality among our sample of graduates.

Overall, we found that there is virtually no difference in hourly pay between the men and women in our sample of relatively recent graduates. However, men in the private sector earn about 8 per cent more than females in the same sector. The gender pay gap in hourly pay is evident at the higher echelons of

¹⁰ Those who reported no bonus were allocated a bonus value of €0.

the occupational structure, among those working in finance, business and public administration, and amongst those who have studied business and law.

We also found gender differences in weekly wages: on average, men earn about 10 per cent more per week than women. This average, however, conceals important differences among sub-groups. When we disaggregate by level of award, we discover that men with undergraduate diplomas earn about 20 per cent more than women at this level of qualification, while men with postgraduate degrees earn about 8 per cent more than women with similar degrees

Men are much more likely than women to receive bonuses. When they do, their bonuses are larger. Men in the public sector are more likely to benefit from entitlement to occupational pensions, and from free or subsidised meals and to be enrolled in a private health scheme. They are also more likely to have received training sponsored by their employer, a difference that may influence subsequent earnings and job prospects.

4. THE EFFECTS OF WORKPLACES AND PREFERENCES

4.1 Introduction

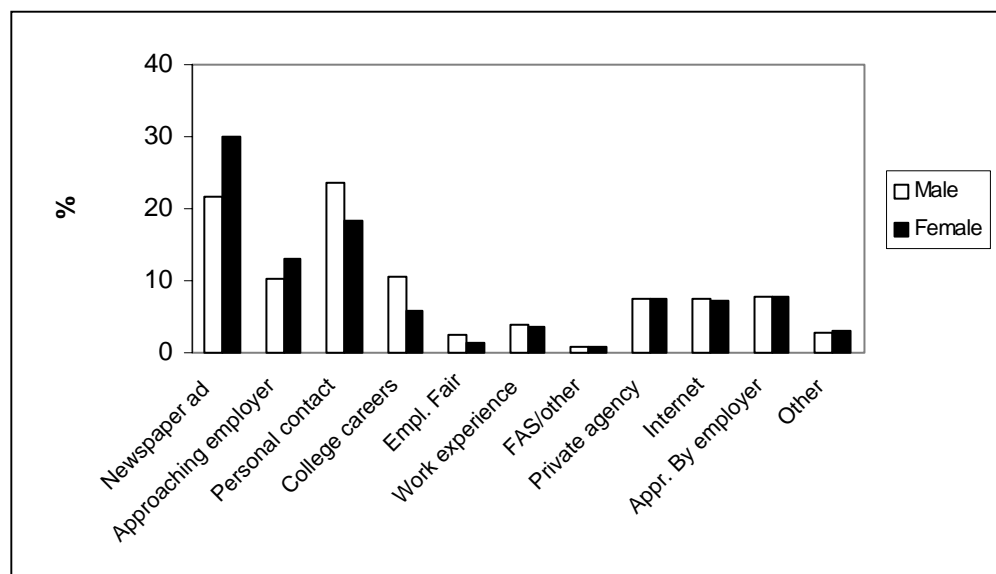
Chapter 3 has explored the relationship between the educational qualifications and skills graduates bring to the labour market and their current earnings. This chapter focuses on two additional parts of the theoretical framework outlined in Chapter 1, that is, on the institutional practices of the employer and individual preferences and values. It considers whether institutional practices among employers vary between men and women and how they are related to earnings. Employer practices are often invoked as possible explanations for the types of jobs and the pay levels received by men and women (see Chapter 1). However, they are not usually included in conventional analyses of gender pay differentials.

This chapter presents a descriptive account of employer practices in the public and private sectors while the impact of such practices on current earnings, controlling for prior educational differences, is analysed in Chapter 5. As the majority of our sample are very recent entrants to the labour market, it is useful to examine the way in which graduates become integrated into employment. Previous research has indicated that early career pathways may have much longer-term effects on occupations and pay levels. The second section, therefore, considers job search methods and recruitment procedures. Having higher 'human capital' does not necessarily guarantee, however, that graduates will find jobs appropriate to their qualifications and specialist area; previous research has indicated that new graduates frequently enter relatively low-level service work, at least for a time, depending on the overall labour market climate (Hannan *et al.*, 1998). The issue of the 'match' between education, skills and the requirements of the current job is therefore discussed in the third section of the chapter. The fourth section outlines formal pay and promotion practices among employers while the fifth section examines the prevalence and impact of equal opportunities policies and practices.

While many theorists have related persisting gender pay differentials to variation in employment structures (see Chapter 1), others have placed such patterns in the context of gender differences in attitudes and commitment to paid employment. Section 6, therefore, examines work commitment and values among Irish graduates along with their satisfaction with their job and income levels.

4.2 Recruitment Practices

Previous research has found that more formal processes of recruitment and promotion may serve to reduce gender differences whereas informal practices tend to reproduce segregated workforces (Collinson *et al.*, 1990). This section looks at how graduates first heard about their current jobs and the selection procedures used by employers.

Figure 4.1: How Respondent Heard About Current Job

Note: All figures and tables in this chapter are based on analysis of the “*Graduate Follow-Up Survey 2004*”.

The main ways that graduates heard about their current job were newspaper advertisements, personal contacts and approaching employers. Female graduates were somewhat more likely to mention newspaper advertisements while male graduates were more likely to mention personal contacts and the college careers office (see Figure 4.1). As might be expected, formal job search methods were significantly more prevalent among those in public sector jobs; 45 per cent of those in the public sector had heard about their job through a newspaper advertisement compared with 17 per cent in the private sector. However, gender differences in job search methods are only partially due to the greater concentration of female graduates in the public sector, with differences persisting between women and men in the same sector. This corresponds to previous research which finds that women are less likely to use informal job search methods than men (Russell, 1996).

For the vast majority of male and female graduates, the main selection procedures used by employers involved a curriculum vitae and a first interview. References were also taken up in over half of cases. Gender differences in the selection procedures used by organisations were comparatively modest. Female graduates were slightly more likely to report a curriculum vitae being used (83 per cent compared with 80 per cent averaging across the public and private sectors) and references being taken up (61 per cent compared with 54 per cent), while male graduates were somewhat more likely to report a second interview being involved (33 per cent compared with 28 per cent). Any gender differences in selection procedures tend to be related to the differential allocation of men and women between the public and private sectors. Selection procedures for public sector jobs are more likely to rely on application forms and references being taken up and less likely to involve second interviews than those in the private sector (Table 4.1). On average, pay levels for both women and men tended to be higher where there was an application form, first interview and where references were taken up and lower where psychometric testing was used. These pay differences are mainly related to the more formalised procedures used in the public sector where pay rates tend to be higher.

Table 4.1: Selection Procedures by Gender and Sector

	Private Sector		Public Sector	
	Male %	Female %	Male %	Female %
CV	79.4	83.5*	82.7	83.6
Application form	24.3	27.2	59.4	49.0*
First interview	87.2	90.1	92.0	88.0
Second interview	38.4	39.4	18.7	12.0*
Psychometric tests	13.3	14.6	16.1	7.3*
Exams	3.4	2.9	5.8	4.2
Oral presentation	10.7	11.1	10.2	12.0
References taken up	49.0	55.6*	69.8	68.3
N of cases (weighted)	647	695	224	483

Note: * indicates significant gender differences within sector at <.05 level.

4.3 Skills Matching

Job search on the part of graduates and recruitment criteria among employers will interact to create a more or less ‘appropriate’ match between the level and type of qualifications and the nature of the current job. Graduates in the survey were asked about the extent to which they use the knowledge and skills acquired in third level education in their current job. The process of matching between skills and job obtained was similar for male and female graduates, with 44 per cent reporting using their knowledge to a considerable degree. Significant differences were found, however, according to whether graduates worked in the public or private sector (Table 4.2); those in the public sector were twice as likely as those in the private sector to report that they used the knowledge/skills acquired in higher education in their current job ‘to a very great extent’ (26 per cent compared with 13 per cent).

Table 4.2: Extent of Usage of Knowledge/Skills in Current Job by Gender and Public Sector

	Private Sector		Public Sector	
	Male %	Female %	Male %	Female %
Not at all (5)	9.9	10.2	4.4	4.1
4	20.3	23.2	9.3	13.7
3	28.4	30.4	30.1	28.2
2	27.6	22.7	29.6	28.4
To a very great extent (1)	13.9	13.4	26.5	25.5
Total	100.0	100.0	100.0	100.0

Similarly, the extent of the ‘match’ between field of study and occupational area was comparable for male and female graduates, with over a third feeling that their field of study was the best one for their type of work and a similar proportion considering that other types of courses could also prepare people for their job. Almost a fifth felt their field of study did not matter for their current job while less than a tenth felt another field would have been more useful. Significant differences were again evident between the public and private sectors with a closer match to field of study evident in the public sector (Table 4.3); 45 per cent of those in the public sector reported that their field was the best (or only) one for their job compared with 29 per cent of private sector employees.

Table 4.3: Match Between Field of Study and Occupational Area by Gender and Public Sector

	Private Sector		Public Sector	
	Male %	Female %	Male %	Female %
Only possible/best field	28.8	28.8	45.3	46.5
Other fields could prepare	42.9	36.0	30.2	32.6
Another field more useful	7.6	10.9	6.2	6.6
Field does not matter	19.5	22.6	16.9	13.7
Other	1.2	1.7	1.3	0.6
Total	100.0	100.0	100.0	100.0

The majority (58 per cent) of graduates felt that their current job was appropriate to their level of education, with no significant differences evident by gender. Again a closer match between education and employment position was evident in the public sector (Table 4.4); over a third of public sector workers reported their job was ‘completely appropriate’ to their educational level compared with a fifth of those in the private sector. Over 60 per cent of graduates reported that other people in their job had about the same level of qualification as them, a third reported being ‘over-qualified’ with most others in the job having a lower level of qualification, while 5 per cent reported being under-qualified. There were no significant gender differences overall in the extent of under- or over-qualification being reported. However, women in the private sector were more likely to report being over-qualified than women in the public sector; no such sectoral difference was evident for male graduates (Table 4.5).

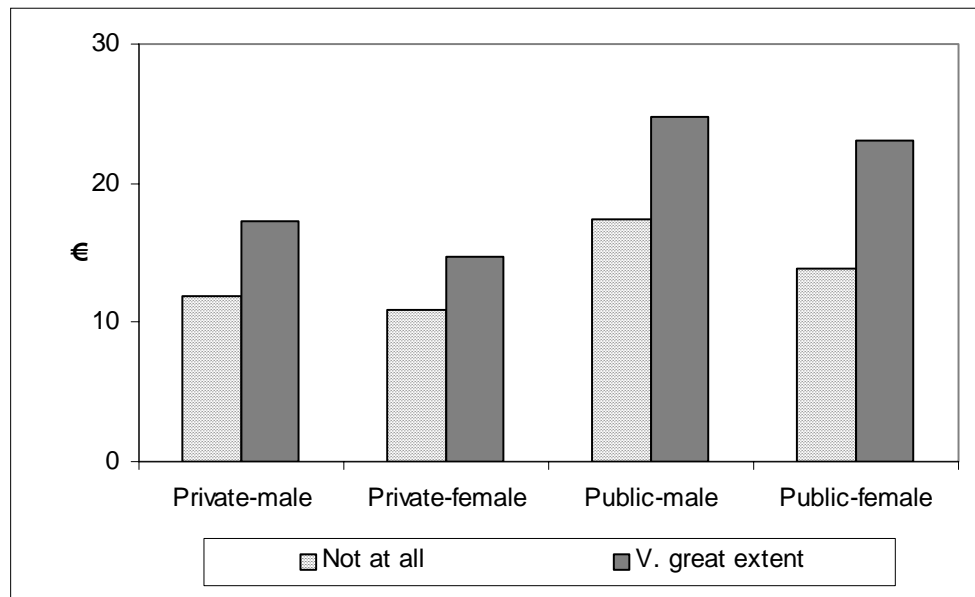
Table 4.4: Match Between Educational Level and Current Job by Gender and Public Sector

	Private Sector		Public Sector	
	Male	Female	Male	Female
	%	%	%	%
Not at all appropriate (5)	9.9	12.6	5.3	4.6
4	11.4	12.8	7.1	11.2
3	23.3	24.1	16.9	27.8
2	36.4	30.2	32.9	32.0
Completely appropriate (1)	19.1	20.3	37.8	34.4
Total	100.0	100.0	100.0	100.0

Table 4.5: Under-Qualification and Over-Qualification by Gender and Public Sector

	Private Sector		Public Sector	
	Male	Female	Male	Female
	%	%	%	%
Over-qualified	34.4	33.9	33.3	27.7
Same level as others	59.7	60.9	62.7	68.4
Under-qualified	5.9	5.2	4.0	4.0
Total	100.0	100.0	100.0	100.0

The level of matching between educational background and current job is found to be predictive of pay levels among both female and male graduates. Those who use the skills acquired in third level education in their current job report significantly higher pay levels (€19.77 for ‘to a very great extent’ compared with €12 for ‘not at all’), a pattern that applies for both men and women and for both the public and private sector (see Figure 4.2). Higher pay levels were found among those reporting that their field of study was the best preparation for their job with the lowest pay found among those who felt that their field of study did not matter for their job. As with skills matching, this pattern applied for both women and men and for public and private sector workers. Similarly, higher pay levels were found among women and men who reported a greater match between their level of education and their job (€19.31 for ‘completely appropriate’ compared with €11.47 for ‘not at all appropriate’). Lower pay levels are found among the under-qualified and the over-qualified compared with those whose qualifications match their job. In sum, both male and female graduates appear to be ‘rewarded’ for a closer match between their educational background and their current job, a pattern that is evident in both the public and private sectors.

Figure 4.2: Hourly Pay Levels by Usage of Higher Education Skills in Current Job

4.4 Pay and Promotion Procedures

Employers can vary in the degree to which pay and promotion procedures are formalised within the firm or organisation and this is likely to have implications for pay equality. More formalised systems tend to be more transparent, leaving less scope for pay differences based on ‘ascribed’ characteristics such as gender. This section looks at pay scales and promotion procedures in the jobs held by graduates. The vast majority of graduates reported that their starting salary was decided on the basis of a fixed rather than a negotiated offer, although women were slightly more likely to report a fixed offer being involved (86 per cent compared with 82 per cent), mainly because of their over-representation within the public sector where fixed offers were more prevalent. Within the private sector, women and men with a negotiated offer tended to have higher pay levels than those with fixed offers.

In terms of current pay arrangements, 60 per cent of women and 47 per cent of men were on an incremental pay scale. As might be expected, the vast majority (almost four-fifths) of those in the public sector were on an incremental pay scale. Within the private sector, women were more likely to be on a pay scale than men but no significant gender differences were evident within the public sector. Within the private sector, males not on a pay scale earned significantly more than males on a pay scale, leading to a greater gender gap in organisations without an incremental pay scale. These results support the view that formal procedures promote greater gender equality.

Organisations can also differ in the extent to which they have formal promotion procedures and in the availability of promotional opportunities for their employees, potentially leading to variations in career trajectories across different groups of workers. Just under half of graduates reported a formal promotion procedure in their workplace with no significant differences overall between men and women in this respect. As might be expected, formal procedures were much more prevalent in the public sector; however, public sector males were somewhat more likely to work in organisations with such procedures than their female counterparts. Within the private sector, average pay levels were higher for those in organisations with formal procedures and the gender gap was greatest in firms without formal procedures.

Table 4.6: Promotion and Pay Increases with Current Employer

	Total		Private Sector		Public Sector	
	Male	Female	Male	Female	Male	Female
	%	%	%	%	%	%
Promoted at least once	42.4*	36.0	47.5	43.3	27.6	25.7
Negotiated a pay increase at least once	34.9*	28.3	43.3*	37.1	9.8*	15.0

Note: * significant gender differences at $p < .05$ level.

In terms of promotion, male graduates were somewhat more likely than their female counterparts to have been promoted at least once with their current employer (see Table 4.6). However, this was due to the fact that the likelihood of promotion was lower in the public sector where female graduates were disproportionately located. Overall male graduates were somewhat more likely to have negotiated a salary increase since starting work with their current employer. This difference was evident within the private sector but the opposite was the case in the public sector, with female graduates more likely to have negotiated such an increase. As with promotion, private sector workers were more likely to have negotiated a salary increase than those in the public sector. Having been promoted is associated with higher average pay for both males and female in the public and private sectors. Having negotiated a pay increase is significantly associated with higher average pay only for male graduates in the private sector.

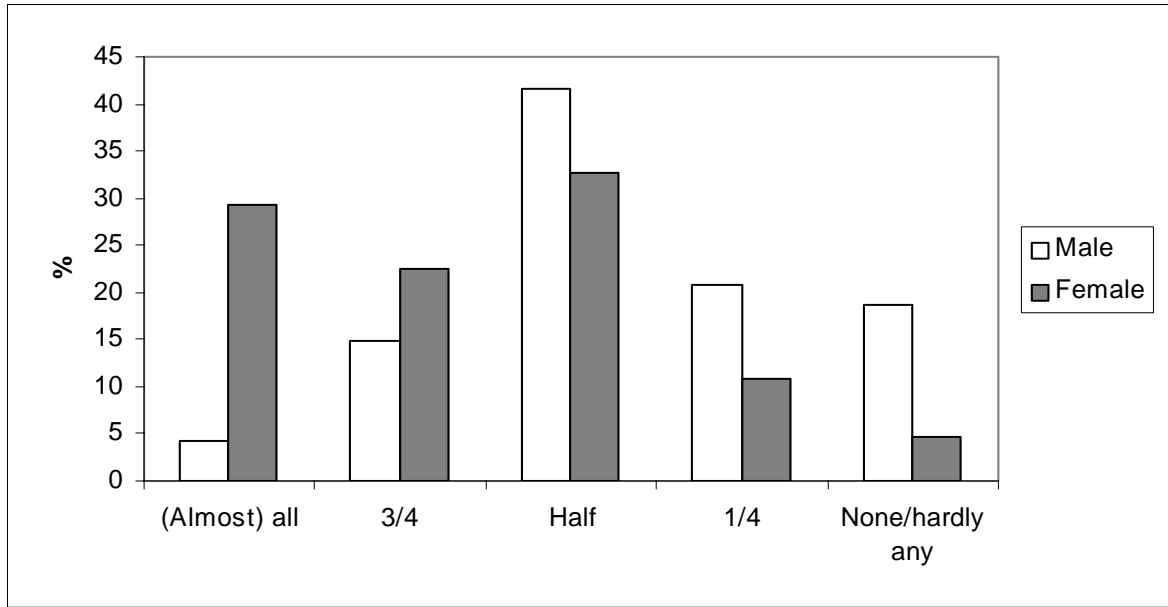
Male graduates were more likely to consider it likely that they would be promoted in their present organisation in the next five years than female graduates; 28 per cent considered it 'very likely' compared with 18 per cent for females. This pattern applied within both the public and private sectors. Within the private sector, male and female graduates who were optimistic about their promotion chances tended to have higher earnings than those who considered promotion unlikely.

'Atypical' work patterns may also vary by gender and potentially impact on pay levels. Working from home was reported by a small minority of graduates; it was more commonly reported by male graduates but the gender differences were not substantial (9 per cent compared with 7 per cent). Those who work from home tend to report higher earnings than those who do not. A fifth of graduates were in jobs where they had flexible hours or flexitime; the prevalence of flexible working hours did not vary by gender. Our analysis found no significant relationship between flexible working hours and hourly pay levels.

4.5 Equal Opportunity Policies and Practices

This section examines the gender composition of the workplace along with the existence of formal equality policies within firms. In keeping with the gendered distribution across occupations and industries indicated in Chapter 3, graduates tended to be employed in relatively gender-segregated workplaces. Over half (52 per cent) of female graduates were in workplaces where women made up three-quarters or more of the workforce while less than a fifth of male graduates worked in such settings (see Figure 4.3). These patterns of gender segregation also had implications for management structures; male graduates were much more likely to report to a male supervisor, with over three-quarters doing so compared with half of female graduates.

Graduates tended to report higher pay levels when they worked in female-dominated workplaces; however, this is due to the greater concentration of 'female' workplaces in the higher-paying public sector. Within both the public and private sectors, those with a male supervisor tend to have higher average pay levels.

Figure 4.3: Proportion of Women in Current Workplace**Table 4.7: Perceptions of Equal Opportunities in the Workplace**

Percentage who believe that equal opportunities exist in their workplace in relation to:	Total		Private Sector		Public Sector	
	Male	Female	Male	Female	Male	Female
	%	%	%	%	%	%
Recruitment	88.3	87.8	86.7	89.2	92.9*	85.3
Pay and conditions	78.4*	74.3	74.7*	67.2	88.4	84.1
Career development/advancement	85.1*	76.8	83.8*	75.3	89.2*	79.1
Formal equal opportunities policy exists	56.4	52.2	49.2	45.5	77.3*	61.3

Note: * significant gender differences at $p < .05$ level.

In the survey, graduates were asked about a number of aspects of equal opportunities policy and practice in their workplace which were considered likely to have an impact on gender differences in pay levels. The vast majority (88 per cent) of all graduates considered that their workplace had equal opportunities for men and women in terms of recruitment, with no overall gender differences found in the prevalence (see Table 4.7). Within the public sector, however, men were somewhat more likely to report equal opportunities in recruitment than women. Male graduates were somewhat more likely than female graduates to report equal opportunities in terms of pay and conditions in their organisation (78 per cent compared with almost 74 per cent), a pattern that was significant in the private sector only. Overall, those working in the public sector were more likely to report equal opportunities in pay than those in the private sector. A bigger gender gap in pay levels was evident among those reporting unequal opportunities.

The gender differences were somewhat greater in perceived equality in promotional opportunities with 85 per cent of male graduates reporting “the same opportunities for career development and advancement” compared with 77 per cent of female graduates. This pattern applied within both the public and private sectors but was not related to pay levels. Over a third of graduates were not aware whether their organisation had a formal explicit policy on equal opportunities while over half of both males and females reported such a policy. Those working in the public sector were significantly more likely than those in the private sector to report a formal equal opportunities policy in their

workplace. The pay gap in favour of males was greater for those working in organisations without such a policy (with a male/female pay ratio of 1.08 compared with 1.02 in workplaces with a policy), indicating the role of formal policies in promoting greater gender equality.

4.6 Work Values and Preferences

Chapter 1 indicates that many theorists have attributed gender pay differences to variation between women and men in their commitment to paid work. The survey covered two dimensions of work commitment. Male graduates were somewhat more likely than female graduates to report an instrumental attitude to work, agreeing that “a job is just a way of earning money – no more”, although only a minority of either gender held such attitudes (17 per cent compared with 10 per cent). These gender differences were evident in both the public and private sectors, although those in the private sector were more likely to report an instrumental attitude to work. Over three-quarters of graduates agreed that “I would enjoy having a paid job even if I did not need the money”. Within the private sector, agreement was more likely among female graduates; however, men and women working in the public sector did not differ in their responses with the vast majority saying they would continue to work if they did not need the money. Those who disagree that a job is just a way of earning money tend to earn significantly more than those who agree with the statement but this is related to higher average earnings in the public sector. However, there is no significant variation in hourly pay levels according to whether graduates wanted to work (even if the money was not needed).

Respondents were asked about the characteristics they felt were most important in a job. Having an interesting job was the most commonly mentioned characteristic among both male and female graduates (51 per cent and 56 per cent respectively) (see Figure 4.4). The next most commonly mentioned job qualities were a high income, good opportunities for advancement and job security. Male graduates were somewhat more likely to mention income and promotional opportunities. In contrast, female graduates were somewhat more likely to mention job security and having a job that helps other people or is useful to society; however, this pattern is related to the greater emphasis on these factors among public sector workers with no marked gender differences found within sectors. Within the private sector, those who valued high income and ‘a job that is useful to society’ tended to have higher earnings. In the public sector, those who emphasised a job that is useful to society and helps other people tended to have the highest average earnings.

It appears that work values are associated with the sector in which graduates are employed. Those in the public sector, both male and female, are more likely to express a public service ethos placing a higher value on a job that allows you to help other people and that is useful to society. It has been argued that work values such as these are relatively stable and therefore do not fluctuate with the current job. If this is correct, then such differences in work values may lie behind some of the sectoral gender divisions that are observed.

Graduates were also asked about the most important factors influencing them taking their current job. The factors were grouped in terms of extrinsic factors (such as pay and fringe benefits), intrinsic factors (such as interest in job content and opportunity to do something worthwhile) and convenience (such as location and hours of work); in addition, a group of respondents reported that they had no choice in terms of taking their current job. The largest group of graduates mentioned intrinsic factors, especially interest in job content, as a motivation for taking their current job (see Table 4.8). Men were somewhat more likely than women to mention extrinsic factors. Female graduates were more likely to mention convenience, especially location, a difference that applied within sectors. Across both public and private sectors, graduates who reported no choice in taking their job had the lowest average

pay levels. Within the private sector, those who cited extrinsic factors tended to have the highest pay.

Figure 4.4: Most Important Factor in a Job

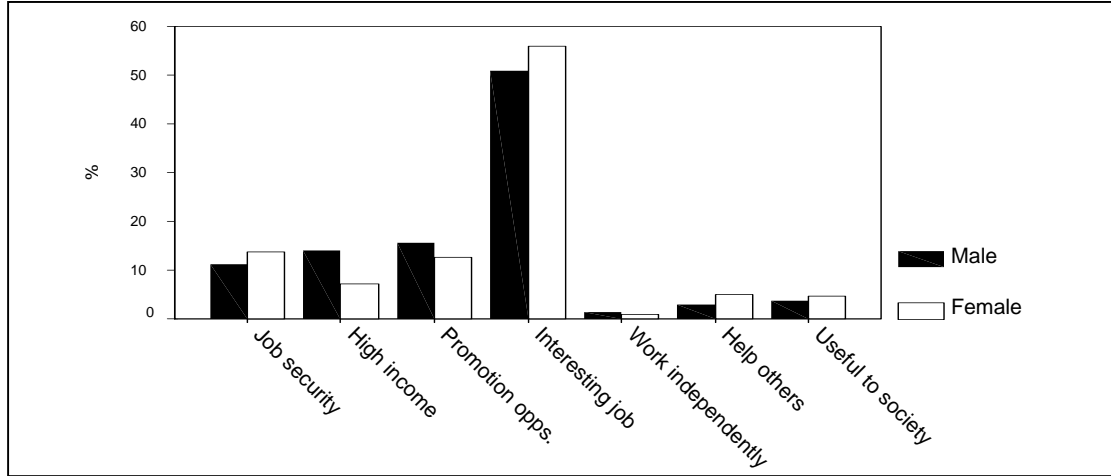


Table 4.8: Most Important Factor in Taking Current Job

	Total		Private Sector		Public Sector	
	Male %	Female %	Male %	Female %	Male %	Female %
Extrinsic factors	30.9	23.4	30.7	26.3	32.1	19.7
Intrinsic factors	44.9	48.8	43.2	45.4	49.8	53.2
Convenience	9.7	15.8	10.4	15.0	7.9	16.6
No choice	14.4	12.1	15.7	13.4	10.2	10.5
Total	100.0	100.0	100.0	100.0	100.0	100.0

Note: significant gender differences at p<.05 level for total, private and public sectors.

In terms of satisfaction with pay levels, the majority of graduates reported receiving lower pay than they deserved with female graduates somewhat more likely to report receiving less than they deserve (Table 4.9), a pattern that was evident within both the public and private sectors. Similarly, female graduates are somewhat more likely to report dissatisfaction with their current pay (41 per cent compared with 34 per cent). Satisfaction with pay was also related to sector; private sector workers were more likely to feel they were paid less than they deserved and were significantly more dissatisfied with their earnings than their counterparts in the public sector. In spite of differences in satisfaction with pay, no gender differences are evident in relation to job satisfaction with the majority of both genders being fairly or very satisfied.

Table 4.9: Perceived Fairness of Pay Given Skills and Effort

	Male %	Female %	All %
Much less than you deserve	15.3	18.1	16.9
Less than you deserve	42.9	46.9	45.2
What you deserve	39.6	33.9	36.3
More than you deserve	2.1	1.2	1.6
Total	100.0	100.0	100.0

As might be expected, pay levels were lowest among those who felt they received less pay than they deserved and among those dissatisfied with their pay. Those who were satisfied with their job as a whole tended to have higher pay levels than those who were dissatisfied. Therefore, there is no evidence

among this highly educated group that women are more satisfied with poorer objective conditions, as suggested by Hakim (1991).

4.7 Conclusions

This chapter has explored the nature of the institutional context within which graduates work and the way in which they have been appointed to this employment. There are a number of common features in the early labour market experiences of male and female graduates. They tend to be appointed using formalised procedures, involving a curriculum vitae and interview, and are usually made a fixed pay offer. Level and type of education and current job are similarly 'matched' for male and female graduates, with higher pay levels among those whose job is closely related to their educational qualifications. Finally, contrary to many studies which highlight gender differences in preferences (see Chapter 1), male and female graduates tend to have relatively similar attitudes to paid employment; they do not tend to have a purely instrumental attitude to work, they value having an interesting job over other factors and they tend to mention intrinsic factors (such as interest in job content) as a motivation for taking their current job.

In spite of these similarities in early labour market careers, some important gender differences in the pathways taken by male and female graduates are evident. Even at this early stage of their career, male graduates are somewhat more likely to have been promoted by their current employer and more likely to have negotiated a salary increase due to their concentration in the private sector, men were also more optimistic about their future chances of promotion than female graduates. Furthermore, lack of formal procedures and practices in some workplaces has resulted in a greater gender pay gap. The difference between male and female pay is greater in organisations that do not have incremental pay scales, formal promotion procedures and/or formal equal opportunity policies, an issue that is explored in greater detail in Chapter 5. Perhaps the most striking difference though is the marked persistence of occupational segregation by gender. Even within the graduate labour market, over half of female graduates are employed in predominantly female workplaces. The extent to which such segregation impacts on pay levels is discussed further in the following chapter.

5. EXPLAINING THE PAY GAP AMONG MALE AND FEMALE GRADUATES IN THE PRIVATE SECTOR

In earlier chapters, we focused on the wage differentials among recent graduates in the public and private sectors, looking at a wide range of influences from educational qualifications to institutional characteristics. In this chapter, we seek to investigate more systematically the gender pay gap found among graduates working in the private sector. We focus on the private sector because, as we have shown in Chapter 3, there is no significant hourly wage difference between men and women in the public sector. We aim to assess the role of different factors in accounting for the gender pay gap by running a series of regression models. The literature outlined in Chapter 1 and the results of the analyses in earlier chapters have led us to identify five sets of variables that potentially influence earnings and the gender pay gap – educational human capital, labour market human capital, match between education and current job, institutional characteristics and work values/commitment. The modelling strategy that we adopt is to enter each of the sets of explanatory variables separately and to assess their impact on the female wage coefficient. We do not include occupational characteristics in the models as these tend to act as a proxy for wages and disguise the underlying processes of interest that result in certain people being allocated to lower paying occupations.

5.1 Explanatory Variables

Many of the variables have been described in earlier chapters but some require further explanation. In the models the dependent variable is the *natural log of hourly wages*. This transformation has a number of advantages. First, it eases interpretation as the coefficients can be read as percentage increases/decreases; second, it reduces the impact of extreme outliers, and, third, it renders the distribution of errors more nearly normal. The use of logged earnings is standard practice in estimating wage equations.

The education variables used in the model are: highest level of award, grade achieved, additional professional qualification, competencies gained through the course and field of study (of most recent award). Four types of competencies were tested in the model: communication/analytical skills (including specialist knowledge), teamwork/leadership skills, language proficiency and computer skills. The field of study refers to the last award received.

The second set of variables measure labour market human capital. These are job tenure; previous employment experience; receipt of employer-provided training in the last two years; previous experience of unemployment; and trainee status. Job tenure is calculated from the start date for current job and the date of interview. Additional employment experience is based on

respondent's estimates of the number of months employed since turning 18 years. We then subtracted current job tenure from this figure. Previous unemployment is simply a dichotomous variable recording whether or not the respondent has ever been unemployed. This includes time spent searching for the first job. The 'trainee in job title' variable is self-explanatory. Nearly all of this group define themselves as employees and indeed are working full-time; however, they are involved in formal training programmes. The majority of the group are trainee accountants and apprentice solicitors. These are distinguished from full-time students with part-time jobs who are excluded from the analysis throughout the report.

The third set of variables captures the match between job and previous education (subject and level). We use two measures of the fit between education subject and job: skills-match and field of study match. The skills-match variable used is based on respondent's ranking of the extent to which they use the skills and knowledge acquired in the course of their third level education on a scale of zero to five. The scale has been recoded so that a score of five indicates that skills/knowledge are used to 'a very great extent' and a score of zero that they are not used at all. We use one level of education fit measure which asks respondents whether most people in their job have lower, higher or the same levels of qualifications as themselves; this is used to determine whether they are over- or under-qualified.¹²

The fourth set of variables reflects institutional characteristics. These include size of organisation (total number of employees in Ireland); trade union membership; regional location; recruitment practices; perceptions of equal opportunities in organisation; equality policy and gender composition.¹³ Two measures of the gender composition of the workforce are included: the proportion of the workforce who are female (none/hardly any, about a quarter, about a half, about three-quarters, all/almost all) and whether respondents' immediate supervisor/manager is female.

The final set of variables tested aims to assess the role of preferences in explaining the gender pay gap. We test three measures: work values, work commitment and factors influencing the decision to take the current job. Work commitment scores were calculated from responses to two questions: 'A job is just a way of earning money – no more' and 'I would enjoy having a paid job even if I did not need the money'. To assess work values, respondents were asked to identify which of seven factors was the most important aspect of a job (see Chapter 4 for details). We tested various specifications of these work values but only valuing high income proved significant. Respondents who mentioned high income as the most important or second most important factor were given a value of one and those who did not mention high income coded as zero. Finally, we include a variable on whether the decision to take the current job was influenced primarily by extrinsic conditions (pay, fringe benefits, promotion opportunities, or security); intrinsic rewards (interest, opportunities for skill use, training opportunities, doing something worthwhile, level of responsibility); convenience factors (holidays, hours of work, flexible working arrangements or location) or lack of other job offers.

¹² An additional measure of the appropriateness of *level of education* for current job was excluded because it was too highly correlated with the skill match variable and the over/under qualified measure.

¹³ We did not include institutional factors such as the operation of profit sharing, premium payments or performance related pay schemes as these were too close to the dependent variable (earnings).

Table 5.1: Means Scores on Regression Variables for Male and Female Graduates in the Private Sector

		Men	Women
	<i>Log wage</i>	2.63	2.57
Education	Certificate	.043	.039
Human	Diploma	.104	.062
Capital	Degree	.542	.541
	Postgraduate Diploma	.119	.155
	Postgraduate Degree	.177	.187
	Other Award	.015	.015
	Any Other Profess Qualification	.351	.343
	Grade Pass	.201	.125
	Grade Honours	.525	.586
	Grade First Class Honours	.196	.183
	<i>Communication/Analytical Skills (score)</i>	3.673	3.744
	Arts/Humanities	.054	.141
	Science	.090	.146
	Engineering, Architecture	.283	.056
	Social Science	.008	.029
	Business	.320	.383
	Computers & IT	.185	.138
	Medicine, Nursing & Veterinary	.005	.008
	Law	.017	.038
	Education	.019	.027
	Other Field	.019	.033
Lab Market	<i>Months in Current Job</i>	25.0	22.9
Human	<i>Months Employed Ex Current Job</i>	24.6	25.5
Capital	Previous Unemployment Experience	.513	.522
	Trainee in Job Title	.074	.073
	Any Empl.-Provided Training in last 2 years	.505	.445
Job/Educ.	<i>Extent use skills (scale)</i>	3.14	3.07
Match	Over-qualified	.347	.333
	Under-qualified	.057	.051
	Best field for Job	.291	.289
	Other Fields Could Prepare	.438	.370
	Other field better	.077	.116
Institutional	TU Membership	.109	.123
Factors	< 20 Employees	.176	.178
	20-99 Employees	.156	.153
	100-499 Employees	.177	.130
	500+ Employees	.446	.427
	Size D/K	.045	.111
	Working in Dublin	.50	.51
	Negotiated Starting Salary	.217	.201
	<i>Proportion female (scale 1-5)</i>	2.49	3.28
	Female supervisor/manager	.208	.477
	<i>Equal Opportunities scale</i>	2.418	2.281
	Equality policy	.496	.462
Preference/ Values	<i>Work Commitment (score)</i>	3.642	3.869
	High Income Important	.421	.301
	Why take job –intrinsic rewards	.427	.459
	Why take job –extrinsic rewards	.312	.258
	Why take job –convenience factors	.102	.149
	Why take job –no choice	.160	.134

Note: Variables in italics are interval level. All other variables are categorical for these the 'mean' represents the proportion of respondents in this category. These figures are unweighted because that is what is used in the regression models. Therefore, they will differ from the percentages reported in earlier chapters.

Source: All tables in the chapter are based on the *Graduate Follow-up Survey 2004*.

In Table 5.1, we compare the characteristics of men and women working in the private sector across all five sets of variables. In contrast to the descriptive tables outlined in Chapters 3 and 4, these results are based on unweighted data

as that is what is used in the models.¹⁴ Among the educational variables, we see that, in the private sector, female graduates have somewhat higher qualifications than male graduates; the grade levels of the two groups are broadly similar. The main difference in educational characteristics is in field of study. Female graduates working in the private sector are significantly more likely to have an Arts, Science or Social Science background, while a much higher proportion of the male graduates have an engineering or computer/IT background (see Chapter 3 for further discussion).

The sample was specifically designed to minimise differences in labour market experiences. This is reflected in the similarity in the accumulated labour market human capital of men and women. The men are found to have a slightly longer tenure in their current jobs (25 versus 23 months), but the women have marginally more experience outside the current job. The main difference is that female graduates in the private sector are less likely to have received employer-sponsored training in the last two years than male graduates.

There is very little difference in the match between education and current job for male and female graduates. Most of the institutional characteristics are also similar for male and female graduates in the private sector. The main exceptions are those relating to the gender composition of the workforce. As outlined in Chapter 4, women are much more likely to be working in a female-dominated environment and women are also more likely to have a female supervisor or manager (48 per cent of women compared to 21 per cent of men).

Finally, there are some significant gender differences in work values and preferences. Female graduates in the private sector have higher levels of work commitment than their male counterparts. Male graduates are more likely to value high income, and to have been influenced by extrinsic factors in deciding to take the current job, while women were more likely to have mentioned convenience factors (e.g., location, hours). However, 16 per cent of the male graduates and 13 per cent of the female graduates said the most important reason for taking the current job was lack of other offers which illustrates the limits of 'choice'.

The distribution of these characteristics across male and female graduates working in the private sector assists us in interpreting the regression results presented in the next section. First, we estimate a model of earnings with only gender controlled. This shows us the size of the 'raw' gender pay gap in the private sector; we then add each of the five sets of variables separately and examine the change in the size of the female coefficient (the 'adjusted' gender effect). In the final model, we add all five sets of variables together.

5.2 Results

EDUCATION EFFECTS

We enter the educational variables in two blocks separating subject from the other education measures. While level of award, grade and communication/analytical skills gained through education have a strong positive effect on earnings (see below), they do not help to explain the pay gap among graduates in the private sector. When this set of educational outcomes are added to the model, the negative wage effect for women actually increases, which suggests that the wage gap for women is greater *within* educational groupings and that women do not fully benefit from the higher qualifications they have relative to men. There is also some evidence that the returns to educational level vary for men and women; principally the earnings returns to a postgraduate degree are lower for women (i.e. the interaction between female and postgraduate degree is significant and negative; the interaction between

¹⁴ It is conventional statistical practice to use unweighted data in wage equations.

female and diploma is also negative and significant at the 10 per cent level). Similarly, men get significantly higher rewards for first class honours (+.252) than women (+.046).¹⁵

Controlling for field of study significantly reduces the gender gap in (log) hourly wages from 7.6 per cent to 5 per cent. This result suggests that gender differentiation in subject choice contributes to pay differences among male and female graduates in the private sector. Nevertheless, the negative effect of being female remains significant even when subject is controlled. The returns to field of study do not differ significantly for male and female graduates (the interactions between field of study and gender were insignificant). Therefore, the impact of field of study on the female wage coefficient reflects the gender differences in subject choice rather than differential returns to subject.

Table 5.2: Mean (log) Hourly Wages – Effects of Educational Human Capital

	'Raw' ¹	Adjusted + block 1	Adjusted ² + block 2
Female	-0.061***	-.076***	-.050**
Award Level (ref = Cert.)			
Diploma		.070	.057***
Degree		.234***	.225***
Postgraduate Diploma		.217***	.218***
Postgraduate Degree		.323***	.319***
Other Award Level		.044	.058
Additional Professional Qual. Grade (ref =Pass)		-.031	-.003
Honours		.053*	.071**
1 st class honours		.146***	.150***
Grade Not Applicable		.078*	.076*
Analytic/Communication Skills		.053***	.054***
Subject (ref = Arts)			
Science			.176***
Engineering, Architecture, Planning			.184***
Social Science			.153**
Business			.079**
Computers & IT			.163***
Medicine, Nursing & Vet.			.433***
Law			.026
Education			-.014
Other field			.143**
Constant	2.631***	2.165***	2.021***
Adjusted R ²	0.007	.103	0.135
Sig. F Change	.002	.000	.000

*** p < .005. ** p < .05. * p < .10.

¹The 'raw' female coefficient changes slightly in the tables because of the effect of missing values.

In terms of the effects of the education variables themselves, we find that the level of award and grade have a highly significant effect on earnings in the private sector. Having a degree earns respondents an additional 23 per cent per hour compared to those who obtained certificates. A postgraduate diploma adds a premium of 22 per cent compared to certificate holders and a postgraduate degree adds 32 per cent (43 per cent for men and 22 per cent for women). Getting an honours grade significantly increases earnings among recent graduates while achieving first class honours has an even more positive effect adding 15 per cent to (log) hourly earnings even when subject and award level are controlled.

Subject of the most recent third level award has a strong influence on pay levels in the private sector. Controlling for award level and grade, medical

¹⁵ This interaction between gender and 1st class honours is significant at the .001 level. (Results not reported in Table 5.2).

graduates (in the private sector) earn 43 per cent more than Arts/Humanities graduates. Science, social science, engineering and computer graduates also earn significantly more per hour than Arts/Humanities graduates. There is no significant difference for graduates from Law or Education. It should be remembered that the overall wage differences by subject are rather different because of the higher wage premium attached to public sector employment and differential entry rates to the public sector by subject/discipline (see Chapter 3). Having strong communication and analytical skills further enhances earnings by 5 per cent over and above the effects of subject and qualifications. Teamwork/leadership skills, language proficiency and computer skills were also tested but found to have no significant impact on earnings in the private sector. Therefore, these variables were excluded from the model.

5.3 Labour Market Human Capital

Controlling for labour market human capital, such as employment and unemployment experience, employer training and trainee status, leads to a small reduction in the female wage coefficient from $-.060$ to $-.048$. Since there are few differences in the value of these variables for male and female graduates, this suggests that there are differential returns to these characteristics for men and women. Further analysis confirms there is a significant negative interaction between previous experience and female, which shows that men in the private sector get a higher wage premium for previous work experience.

Table 5.3: Hourly Wages – Effects of Labour Market Human Capital

	'Raw' ¹	Adjusted
Female	-0.060^{***}	$-.048^{**}$
Months in Current Job		$.003^{***}$
Additional Employment (months)		$.002^{**}$
Previous Unemployment		$-.097^{***}$
Trainee in Job Title		$-.245^{***}$
Employer Training in last 2 years		$.096^{***}$
Constant	2.631^{***}	3.529^{***}
Adjusted R ²	0.007	.130
Sig. F Change	.002	.000

*** $p < .005$. ** $p < .05$. * $p < .10$.

¹The 'raw' female coefficient changes slightly in the tables because of the effect of missing values.

In keeping with previous research and human capital theory predictions, work experience has a strong influence on earnings. Experience in the current job is associated with slightly higher returns than wider employment experience. Each additional month in the current job adds 0.3 per cent to hourly earnings and each month of experience outside the current job adds 0.2 per cent. Those on trainee contracts are found, as expected, to earn significantly less per hour than other graduates. Previous unemployment experience reduces current hourly earnings by 10 per cent. We also tested the number of jobs held since graduation but this was found to be insignificant and so was excluded from the model.

5.4 Education-Job Match

Table 5.4 examines the impact of matching between level and type of education and current job on the gender pay gap among graduates in the private sector and on pay levels more generally among this group. Focusing first on the 'Female' coefficient we see that the job-education match does not help to explain the male-female wage gap among graduates in the private sector as the negative coefficient only changes marginally when these variables are added to the model.

Table 5.4: Log Hourly Wages – Effect of Education-Job Match

	'Raw' ¹	Adjusted
Female	-0.056***	-0.052**
Extent Use Course Skills		.035***
Over-qualified		-.074***
Under-qualified		-.102**
Field Match (ref = field not relevant)		
Best field for job		.100***
Adequate field for job		.083***
Not good field for job		.048
Constant	2.632	2.482
Adjusted R ²	0.006	0.070
Sig. F Change	.004	.000

*** p < .005. ** p < .05. *p < .10.

¹The 'raw' female co-efficient changes slightly in the tables because of the effect of missing values.

However, the job-education match does affect earnings more generally. The match between educational skills and current job is strongly predictive of current earnings in the private sector with the highest pay found among those who use these skills to a very great extent in their current job. The extent of matching between field of education and current job also influences earnings with the highest pay found among those who report that their field of study was the best field for their area of work. The match between the level of education and current job is also influential. Both those who are over-qualified and under-qualified tend to have lower earnings compared to those who have the appropriate level of education.

5.5 Institutional Effects

When organisation size, trade union membership and regional location are added to the earnings model, there is no change in the female coefficient. Therefore, although these variables have a significant impact on earnings in the private sector (see below), they do not help explain the male/female wage gap.

When the second set of institutional variables (recruitment procedures, equality policies, and factors relating to the gender composition of the workplace) are then added to the model, the female coefficient declines and becomes statistically insignificant. Further analysis shows that it is the gender segregation variable that has most impact on the female wage coefficient reducing it from -5.8 per cent to -3.7 per cent. The effect of gender segregation does not differ between men and women.¹⁶ Men working in female-dominated workplaces also experience a negative wage effect (-2.2 per cent in hourly wages for each point on this five point scale). However, by definition, it is mainly women who work in such environments and who experience this wage penalty; women were also more likely to have a female supervisor and so to experience the penalty attached to this also (see Table 5.1). Therefore, the individual wage gap experienced by women in the private sector rather than being 'explained away' is displaced by a collective disadvantage experienced by those in female-dominated workplaces. Equality policies and perceived equal opportunities also reduce the 'Female' coefficient (from -.031 to -.024 when all other institutional factors are controlled) which suggests that measures to promote equality have some influence on gender pay equity among this group. Industrial sector has no impact on the gender pay gap since the female coefficient does not change when sector is added to the model.¹⁷

The results for the control variables show that size of the employing organisation has a significant impact on earnings with those working in organisations with more than 20 employees earning more than those in smaller

¹⁶ The interaction between sex and gender composition is insignificant.

¹⁷ This is true even if sector is added to the model before any of the other institutional variables.

organisations. Graduates working in organisations with over 500 employees earned most. Consistent with previous research in Ireland and elsewhere, trade union membership has a positive impact on earnings. Regional location is found to be highly influential: those working in Dublin enjoy an hourly wage premium of 16 per cent in the private sector.

Table 5.5: Log Hourly Wages – Effect of Institutional Characteristics

	'Raw'	Adjusted Block 1	Adjusted Block 2	Adjusted Block 3
Female	-0.062***	-0.058***	-0.024	-.021
Organisation Size (ref < 20)				
Size 20-99		0.062**	0.064**	.075**
Size 100-499		0.066**	0.061*	.072**
Size 500+		0.163***	0.165***	.156***
Size don't know		-0.005	0.004	.009
Trade Union Member		0.051*	0.065**	.061**
Dublin		0.155***	0.156***	.167***
Negotiated Job Offer			0.112***	.110***
Proportion Female			-0.022**	-.023**
Female Boss			-0.036*	-.042**
Perceived Equal Opportunities			0.024**	.022**
Equality Policy			0.043**	.038*
Sector (ref= trad. manufacturing)				
Farming				-.133
Hi tech manufacturing				.143***
Construction				.078
Retail				-.021
Hotel/Catering				-.127**
Transport & Communications				-.028
Financial services				.036
Business services				.041
Educ, Health, other services				.187***
Constant	2.634***	2.455***	2.278***	2.373***
Adjusted R ²	0.007	0.114	.145	.174
Sig. F Change	.001	.000	.000	.000

*** p < .005. ** p < .05. * p < .10.

As mentioned above, a higher proportion of women in the workplace depressed wages for both men and women. Having a female boss also reduced earnings for both men and women but this effect was only on the border of statistical significance. Equality policies and perceived equal opportunities were both associated with higher earnings. Those who negotiated their starting salary were found to have higher earnings than those who started on a fixed offer. Other recruitment practices were not significant and so were excluded from the model. Additional human resource practices, such as having formal promotion procedures and an incremental pay scale, were also found to be insignificant and were removed from the model.

5.6 Individual Preferences

The final set of variables aims to capture individual values and preferences (work commitment, work values and reasons for taking current job). The three preference measures are found to influence wage levels among graduates in the private sector; however, they do not contribute to the explanation of gender differences. The female coefficient remains unchanged when these variables are added. More disaggregated analysis showed that controlling for commitment increased the pay gap marginally, as the women had higher commitment scores than men, but controlling for materialistic work values reduced the gap. Therefore, the two effects cancel one another out.

In general terms, work commitment increases average hourly earnings as does having materialistic work values. An emphasis on convenience factors in job choice had a negative impact on earnings, reducing hourly earnings by 6.4 per cent, compared to those who emphasised intrinsic rewards. However, lack of choice had a more negative effect; those who said the most important

reason for taking the current job was that they had no other offers earned 13 per cent less per hour than the reference group.

Table 5.6: Log Hourly Wages – Effect of Preferences

	'Raw'	Adjusted
Female	-0.057***	-0.052***
Value High Income		.082***
Work Commitment Score		.032**
Why Current Job (ref = Intrinsic rewards)		
Extrinsic Rewards		.030
Convenience factors		-.064**
No choice		-.131
Constant	2.631***	2.499***
Adjusted R ²	0.006	0.047
Sig. F Change	.003	.000

*** p < .005. ** p < .05. *p < .10.

The regression analysis has highlighted which of the five sets of factors have most influence on the gender pay gap. While all five sets of variables had a significant influence on earnings, only three influenced the size of the female wage coefficient: education, labour market human capital and organisation characteristics (particularly gender composition of the workplace). However, because the variables were entered separately, it was not possible to assess whether the impact of these factors remains significant when all are entered simultaneously. We, therefore, run a final earnings regression including all five sets of factors (we do not include industrial sector in the final model because it is highly correlated with field of study). We enter the three sets of variables found to influence the pay gap first, that is, education, labour market human capital and gender composition of workforce. Educational characteristics and accumulated labour market experience also precede current job so they are entered before gender composition of the workforce. Table 5.8 shows that, when both education and labour market human capital variables are controlled, the negative effect of being female on earnings is halved and becomes significant only at the 10 per cent level. Once the two gender composition variables are added, the 'female' effect becomes non-significant; however, these variables no longer have a significant effect on earnings and do not add anything to the fit of the model. It is likely that some of the impact of gender segregation has been soaked up by field of study, since the two variables are strongly related (e.g., those with engineering degrees are more likely to be in male-dominated work environments and those with a social science background and medical/paramedical backgrounds are more likely to be in female dominated workplaces).

The final model shows that educational characteristics, namely level, grade and field of study, remain significant even when labour market experience, institutional characteristics and preferences are controlled (Table 5.7). However for grade, earnings are now only differentiated between those with first class honours and those with a pass grade. Similarly, the labour market human capital variables continue to exert a strong effect on earnings in the private sector even when education and other characteristics are controlled. Only recent employer-provided training and communication skills become non-significant. It is likely that employer training was previously acting as a proxy for other employer/organisation characteristics.

Table 5.7: Final Model Including All Control Variables

	B	Significance
(Constant)	1.798	.000
Female	-0.006	.772
Diploma	0.043	.395
Degree	0.201	.000
Postgraduate diploma	0.197	.000
Postgraduate degree	0.260	.000
Other award	0.090	.434
Any Additional Professional Qualification	-0.014	.467
Grade not applicable	-0.005	.896
Honours	0.015	.568
First Class Honours	0.060	.049
Communication/analytical skill	0.022	.110
Science	0.110	.002
Engineering	0.084	.024
Social Science	0.137	.059
Business	-0.021	.503
IT/Computers	0.064	.075
Medicine/Nursing	0.330	.001
Law	-0.056	.337
Education	0.015	.823
Other field	0.025	.679
Months in Current Job	0.004	.000
Months Employed Excluding Current Job	0.002	.000
Previous unemployment	-0.036	.042
Trainee in Job Title	-0.166	.000
Any additional Employer Training in last 2 years	0.030	.092
Proportion female	-0.011	.202
Female boss	-0.027	.156
Organisation size 20-99	0.039	.189
Organisation size 100-499	0.039	.198
Organisation 500+	0.119	.000
Organisation Size don't know	-0.003	.930
TU member	0.038	.161
Dublin	0.133	.000
Negotiated starting salary	0.077	.000
Equal Opportunities scale	0.013	.151
Equality Policy	0.018	.335
Extent Use Course Skills in Job	0.019	.047
Over-qualified	-0.064	.001
Under-qualified	0.004	.923
Best field for job	0.068	.026
Adequate field for job	0.038	.155
Another field better	0.011	.740
Commitment	0.010	.342
High Income	0.056	.002
Why took job – extrinsic	0.055	.007
Why took job – convenience	0.033	.228
Why took job – No choice	-0.036	.190

The influence of institutional level characteristics on earnings becomes much less significant when education, labour market experience and other factors are controlled. As mentioned above, the two gender composition variables become non-significant as do equality policy and perceptions of

equality; only working in very large firms, location in Dublin and negotiating starting salary continue to exert an independent influence on earnings.

The effect of the education-job match variables on earnings weakens somewhat when other characteristics are controlled but they still have a significant effect independent of education itself. Skill-level match still has a positive effect, but the negative impact for under-qualification disappears; a strong match between field of study and type of work continues to have a positive impact on earnings.

Finally, while work commitment no longer has a positive impact on earnings, placing a high value on extrinsic rewards (in both the longer term and in choosing current job) is still associated with higher levels of earnings.

We have tested these results to ensure that these results are not influenced by selection bias and they are found to be robust (see Appendix A). The differential rates of participation in the private sector for men and women could potentially be associated with differences in the unobserved ability of men and women in the private sector. A formal test of selection biases using a Heckman Selection Correction Model finds no significant selection effect. For further details see Appendix A.

Table 5.8: Change in Model Fit and Female Coefficient

Model	Adjusted R Square	Significance F Change	Female Coefficient
1 Female Only	.007	.003	-.059***
2 + Educational Characteristics	.138	.000	-.044**
3 + Labour Market Human Capital	.221	.000	-.033*
4 + Gender Composition	.222	.293	-.025
5 + Other Institutional Characteristics ¹	.301	.000	-.010
6 + Preference/Values	.316	.000	-.005
7 + Job/Education Match	.335	.000	-.006

¹ Industrial sector is excluded because it is too strongly correlated with field of study.

*** $p < .005$. ** $p < .05$. * $p < .10$.

5.7 Conclusions

In this chapter, we explored the gender pay gap found amongst graduates in the private sector applying a range of different explanations identified in previous research. The results suggest that there are four main causes behind this pay gap:

1. Differential returns to educational capital for male and female graduates;
2. Differential returns to employment experience for male and female graduates;
3. Gender differences in field of study, and differences in the rewards attached to these fields;
4. Negative impact of working in a female-dominated workplace, which is linked to field of study.

The first two results suggest the possibility of discriminatory practices or processes in the private sector of the labour market. Male graduates receive a greater return from their qualifications levels (in particular, postgraduate degrees) and from achieving first-class honours. This means the higher qualifications found among female graduates in the private sector do not translate into higher earnings. These differential returns cannot be accounted for by field of study as they persist even when field of study is controlled. Similarly, the greater reward attached to previous experience for men is another source of unexplained gender inequality. Since the level of match between job and education does not differ by sex, it is unlikely that men's previous experience was any more relevant than women's so it is difficult to account for these differential returns in productivity terms.

In the previous chapter, we found that, in the private sector, male graduates were more likely than female graduates to have negotiated a wage increase. This suggests one process through which differential returns to experience and educational qualifications arise. However, it does not explain why men are more likely to have negotiated pay increases.

The third and fourth of these results point to the importance of gender segregation in education and employment as a source of difference in the earnings of men and women. Field of study has a strong effect on earnings in general and on the gender wage gap. Therefore, part of the explanation for the gender pay gap is rooted in the education system and in earlier educational choices, sometimes made as far back as the junior cycle of secondary school. However, it should not necessarily be assumed that the returns to subjects can be justified in productivity terms or that the rewards attached to subjects are unconnected to the gendered nature of these fields. As argued in Chapter 1, the values attached to certain skills are in part socially and historically determined, with skills and occupations identified as 'female' being devalued (Crompton and Jones, 1984; Phillips and Taylor, 1980; Jenson, 1989; Walby, 1986). The negative impact of the proportion of women in the workplace on earnings also highlights the role of gender segregation in the pay gap, and again raises the question as to why female-typed occupations are paid less. In the final model, this effect becomes insignificant when subject is controlled as they are tapping into the same phenomenon.¹⁸

Finally, it is worth noting that some explanations of the gender pay gap were not supported by the data. The match between job and educational qualifications had a significant impact on earnings among graduates in the private sector but did not account for the pay gap, because the match was similar for men and women and there was no evidence of differential returns. Similarly, while preferences and work values had some influence on earnings, this did not affect the gender pay gap, because, while extrinsic work values were higher among men, work commitment was higher among women, so the benefits for these factors cancelled each other out.

¹⁸ If field of study is removed from the final model, proportion female becomes significantly negative again.

6. CONCLUSIONS

In this study, we have examined gender pay patterns in a very specific sector of the labour market. In 2004, we surveyed male and female graduates who received an award in 2001 and entered the labour market shortly thereafter. These are a highly educated group of mainly young people who have been in the labour market for only a short period and who, by and large, have not embarked upon family formation. In many ways, this is a sector of the labour market where we might least expect to find a gender pay gap, because we are comparing men and women with very similar levels of human capital as embodied in education and experience.

Previous research on the gender pay gap in Ireland and elsewhere has highlighted the crucial role of gender differentiation in caring responsibilities in contributing to the gender pay gap and has focused attention on issues such as childcare and other supports for working parents (Callan and Wren, 1994; Barrett *et al.*, 2000; Russell and Gannon, 2002). However, these studies have also routinely found a significant unexplained gap in male and female wages and have pointed to the role of segregation and exclusionary/discriminatory practices in the labour market. Recent graduates were selected for this study because they allow us to look beyond the story of differentiation in caring responsibilities and penalties for time out of the labour market and to focus instead on other factors. Our review of the literature identified five sets of processes which are relevant to earnings and to the gender pay gap which we examine in this study – educational human capital; labour market human capital; education/job match; institutional characteristics and work values. These capture the characteristics that employees bring with them to the labour market and the characteristics of the work environment itself, and the interaction between these factors, which will together determine earnings levels. By allowing us to focus on these additional factors and enabling us to study how gender differences emerge in the early career, the study also provides insights into gender pay issues more generally.

Most studies of the gender pay gap draw on multi-purpose household or employee surveys; however, the data for the current study come from a survey specifically designed to address this issue. We, therefore, have much richer information on factors such as educational human capital (grade, level, field of study), the extent to which educational skills are used on the job, and respondents' work values and job preferences. We also have more detailed institutional information than available in many surveys, including questions on the gender composition of the workforce, recruitment practices and promotion procedures.

6.1 Patterns of Rewards Among Male and Female Graduates

We look at two different measures of earnings – weekly and hourly – since each have differing advantages. In analysing the causes of gender pay differentials, it is conventional to concentrate on hourly rates of pay. Hourly wages because they are standardised provide a clear basis of comparison of men and women's wages. They also entail the most stringent test of pay differentials. Moreover, there are important differences between the hours of work typically worked by men and women, so standardising by hours worked

allows comparison on the basis of equivalent units. The use of hourly pay levels also permits easier comparison across groups, across countries and facilitates monitoring over time. However, hourly wage levels do not provide a fully adequate picture of earnings. Weekly wages (or annual) provide essential information about the actual incomes earned by individuals and thus serve as an important indicator of economic well-being. Given that many graduates are salaried employees it is not the case that earnings can simply be increased by working longer hours. Weekly pay may be a more accurate measure since respondents' estimates of hours worked per week are also subject to errors and therefore calculations of hourly pay are affected by these errors.

There is no hourly pay gap between male and female graduates found for the group as a whole. This compares to a national gender pay gap amongst all employees of 15 per cent recorded in 2000 (Fitz Gerald *et al.*, 2004), which suggests that, as anticipated, restricting the sample to recent entrants with third level qualifications and excluding most older employees with family responsibilities removes some of the established causes of gender pay inequalities. However, this overall equality in hourly pay disguises significant gender differences within different sectors of the labour market.

Just three years after graduation there is a gender pay gap of 8 per cent among graduates working in the private sector. This sector accounts for 74 per cent of male graduates and 59 per cent of female graduates. The absence of an overall hourly pay gap is due to the over-representation of female graduates in the public sector, where average pay levels are higher and average hours of work are lower than among private sector workers. Public sector employees work an average of 36.5 hours compared to 41 hours in the private sector, and on average earn over €6 per hour more than private sector workers. Therefore, the higher propensity of female graduates to enter the public sector raises the average hourly female wage and leads to the absence of an overall gender pay gap in *hourly* earnings. Within the public sector the pay gap between men and women is not significant, however, if we exclude teachers who report low hours and therefore high hourly pay, a gender pay gap of 7 per cent emerges for the rest of the public sector.

There are few significant differences in the size of the hourly gender pay difference between fields of study (partly because of small numbers within subject fields). The industrial sectors with the widest gender pay gaps are financial services, business activities and public administration. The survey results also show that the hourly pay gap is widest among those with diplomas and postgraduate degrees. Men with sub-degree diplomas earn 8 per cent more than women while men with postgraduate degrees earn 13 per cent more per hour than female postgraduates.

Our analyses of *weekly* pay show wider gaps in the resources of male and female graduates. Male graduates are found to earn 11 per cent more per week on average than female graduates. Weekly pay gaps are apparent at all award levels, except postgraduate diploma level, but are widest among those whose highest level of award is a sub-degree diploma and those with postgraduate degrees.

There are also significant gender differences in other forms of remuneration. Female graduates were significantly less likely to have received a bonus from their employer in the last twelve months (32 per cent of women compared to 42 per cent of men). The value of these bonuses was also lower for women than men. Among women who had received a bonus, the average value was €2,156 for the year, while the men received an average of €2,877. Like hourly pay, bonuses are strongly influenced by the sectoral location of male and female graduates, as they are largely confined to the private sector where male graduates are over-represented.

There is also some gender variation in other fringe benefits. The most valuable of employer non-cash benefits is likely to be an occupational pension. There is no difference in access to occupational pensions in the private sector

but men in the public sector are more likely to have this benefit than women. Men in the public sector were also more likely to be in receipt of free/subsidised meals than female public sector workers. Male graduates were also more likely to have access to a company car or van; this was not simply due to their greater representation in the private sector, although it is likely to reflect other sectoral differences. Controlling for public/private sector, there was no gender difference in access to (employer provided) private health insurance, subsidised loans or access to free/subsidised transport.

Perhaps it might be argued that women trade-off lower weekly pay (and, in the private sector, lower hourly pay) against other aspects of job quality such as security, promotion prospects or training opportunities. However, this does not appear to be the case. There is no significant difference in the proportion of male and female graduates on permanent contracts and a higher proportion of women feel that their job is insecure. This is particularly noticeable in the public sector and is due to the higher incidence of short-term contracts amongst entrants to the education and health/social work sectors. Men were somewhat more likely to have been promoted than women, this pattern is due to men's concentration in the private sector where promotion is more common, with no gender difference in promotion within the private sector. Men in both the public and private sector were more likely to believe they would be promoted in the next five years.

Finally, male graduates in the private sector were more likely to have received employer-provided training in the last three years. Therefore, where differences arise in these three additional job quality indicators, they favour male graduates.

6.2 Subjective Satisfaction With Rewards

The lower levels of weekly pay among female graduates and hourly pay among those in the private sector is reflected in respondents' subjective assessments of their earnings. Female graduates are less satisfied with their earnings and are more likely to agree that they earn less than they deserve. Therefore, there is little evidence that, among this highly educated group, women are more satisfied with worse objective conditions, even though high income is given less prominence in their work values (see below).

6.3 Explanations of Gender Differences in Earnings

In terms of explaining the patterns of gender differences in pay, we examined five sets of processes. These were examined descriptively for both public and private sector employees (in Chapters 3 and 4) and tested systematically in our models of pay among graduates in the private sector (Chapter 5).

EDUCATIONAL HUMAN CAPITAL

Studies of the total workforce have found that earnings in Ireland are strongly related to educational level (Barrett *et al.*, 2002; O'Connell, Barrett *et al.*, 2000). Although the sample we have chosen are all recent higher education graduates, there is still significant variation in educational characteristics and in the earnings returns associated with them. We found earnings among recent graduates are strongly related to the level of award, to the grade achieved, to subject and to the match between qualification and current job. The main gender difference was in subject choice; however, there were also some differences in level and grade of award. For example, women were more likely to have a postgraduate diploma while men were over-represented among those with sub-degree diplomas.¹⁹ Among those who recorded grades, women were more likely to have achieved an honours level grade than men (85 per cent

¹⁹ This information relates to highest award rather than the most recent award.

versus 77 per cent). Our analysis of the private sector pay gap found that there was a significant gender difference in the returns to award level and grade that favoured men, which is one factor contributing to the pay gap.

There were substantial differences in the earnings returns to field of study. While the returns to subject did not vary for men and women, the strong sex segregation of fields of study meant that 'subject' was found to play a significant role in the gender pay gap in the private sector. For example, the lower earnings for Arts/Humanities students in the private sector mainly affected female graduates while the higher returns to Engineering mainly accrued to male graduates. Differences in the rewards attached to fields of study do not necessarily perfectly reflect differences in the productivity of graduates in these fields. As argued in Chapter 1, the rewards attached to certain occupations and fields are also socially constructed and this process can be influenced by the gender composition of those who occupy the field. Returns to field of study are also influenced by the public/private sector wage differential; for example, higher rewards in the educational and health fields are associated with the concentration of these jobs in the public sector.

LABOUR MARKET HUMAN CAPITAL

Longer periods of general employment experience and longer tenure in the current job increased pay levels among graduates. Receipt of employer-provided training in the preceding two years also enhanced wage levels. Previous experience of unemployment of any duration was found to have a negative impact on earnings. There were few differences in the accumulated labour market experience of male and female graduates, so this could not account for the gender pay gap among private sector workers. Rather, there was evidence of differential rewards for the same characteristics. Specifically, men received a higher return for each month of employment experience. One labour market human capital characteristic that did differ by gender was the receipt of job training from the employer.

JOB/EDUCATION MATCH

The earnings returns to education are likely to be highest when there is a close fit between education and job. Our study included detailed measures of the match between current job and both the level and type of education. There was little difference in the degree of fit between education and job for male and female graduates. However the job/education match was found to be much stronger among public sector workers, which may account for some of the public sector wage premium. The earnings returns to education/job match in the private sector were the same for men and women so neither the distribution or impact of these factors could help explain the pay gap.

INSTITUTIONAL CHARACTERISTICS/DEMAND SIDE CHARACTERISTICS

It is clear from our description of gender pay patterns that a key institutional influence on graduate earnings is location in the public or private sector and this variable is highly gendered. Only a quarter of male graduates enter the public sector compared to 41 per cent of female graduates. Graduates in the public sector were found to have significantly higher earnings than those in the private sector. The wage premium for the public sector was slightly higher for women than men: the public/private ratio in hourly wages was 1.48 for women and 1.41 for men. This finding is consistent with other research by Casey (2004), which shows full-time workers in the public sector earn significantly more than those in the private sector, and by Boyle *et al.* (2004), which shows a significant public sector premium even when education and a wide range of personal and occupational characteristics are controlled. The

finding that the gender pay gap is much narrower in the public sector is also consistent with previous results on a wider group of employees in Ireland (Russell and Gannon, 2002).

The public/private distinction also had a strong bearing on other relevant institutional characteristics such as recruitment practices, incremental pay scales, formalised recruitment practices, presence of equality policies, and (perceived) equal opportunities (see below).

Even within the public/private sector divide, there are clear gender differences in industrial sector. Within the private sector, men are more likely to be located in manufacturing and construction than female graduates, while a higher proportion of women than men are employed in retail, the hospitality industry and financial services. Within the public sector, a greater proportion of male graduates are employed in public administration/defence while a greater proportion of female graduates are employed in health/social work. These industrial sector differences also have important implications for patterns of pay for men and women.

High levels of gender segregation were also evident from the results on gender composition. Amongst women 29 per cent worked in workplaces where all or nearly all employees were female, while 19 per cent of men worked in all/almost all-male work environments. Within the private sector, the proportion of women in the workplace was found to have a negative impact on earnings for both men and women, but of course it was women who were most likely to experience this wage penalty. It was found that this negative effect disappeared when field of study was controlled suggesting that these two measures capture different aspects of gender segregation in the labour market.

Other institutional/demand side factors that proved to be important for earnings were organisation size and location in Dublin; however, these variables did not impact on gender pay differentials. Recruitment procedures and promotion procedures were not significant when other institutional characteristics were controlled; however, having negotiated a starting salary continued to have a positive effect on earnings in the private sector. Equality policies were found to have a positive effect on earnings and to reduce the negative female wage coefficient in the private sector but once again this effect became insignificant when other factors were controlled.

JOB PREFERENCES AND WORK VALUES

The research found that there were a number of significant gender differences in work values among graduates. Female graduates were more likely to be committed to work than male graduates. Men were more likely to identify high income and good opportunities for advancement as important work values in general, while women were more likely to mention intrinsic values (interesting work) and social values (benefit to society). Similarly, when reasons for taking the current job were examined, these were also found to be gendered with male graduates more commonly mentioning extrinsic rewards (pay, security, promotions, fringe benefits) and women more likely to mention intrinsic rewards and convenience factors. In general terms, women were not penalised for this focus on non-material rewards since holding such work values was associated with entry to the public sector where earnings were higher. Within the private sector, those who emphasised material rewards had higher earnings levels; however, this male advantage was cancelled out by the positive effect of commitment on earnings that benefited women.

The smaller size of hourly and weekly gender pay differentials among recent graduates compared to all employees suggests that continued policy effort needs to be focused on addressing the wage penalty around motherhood as

identified in previous research. However, the findings suggest that there are certain issues concerning early career integration that also require policy attention.

Inequality in access to employer-provided training, differential returns to educational qualifications and to experience (in the private sector), point to the possible operation of discriminatory processes. It is not possible with the current data to establish the precise mechanisms that are involved but previous more qualitative research have pointed to employer perceptions about the suitability of women for certain jobs, lack of visibility of women's work within organisations (a greater distance from the centres of power), and the social devaluation of jobs occupied by women (see discussion in Chapter 1). Others have suggested that factors such as lack of confidence and lower aspirations would prevent women putting themselves forward for advancement and training opportunities. Lack of ambition or confidence is probably less relevant among our sample of young highly educated graduates. There was only marginally less focus on promotion opportunities in women's decisions to take their current job (12 per cent of men compared to 9 per cent of women mentioned this as the most important factor).

Gender inequality in access to employer sponsored training has also been found in previous Irish research (O'Connell, 1999, p. 26). O'Connell's finding that women were more likely to self-finance job-related training suggests a problem of access rather than motivation to participate. There is currently significant national policy interest in increasing employer training as part of promoting a knowledge-based economy. It is important that policy initiatives in this area are monitored from a gender equality perspective to ensure equality of access.

The lower weekly gender pay gap in the public sector and the absence of an hourly pay differential in the public sector, combined with the greater perception of equal opportunities among graduates working in the public sector, suggest that certain institutional features of this sector promote greater gender equality. These features include formalised transparent employment practices such as formalised pay scales and promotion practices. Equality policies were more likely to be present in the public sector (see also O'Connell and Russell, 2005) and were found to reduce pay differentials in the private sector when other controls were not present in the models. Adoption of formalised human resource practices and greater attention to equality policies in the private sector may therefore reduce gender inequalities in that sector. Despite a common legislative framework, there are clearly differences in employees' experiences of equal opportunities at an organisational level. The results highlight the need for national level legislation to be backed up by organisation level practices including tracking of promotions. Equality Audits carried out on the direction of the Equality Authority can assist organisations in identifying problem areas and can recommend appropriate actions.

The results relating to bonuses suggest that there is a need to monitor the receipt of such payments from an equality perspective. It appears that these discretionary and often non-transparent payments create more space for inequality.

Gender differences in field of study emerge as a key influence on the pathways taken by male and female graduates in their early careers and hence on their pay levels. Subject choice within higher education reflects the culmination of a longer term process of choices made throughout a student's second level career (Smyth and Hannan, 2002). Gender differences in field of study therefore reflect variation in access to related subjects at school level but, more importantly, relate to differences in attitudes to subjects and occupations formed at a relatively early stage. These differences have important implications for policy development. Greater equity in later subject choice could be facilitated by ensuring access to a broad range of subjects for male and female students across different types of schools, facilitating less

traditional subject choices through the timetabling of subject options and ensuring early access to advice and guidance regarding subjects and careers. The recommendations outlined by Darmody and Smyth's (forthcoming) study on take-up of technological subjects in school are pertinent here and require both national and school level responses. Recommended actions at school level include the provision of taster programmes so that students have at least some exposure to non-traditional subjects. Darmody and Smyth also recommend provision of career guidance early in the junior cycle, supported by the development of user-friendly material from the Department of Education and Science and the NCCA on different subjects for dissemination to parents and students.

Similar attention should be focused on subject choices at the point of transition into third level education. Both schools and third level institutions have a responsibility to ensure students have access to information on a comprehensive range of subjects. Advice on 'non-traditional' subjects and careers is particularly important as information on these subjects may not filter through informal channels.

While field of study has a strong influence on career choice the routes taken by graduates are varied and not pre-determined. Current guidance provision varies across the Institutes of Technology and Universities.²⁰ Consideration should be given to expanding the role of the career guidance services of third level institutions with a view to widening graduate's career options and providing them with information and advice in relation to initial salary negotiations, and early career progression where this is not currently available. The specifics of these issues are outside the scope of the current study and further research on the role of third level institutions regarding career advice and assistance would be beneficial.

It should be noted that not all segregation has negative outcomes for women's pay or increases gender pay inequality. The concentration of female graduates in the public sector enhances their earnings levels and reduces the gender pay gap, at least at this stage of their careers.

6.5 Longer Term Outcomes?

It is also worth speculating on the possible evolution of gender pay patterns amongst this group of graduates. There are a number of reasons why we would expect the pay gap among these graduates to widen over time. First, the higher returns to labour market experience found in the private sector would lead to a widening gap over time even if no divergence occurs in the level of participation of male and female graduates. Second, we might expect the earnings gap in favour of public sector workers to be widest in the early career, since the levels of earnings in the public sector are high but are more compressed (the public sector premium is present among the broader population of employees but is lower than that found amongst recent graduates).²¹ Therefore, the positive impact of the concentration of women in the public sector may weaken over time. Finally, as this cohort ages and enters the period of family formation, the deeply entrenched gender differences in caring and the well-documented effects this has on gender pay differentials are likely to emerge. Mothers with third level education are found to take shorter breaks from employment following childbirth than other groups; however, any gender difference in participation would lead to a widening of the gender pay gap.

²⁰ National Centre for Guidance in Education Website www.ncge.ie.

²¹ See Boyle *et al.* (2004).

6.6 Conclusions

The current study, while concentrating on a very specific sector of the labour market, also provides insights into the roots of gender pay patterns more generally. We see that a number of important factors such as gender segregation are set in place early in the career before women have children and despite high levels of education. Indeed, the field of study results show that the roots of segregation precede labour market entry. Similarly, differential returns to experience exist before women have taken substantial time out of the labour market for child-rearing purposes. By revealing such patterns amongst a highly educated group of recent labour market entrants, the study highlights that, in addition to addressing the motherhood wage penalty identified by previous research, there is a need to focus on the processes of early career integration and career choices if gender pay gaps are to be reduced.

REFERENCES

- BANDURA, A., C. BARBARANELLI, G. V. CAPRARA, and C. PASTORELLI, 2001. "Self-Efficacy Beliefs as Shapers of Children's Aspirations and Career Trajectories", *Child Development*, Vol. 72, No. 1, pp. 187-206.
- BARRETT, A., T. CALLAN, A. DORIS, D. O'NEILL, H. RUSSELL, O. SWEETMAN and J. McBRIDE, 2000. *How Unequal? Men and Women in the Irish Labour Market*, Dublin: Oaktree Press in association with The Economic and Social Research Institute.
- BARRETT, A., J. FITZ GERALD and B. NOLAN, 2002. "Earnings Inequality, Returns to Education and Immigration into Ireland", *Labour Economics*, Vol. 9, pp. 665-680.
- BECKER, G.S., 1985. "Human Capital, Effort and the Sexual Division of Labor", *Journal of Labor Economics*, Vol. 3, No. 1.
- BERGIN, A., J. CULLEN, D. DUFFY, J. FITZ GERALD, I. KEARNEY, D. McCOY, 2003. *Medium-Term Review 2003-2010*. Dublin: The Economic and Social Research Institute.
- BOYLE, G., R. McELLIGOTT, and J. O'LEARY, 2004. "Public-Private Wage Differentials in Ireland 1994-2001", ESRI *Quarterly Economic Commentary*, Special Article. Summer, Dublin: The Economic and Social Research Institute.
- BUCHMANN, M. and M. CHARLES, 1995. "Organizational and institutional factors in the process of gender stratification: comparing social arrangements in six European countries", *International Journal of Sociology*, Vol. 25, pp. 66-95.
- CALLAN, T. and A. WREN, 1994. *Male-Female Wage Differentials: Analysis and Policy Issues*, General Research Series, No. 163, Dublin: The Economic and Social Research Institute.
- CASEY, B., 2004. "An Economy Wide Perspective on Earnings Data in Ireland, ESRI *Quarterly Economic Commentary*, Spring, Dublin: The Economic and Social Research Institute.
- COLLINSON, D.L., D. KNIGHTS and M. COLLINSON, 1990. *Managing to Discriminate*. London: Routledge.
- CORCORAN, T., G. HUGHES, J.J. SEXTON, 1996. *Occupational Forecasts 1996*. Dublin: The Economic and Social Research Institute.
- CROMPTON, R., G. JONES, 1984. *White Collar Proletariat: Deskillling and Gender in Clerical Work*, London: Macmillan Press.
- DARMODY, M. and E. SMYTH (forthcoming), *Gender and Subject Choice: Take Up of Technological Subjects in Second Level Education*, Dublin: Liffey Press.
- DEPARTMENT OF EDUCATION AND SCIENCE, 2003. *Number of students in third-level institutions*. (<http://www.heai.ie>)
- ECCLES, J.S., 1994. "Understanding Women's Educational and Occupational Choices. Applying the Eccles *et al.*, Model of Achievement-Related Choices", *Psychology of Women Quarterly*, Vol. 18, No. 4, pp. 585-609.
- ELIAS, P., K. McKNIGHT, K. PURCELL and C. SIMM, 1999. *Moving On: Graduate Careers Three Years After Graduation*, Manchester: Careers Service Unit.
- ELIAS, P. and K. PURCELL 2004. *The Earnings of Graduates in Their Early Careers*, Researching Graduate Careers Seven Years On, Research Paper No. 5, Employment Studies Research Unit/Warwick Institute for Employment Research.
- ENGLAND, P., 2000. "The Devaluation of Women's Work: A comment on Tam", *American Journal of Sociology*, Vol. 105, No. 6, pp. 1741-1760.
- ETHINGTON, C.A. and L.M. WOLFLE, 1988. "Women's Selection of Quantitative Undergraduate Fields of Study: Direct and Indirect Influences", *American Educational Research Journal*, Vol. 25, No. 2, pp. 157-175.
- FAHEY, T., H. RUSSELL and E. SMYTH, 2000. "Gender Equality, Fertility Decline and Labour Market Patterns among Women in Ireland" in B. Nolan, P.J. O'Connell and C.T. Whelan (eds.), *From Bust to Boom?: The Irish Experience of Growth and Inequality*, Dublin: IPA/ESRI.
- FITZ GERALD, J., P.J. O'CONNELL and E. MORGENROTH (eds.), 2004. *Mid-Term Evaluation of The National Development Plan*. Dublin: The Economic and Social Research Institute.

- FITZPATRICK ASSOCIATES and P.J. O'CONNELL, 2005. *A Review of Higher Education Participation in 2003*. Dublin: The Higher Education Authority.
- FONTAINE, J. and D. OHANA, 1999. "Gender Strategies and Social Representations: the choice of scientific post-*baccalauréat* streams in France", *European Journal of Education*, Vol. 34, No. 4, pp. 413-424.
- FOUAD, N.A., 1994. "Annual Review 1991-1993: Vocational Choice, Decision-Making, Assessment, and Intervention", *Journal of Vocational Behavior*, Vol. 45, pp. 125-176.
- GANGL, M., 2003a. "The Structure of Labour Market Entry in Europe: A Typological Analysis" in Walter Müller and Markus Gangl (eds.), *Transitions from Education to Work in Europe*, Oxford: Oxford University Press.
- GANGL, M., 2003b. "Explaining Change in Early Career Outcomes" in Walter Müller and Markus Gangl (eds.), *Transitions from Education to Work in Europe*, Oxford: Oxford University Press.
- GANNON, B. and B. NOLAN, 2004. "Inter-industry Wage Differentials in Ireland, *The Economic and Social Review*, Vol. 35, No. 2.
- GASH, V. and P.J. O'CONNELL, 2000. *The Irish Graduate Labour Market*, Books and Monographs No. 156, Dublin: The Economic and Social Research Institute.
- GASKELL, J., 1984. "Gender and Course Choice: The Orientation of Male and Female Students", *Journal of Education*, Vol. 166, No. 1, pp. 89-102.
- GERSHUNY, J., *Time and the Socioeconomic Atom*. The Geary Lecture 2003. Dublin: The Economic and Social Research Institute.
- GINN, J., S.L. ARBER, *et al.*, 1996. "Feminist Fallacies: a reply to Hakim on Women's Employment", *British Journal of Sociology*, Vol. 47, No. 1, pp. 167-174.
- HAKIM, C., 1991, "Grateful Slaves and Self-Made Women: Fact and Fantasy in Women's Work Orientations", *European Sociological Review*, Vol. 7, No. 2, pp. 101-121.
- HAKIM, C., 1996. *Key Issues in Women's Work: Female Heterogeneity and the Polarisation of Women's Employment*, London: Continuum Press.
- HAKIM, C., 2002, "Lifestyle Preferences as Determinants of Women's Differentiated Labor Careers", *Work and Occupations*, Vol. 29, No. 4, pp. 428-458.
- HANNAN, D.F., B. McCABE, S. McCOY, 1998. *Trading Qualifications for Jobs*. Dublin: Oak Tree Press in association with The Economic and Social Research Institute.
- HECKMAN, J.J., 1980. "Sample Selection Bias as a Specification Error with an Application to the Estimation of Labor Supply Functions" in J. P. Smith (ed.), *Female Labor Supply: Theory and Estimation*, Princeton: Princeton University Press.
- HELWIG, A.A., 1998. "Gender-Role Stereotyping: Testing Theory with a Longitudinal Sample", *Sex Roles*, Vol. 38, No. 5/6, pp. 403-423.
- HENWOOD, F., 1998. "Engineering Difference: discourses on gender, sexuality and work in a college of technology", *Gender and Education*, Vol. 10, No. 1, pp. 35-49.
- HIGHER EDUCATION AUTHORITY [HEA] 2002. *First Destinations Report*. Dublin: HEA.
- HIGHER EDUCATION AUTHORITY, 2003. *What do Graduates do? (2001 First Destinations Report)* Dublin: HEA.
- HUGHES, G., 2002. "Employment and Occupational Segregation" in *Impact Evaluation of the European Employment Strategy in Ireland*, Dublin: Department of Enterprise, Trade and Employment.
- INDECON, 2002. *Study of the Gender Pay Gap at Sectoral Level in Ireland*, Dublin: Indecon.
- JENSON, J., 1989. "The Talents of Women, the Skills of Men: Flexible Specialization and Women" in S. Wood (ed.), *The Transformation of Work?* London: Unwin Hyman.
- JONSSON, J.O., 1999. "Explaining sex differences in educational choice: an empirical assessment of a rational choice model", *European Sociological Review*, Vol. 15, No. 4, pp. 391-404.
- KARLIN, C.A., P. ENGLAND, and M. RICHARDSON, 2002. "Why do 'Women's Jobs' have Low Pay for their Educational Level?", *Gender Issues*, Vol. 20, No. 4, pp. 3-22.
- LAURSEN, Per F., 1993. "Students' Choice and Social Selection", *Scandinavian Journal of Educational Research*, Vol. 37, No. 4, pp. 279-291.

- MILLER, L. and J. BUDD, 1999. "The Development of Occupational Sex-role Stereotypes, Occupational Preferences and Academic Subject Preferences in Children at Ages 8, 12 and 16", *Educational Psychology*, Vol. 19, No. 1, pp. 17-35.
- MÜLLER, W. and M. WOLBERS, 2003. "Educational Attainment in the European Union" in Walter Müller and Markus Gangl (eds.), *Transitions from Education to Work in Europe*, Oxford: Oxford University Press.
- NATIONAL CENTER FOR EDUCATION STATISTICS [NCES], 2000. *Entry and Persistence of Women and Minorities in College Science and Engineering Education*. Research and Development Report, US Department of Education, Office of Educational Research and Improvement.
- O'CONNELL, P.J., 1999. "Adults in Training: An International Comparison of Continuing Education and Training", OECD Centre for Educational Research and Innovation, WD(99)1. Paris: OECD.
- O'CONNELL, P.J. and H. RUSSELL, 2005. *Equality at Work? Workplace Equality Policies, Flexible Working Arrangements and the Quality of Work*, Equality Research Series, Dublin: The Equality Authority.
- O'CONNOR, P., 1995. Barriers to Women's Promotion in the Health Boards. Limerick: MWHB.
- O'CONNOR, P., 1996. "Organisational Culture as a Barrier to Women's Promotion", *The Economic and Social Review*, Vol. 27, No. 3.
- OECD, 2004. *Education at a Glance: OECD Indicators*. Paris: Centre for Educational Research and Innovation, OECD.
- OLSEN, W. and S. WALBY, 2004. *Modelling Gender Pay Gaps*, Equal Opportunities Commission Working Paper Series No. 17, Manchester: Equal Opportunities Commission.
- PHILLIPS, A. and B. TAYLOR, 1980. "Sex and Skill: Notes Towards a Feminist Economics", *Feminist Review*, No. 6.
- PLASMAN, A. et al., 2001. *Indicators on Gender Pay Equity*. Luxembourg: European Commission.
- POLACHEK, S.W., 1981. "Occupational Self-Selection: A Human Capital Approach to Sex Differences in Occupational Structure", *The Review of Economics and Statistics*, Vol. 63, No. 1, pp. 60-69.
- PURCELL, K. and P. ELIAS, 2004. *Higher Education and Gendered Career Development*, Researching Graduate Careers Seven Years On, Research Paper No. 4, Employment Studies Research Unit/Warwick Institute for Employment Research.
- ROBINSON, J. and A. BOSTROM, 1994. "The overestimated workweek? What time diary measures suggest", *Monthly Labor Review*, pp. 11-23.
- RUANE, F. and J.M. SUTHERLAND, 1999. *Women in the Irish Labour Force*, Dublin: Employment Equality Agency.
- RUBERY, J. and C. FAGAN, 1995. "Gender segregation in societal context," *Work, Employment and Society*, Vol. 9, pp. 213-240.
- RUSSELL, H., 1996. *Women's Experience of Unemployment*. Doctoral Thesis, University of Oxford.
- RUSSELL, H. and B. GANNON, 2002. "The Gender Wage Gap in Ireland", *Impact Evaluation of the European Employment Strategy in Ireland*, Dublin: Department of Enterprise, Trade and Employment.
- SEXTON, J.J., G. HUGHES, and C. FINN, 2002. *Occupational Employment Forecasts 2015*, ESRI/FÁS Manpower Forecasting Studies Report No. 10, Dublin: FÁS/ESRI.
- SIMON, H. and H. RUSSELL, 2004. "Firms Gender Pay: A Cross Comparison, Pay Inequality and Economic Performance", Working Paper Series, London: London School of Economics, <http://cep.lse.ac.uk/piep/papers>
- SMYTH, E., 2002. "Gender differentiation and early labour market integration across Europe" in Irena Kogan and Walter Müller (eds.), *School-to-Work Transitions in Europe: Analyses of the EULFS 2002 Ad Hoc Module*, Mannheim: MZES.
- SMYTH, E. and D.F. HANNAN, 2000. "Education and Inequality" in B. Nolan, P.J. O'Connell and C.T. Whelan (eds.), *From Bust to Boom?: The Irish Experience of Growth and Inequality*, Dublin: IPA/ESRI.
- SMYTH, E. and C. HANNAN, 2002. *Who Chooses Science? Subject Choice in Second-level Schools*, Dublin: Liffey Press in association with The Economic and Social Research Institute.
- SMYTH, E., D. BYRNE, (forthcoming). *The Potential Supply of Mature Students to Higher Education*. Dublin: Higher Education Authority.
- WALBY, S., 1986: *Patriarchy at Work: Patriarchal and Capitalist Relations in Employment*, Cambridge: Polity Press.
- WILLIAMS, R., 2004. "An introduction to the UK Time Use Survey from a labour market perspective", *Labour Market Trends*.

APPENDIX A: TEST OF SELECTION EFFECTS FOR ENTRY INTO THE PRIVATE SECTOR

Given the unequal distribution of male and female graduates in the public and private sector it might be argued that the gender differences in pay found in the private sector may be due to unobserved selection effects. This argument assumes that entry into the higher paid public sector is preferred to the private sector (and that all graduates are competing in the same labour market). As women are more successful in competing for jobs in the public sector, the 'less preferable' private sector is populated by a larger proportion of the lower tail of the ability distribution of women than men. If pay differentials are influenced by unobserved ability, then the biased gender composition of the private sector would give rise to lower earnings among women.

We test this effect in two ways. First, we compare the observed ability levels among those entering the public and private sectors. The *Graduate Follow-Up Survey 2004* contains a wide range of measured ability variables including grade level, educational award level, communication skills, language competencies, and computer competency.²² If the *observed* ability of male and female graduates in the private sector are the same this undermines the assumption that unobserved ability is unequally distributed. It also tests the assumption that the more 'able' graduates enter the public sector.

A second test of selection effects is conducted using a Heckman Selection Correction Model. Which is outlined below.

Tables A1 to A4 show that on the five measures tested there are few differences in the ability levels of male and female graduates in the private sector. Where differences do emerge on grade levels and foreign language skills the results suggest that women in the private sector have higher ability levels than men. Therefore, it seems unlikely that men in the private sector have higher levels of unobserved ability. Nor do the results unanimously support the assumption that the more able will choose to enter the public sector – those in the public sector have higher levels of qualifications and higher communication/analytical skills but those in the private sector have higher computer skills. There is no significant difference in grade levels between the two sectors.

²² These competencies are self assessed.

Table A1: Award Level by Sector and Gender

	Private Sector		Public Sector	
	Male	Female	Male	Female
Certificate	5.0	5.4	5.0	4.0
Diploma	11.1	9.2	5.5	5.0
Degree	56.5	53.6	30.0	34.5
Post grad diploma	11.7	15.7	21.4	29.9
Post grad degree	15.7	16.0	38.2	26.6
Significance	100.0	100.0	100.0	100.0
Total	n.s.		p = .016	

Table A2: Grade Levels by Sector and Gender

	Private Sector		Public Sector	
	Male	Female	Male	Female
Pass	22.3	15.7	22.9	14.9
Honours	56.7	64.3	59.4	62.8
First Class Honours	21.0	20.0	17.7	22.3
Total	100	100	100	100.0
Significance	p=.006		p=.051	

Excludes those who said not applicable – i.e. a high proportion of postgraduate degree (30 per cent) 12 per cent overall.

Table A3: Communication Skills Mean Score by Sector and Gender

		Mean	N	Significance
Private	Male	3.67	649	n.s.
	Female	3.73	692	
Public	Male	3.88	224	n.s.
	Female	3.87	483	

Table A4: Language and Computer Skills by Sector and Gender

	Language Proficiency				Computer Skills			
	Private		Public		Private		Public	
	Male	Female	Male	Female	Male	Female	Male	Female
Not at all	48.0	46.3	51.9	52.9	2.2	2.6	4.6	7.3
2	29.9	20.1	24.8	18.2	8.5	10.6	11.9	16.9
3	12.4	17.1	11.2	15.0	29.5	29.6	34.2	29.7
4	6.3	9.6	7.0	9.3	37.7	38.0	32.9	29.7
Great extent	3.3	6.9	5.1	4.7	22.2	19.2	16.4	16.3
	100.0	100.0	100	100	100.0	100.0	100	100.0
Significance	P<.001		n.s		n.s.		n.s.	

Skills on completion of third level education.

A more technical test of possible selection effects is carried out using a Heckman Selection Test. The Heckman selection model consists of two equations. First there is a selection model that estimates the probability of working in the private versus the public sector. Second, there is a regression model of wages in the private sector. Estimating the 2-step model simultaneously allows us to correct for the influence of any unobserved variables that could influence both working in the private sector and earnings, which, if omitted, would generate correlated errors and therefore biased estimates of the coefficients

The Heckman selection model allows us to use information from those who do not work in the private sector to improve the estimates of the parameters in the regression model. The Heckman selection model provides consistent, asymptotically efficient estimates for all parameters in the model.

Estimated parameters from a model of participation in the private versus the public sector are used to calculate the inverse Mills' Ratio and this is then included as a variable in the wage equation for private sector workers. If the inverse Mills' Ratio is significant this indicates that workers in the private sector have unobserved characteristics that influence their wage rates. The model results reported in Table A5 show that the inverse Mills Ratio is not significant and therefore our results are not biased by selection effects. Moreover, the pattern of results in the wage equation including the selection correction is very similar to those in the uncorrected model presented in Chapter 5 (Table 5.7) with some reduction in the effect of field of study and values on wages.

Table A5: Heckman Selection Correction Model of Log Hourly Wages

	Coef.	S.E	Significance
Female	0.004	.021	.863
Diploma	0.022	.058	.706
Degree	0.187	.048	.000
Postgraduate Diploma	0.197	.048	.000
Postgraduate Degree	0.269	.047	.000
Other Award Level	0.086	.115	.455
Any Additional Professional Qualifications	-0.025	.024	.298
Honours	0.010	.026	.693
First class honours	0.059	.030	.050
Grade Not Applicable	0.005	.038	.892
Analytic/Communication Skills Score	0.026	.014	.068
Science	0.085	.045	.056
Engineering, Architecture, Planning	0.051	.053	.336
Social Science	0.218	.112	.052
Business	-0.063	.055	.253
Computers & IT	0.031	.051	.540
Medicine, Nursing & Veterinary	0.425	.139	.002
Law	-0.067	.059	.259
Education	0.096	.109	.379
Other field	0.006	.064	.931
Months in Current Job	0.004	.001	.000
Months Employed Excluding Current Job	0.002	.000	.000
Previous unemployment	-0.035	.017	.042
Trainee in Job Title	-0.167	.035	.000
Any additional Employer Training in last 2 years	0.029	.017	.090
Proportion female	-0.012	.009	.175
Female boss	-0.026	.019	.164
Organisation size 20-99	0.039	.029	.177
Organisation size 100-499	0.039	.030	.193
Organisation 500+	0.119	.027	.000
Organisation Size don't know	-0.004	.036	.910
TU member	0.038	.027	.154
Dublin	0.132	.017	.000
Negotiated starting salary	0.076	.021	.000

Table A5: Heckman Selection Correction Model of Log Hourly Wages

	Coef.	S.E	Significance
Equal Opportunities scale	0.015	.009	.106
Equality Policy	0.017	.018	.342
Commitment	0.011	.011	.301
High Income	0.038	.026	.144
Why took job – extrinsic	0.054	.021	.009
Why took job – convenience	0.030	.027	.269
Why took job – No choice	-0.046	.029	.113
Extent Use Course Skills in Job	0.019	.009	.036
Over-qualified	-0.062	.019	.001
Under-qualified	0.005	.037	.895
Best field for job	0.067	.030	.025
Adequate field for job	0.039	.026	.136
Another field better	0.011	.032	.740
Constant	1.867	.131	.000
<i>Participation in Private Sector</i>			
Female	-0.178	.075	.018
Diploma	0.539	.209	.010
Degree	0.388	.171	.023
Postgraduate Diploma	0.105	.184	.567
Postgraduate Degree	-0.011	.178	.949
Other Award Level	0.135	.462	.769
Additional professional qualification	0.258	.076	.001
Grade Not Applicable	-0.149	.132	.260
Honours	0.104	.104	.318
First class honours	0.033	.123	.787
Science	0.390	.126	.002
Engineering, Architecture, Planning	0.604	.137	.000
Social Science	-0.936	.169	.000
Business	0.727	.112	.000
Computers & IT	0.549	.130	.000
Medicine, Nursing & Veterinary	-1.139	.218	.000
Law	0.176	.202	.383
Education	-0.927	.162	.000
Other field	0.366	.223	.100
Analytic/Communication Skills Score	-0.095	.052	.066
High Income important	0.312	.078	.000
Social Values Important	-0.303	.087	.000
Why took job – extrinsic	0.012	.083	.885
Why took job – convenience	0.082	.102	.419
Why took job - No choice	0.158	.104	.130
Constant	0.160	.279	.567
Inverse Mills' Ratio	-0.112	0.123	.362

APPENDIX B
QUESTIONNAIRE



The Economic and Social Research Institute

4 Burlington Road Dublin 4

Tel: (01) 6671525 Fax: (01) 6686231

GRADUATE FOLLOW-UP SURVEY

STRICTLY CONFIDENTIAL

The Economic and Social Research Institute (ESRI) has been commissioned by the Department of Justice, Equality and Law Reform to undertake a study of recent graduates to examine their early labour market experiences. The survey is concerned with your work history since graduation; your job-search activities; recruitment procedures; and various aspects of the nature of your current employment.

All of the information collected will be treated in the strictest confidence and is entirely anonymous. As you can see the questionnaire does not contain your name, address or any other information which can identify you or associate you with the information you provide.

We are relying on your help in completing the survey to assist policy development in this area.

The questionnaire has 5 sections as follows:

- | | |
|------------------|--|
| Section A | Education and Professional Qualifications (Questions 1 - 5, pp 2 - 4) |
| Section B | Work Values & Labour Force Status (Questions 6 - 10, pp 4 - 5) |
| Section C | Current Job (Questions 11-66, pp 5-12) |
| Section D | Employment History (Questions 67 - 76, pp 13-14) |
| Section E | Background Demographic Details (Questions 77 - 83, page 14) |

Please work systematically through each section. Your assistance is greatly appreciated.

**PLEASE RETURN THE COMPLETED QUESTIONNAIRE TO THE ESRI IN THE
ENCLOSED PREPAID ENVELOPE.**

Section A. Education

HIGHER EDUCATION AWARDS

Q1. Please provide information on all higher education awards you HAVE RECEIVED OR ARE CURRENTLY WORKING TOWARDS (Please complete one row in respect one row in respect of each course, starting with the most recent – if you have taken more than 3 courses, please answer in respect of the 3 most recent).

	A. University/college	B. Name of Award (e.g. Cert, Diploma, BA, MSc, PhD etc.)	C. Level of Award	D. Was this:	E. Start and End dates	F. Full time Or Part-time?	G. Field of Study	H. If awarded in Arts, Science or Engineering please specify subjects.
Most Recent			Honours <input type="checkbox"/> ₁ 1 st <input type="checkbox"/> ₂ 2 nd <input type="checkbox"/> ₃ 3 rd <input type="checkbox"/> ₄ Pass <input type="checkbox"/> ₅ Not applicable <input type="checkbox"/> ₆	Certificate <input type="checkbox"/> ₁ Undergrad diploma <input type="checkbox"/> ₂ Undergrad degree <input type="checkbox"/> ₃ Post grad diploma <input type="checkbox"/> ₄ Post grad Degree <input type="checkbox"/> ₅ Other <input type="checkbox"/> ₆	Start date: ____ ____ month year End date: ____ ____ month year On-going <input type="checkbox"/> ₁	Full-time <input type="checkbox"/> ₁ Part-time <input type="checkbox"/> ₂	Insert relevant code (01-16) from Box A below Code: _____	
Second Most Recent			Honours <input type="checkbox"/> ₁ 1 st <input type="checkbox"/> ₂ 2 nd <input type="checkbox"/> ₃ 3 rd <input type="checkbox"/> ₄ Pass <input type="checkbox"/> ₅ Not applicable <input type="checkbox"/> ₆	Certificate <input type="checkbox"/> ₁ Undergrad diploma <input type="checkbox"/> ₂ Undergrad degree <input type="checkbox"/> ₃ Post grad diploma <input type="checkbox"/> ₄ Post grad Degree <input type="checkbox"/> ₅ Other <input type="checkbox"/> ₆	Start date: ____ ____ month year End date: ____ ____ month year On-going <input type="checkbox"/> ₁	Full-time <input type="checkbox"/> ₁ Part-time <input type="checkbox"/> ₂	Insert relevant code (01-16) from Box A below Code: _____	
Third Most Recent			Honours <input type="checkbox"/> ₁ 1 st <input type="checkbox"/> ₂ 2 nd <input type="checkbox"/> ₃ 3 rd <input type="checkbox"/> ₄ Pass <input type="checkbox"/> ₅ Not applicable <input type="checkbox"/> ₆	Certificate <input type="checkbox"/> ₁ Undergrad diploma <input type="checkbox"/> ₂ Undergrad degree <input type="checkbox"/> ₃ Post grad diploma <input type="checkbox"/> ₄ Post grad Degree <input type="checkbox"/> ₅ Other <input type="checkbox"/> ₆	Start date: ____ ____ month year End date: ____ ____ month year On-going <input type="checkbox"/> ₁	Full-time <input type="checkbox"/> ₁ Part-time <input type="checkbox"/> ₂	Insert relevant code (01-16) from Box A below Code: _____	

BOX A -- CODES FOR FIELD OF STUDY (Col G above)

Arts/Humanities (including Art)	01	Commerce & Business Studies	05	Law	09	Architecture/Planning	13
Science	02	Computing/Information Technology	06	Agriculture	10	Food Science & technology	14
Engineering	03	Medicine & Dentistry	07	Education	11	Tourism/Hotel and Catering/Sports and Leisure	15
Social sciences	04	Paramedical Studies & Nursing	08	Veterinary medicine	12	Other	16



PROFESSIONAL QUALIFICATIONS

Q2. Apart from the higher education course outlined in Q1, please record details (if relevant) on any professional qualification which you have ever studied for since leaving full-time education (e.g. banking, insurance, nursing qualification, accounting, law, management)? If more than one please start with the most recent.

	Name of Institution/College	Field of study (please specify as fully as possible)	Start and End dates	Full time Or Part-time?	Was course paid for by your employer?	Is this qualification of use in carrying out your current job?
67 Most Recent			Start date: ____ ____ month year End date: ____ ____ month year On-going <input type="checkbox"/> ₁ Stopped before completion <input type="checkbox"/> ₂	Full-time <input type="checkbox"/> ₁ Part-time <input type="checkbox"/> ₂	Paid for <input type="checkbox"/> ₁ Not paid for <input type="checkbox"/> ₂ <i>If paid for was it</i> By current employer <input type="checkbox"/> ₁ or Previous employer <input type="checkbox"/> ₂	Yes <input type="checkbox"/> ₁ No <input type="checkbox"/> ₂
Second Most Recent			Start date: ____ ____ month year End date: ____ ____ month year On-going <input type="checkbox"/> ₁ Stopped before completion <input type="checkbox"/> ₂	Full-time <input type="checkbox"/> ₁ Part-time <input type="checkbox"/> ₂	Paid for <input type="checkbox"/> ₁ Not paid for <input type="checkbox"/> ₂ <i>If paid for was it</i> By current employer <input type="checkbox"/> ₁ or Previous employer <input type="checkbox"/> ₂	Yes <input type="checkbox"/> ₁ No <input type="checkbox"/> ₂

Q3. While you were enrolled in full-time third-level education, did you take part in any WORK PLACEMENTS as part of this course/these courses?

Yes ₁ No ₂

Q4. While you were enrolled in full-time third-level education, did you hold a part-time job or jobs (excluding work placements)?

Yes, during term-time and holidays ₁
 Yes, during holidays only ₂
 Yes, during term-time only ₃
 No ₄

Q5. To what extent would you say you had the following competencies or skills at the time when you completed your third-level education?

		To a very great extent	—————→			Not at all
Specialist knowledge in your subject area	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	
Proficiency in a foreign language	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	
Computer skills	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	
Oral communication skills	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	
Written communication skills	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	
Working in a team	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	
Leadership	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	
Analytical Skills	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	
Working under pressure	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	

SECTION B: WORK VALUES & LABOUR FORCE STATUS

Q6. Please tick one box for each statement below to show how much you agree or disagree with it, thinking of employment in general

	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
1. A job is just a way of earning money - no more .	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
2. I would enjoy having a paid job even if I did not need the money	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅

**Q7. Here is a list of some of the things people may look for in a job
 In column A can you please tick the ONE you personally think is MOST important in a job?
 In column B can you please tick the ONE you personally think is the SECOND MOST important?**

	Col. A	Col.B
Job security	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁
High income.....	<input type="checkbox"/> ₂	<input type="checkbox"/> ₂
Good opportunities for advancement.....	<input type="checkbox"/> ₃	<input type="checkbox"/> ₃
An interesting job	<input type="checkbox"/> ₄	<input type="checkbox"/> ₄
A job that allows someone to work independently.....	<input type="checkbox"/> ₅	<input type="checkbox"/> ₅
A job that allows someone to help other people.....	<input type="checkbox"/> ₆	<input type="checkbox"/> ₆
A job that is useful to society	<input type="checkbox"/> ₇	<input type="checkbox"/> ₇

Q8. At present, what is your usual situation with regard to employment? (tick one)

- Working as an employee ₁ →go to Q11
 - Working as self-employed (including farming) ₂ →go to Q11
 - Working on a state employment scheme ₃ →go to Q67
 - Unemployed ₄
 - Student ₅
 - Training in a state or other training programme ₆
 - Engaged on home duties ₇
 - Retired ₈
 - Unable to work due to permanent sickness or disability ₉
 - Other (please specify) ₁₀
- } Continue at Q9

Q9. In the week ending last Sunday, did you do any work for payment or profit, even if it was for one hour?

- Yes ₁ →go to Q11 No..... ₂

Q10. Even if you did not do paid work in the last week, did you have a job or business from which you were away and to which you intend to return? (e.g. temporarily absent due to sickness, holidays, on maternity leave).

- Yes..... ₁ No..... ₂

If you have answered YES to Q9 or Q10 please go to Q11

If you have answered NO to both questions skip to Q67 (section: Employment History)

SECTION C: CURRENT JOB
QUESTIONS 11-67 ARE FOR PEOPLE WHO ARE CURRENTLY WORKING IN A JOB. IF YOU ARE NOT CURRENTLY WORKING IN A JOB SKIP TO Q67 (SECTION ON EMPLOYMENT HISTORY)

Q11. How many jobs do you have at the moment (including part-time jobs)? _____

If you have more than one job please answer the following questions in respect of the job with the highest weekly income.

Q12. When did you begin your present employment? _____ month _____ year

Q13. Location of Job: County _____ If outside Ireland Country _____

Q14. Please describe as fully as possible the exact nature of your current job. (If relevant, e.g. Civil Servant, Garda or Army, please state grade or rank, if farmer please state acreage)

Q15. Do you supervise or manage any personnel in your job?

Yes ₁

No..... ₂

If yes, how many? _____

Q16. What is the main activity of the business or organisation where you work? [Please describe as fully as possible]

Q17. In which of the following sectors do you work?

Public Sector..... ₁

Private Sector..... ₂

Q18. Do you work every week?

Yes ₁

Week on week off..... ₂

Other (specify)..... ₃ _____

Q19. How many days do you normally work per week? _____

Q20. How many hours per week do you NORMALLY work in your main job or business, including regular overtime?

_____ hours per week.

Q21. If less than 30 hours per week, what is your MAIN reason for working less than full-time?

[please tick ONE only]

In education or training..... ₁

I want a full-time job but can't find one..... ₄

Housework / Caring for Children

Do not want to work more hours ₅

or other persons..... ₂

I don't consider this to be part-time work ₆

Personal illness or disability ₃

Other reasons (specify)..... ₇

Q22. Are you personally involved in any of the following practices?

a. Working from home..... ₁

b. Flexible hours/Flexitime..... ₂

c. Job sharing/week on-week off etc..... ₃

d. Term-time working..... ₄

Q23. How many people work in the branch or outlet of the business or organisation in which you work?

1-4 ₁

5-19..... ₂

20-25 ₃

26-49..... ₄

50-99 ₅

100-499..... ₆

500+ ₇

Don't know ₈

Q24. And how many people work in the entire business or organisation, including all of its branches, offices or outlets?

1-4 ₁ 5-19 ₂ 20-25 ₃ 26-49 ₄ 50-99 ₅
100-499 ₅ 500+ ₆ Don't know ₇ Not applicable ₈

Q25. Of all those employed in your place of work (i.e. in your local branch, dept, outlet) what proportion are women?

All Almost all About three- About About a Hardly any None
₁ ₂ quarters half quarter ₆ ₇
₃ ₄ ₅

Q26. Is your immediate supervisor/manager a man or a woman?

Man ₁ Woman ₂

Q27. What type of employment contract do you have in your main job? Which of the following best describes your situation: [tick ONE only]

Permanent contract ₁ Casual work with no contract ₄
Under probation for permanent contract ₂ Some other working arrangement ₅
Fixed term/short-term contract ₃

Q28. Are you currently a member of a Trade Union or Staff Association or similar organisation in your work?

Yes ₁ No ₂

Q29. How secure do you feel your job is?

Very secure ₁ Fairly secure ₂ Insecure ₃ Very insecure ₄

Q30. How likely or unlikely is it that you will choose to leave your present employer over the next year for another job?

Very quite not very not at all Don't N/A
likely likely likely likely know Self-emp
₁ ₂ ₃ ₄ ₅ ₆

Q31. How likely or unlikely is it that you will get a promotion with your present organisation in the next five years?

Very quite not very not at all Don't N/A
likely likely likely likely know Self-emp
₁ ₂ ₃ ₄ ₅ ₆

Q32. Have you received any education or training paid for or provided by your employer over the last 2 years (please exclude training for a professional qualification already listed in question Q2.)

Yes completed....._1 Yes, currently_2 No....._3 go to Q37

Q33. How long did (will) the education or training last? Days____ Weeks ____ Months____
(if you have had a number of spells of education/training please estimate the TOTAL time spent in training)

Q34. Was this with your current employer and/or previous employer?

Current employer..... _1 Previous employer_2

Q35. Do you feel that this education or training has been of use to you in carrying out your current job?

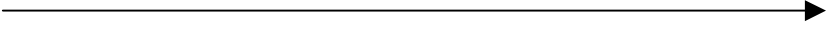
Yes....._1 No....._2

Q36. Do you feel that the skills or knowledge which you have acquired in this education or training would be of use to you in getting a job with another employer or was the education or training specific to your current job only?

Of use in getting job with another employer..... _1 Of use only in current job_2

SKILL MATCH

Q37. Thinking of all of the tasks involved in your current job, to what extent do you use the knowledge and skills you acquired in the course of your third-level education?

To a very great extent  Not at all
1 2 3 4 5

Q38. Please indicate how closely related you feel your field of study (in your most recent third level course) is to your area of work? (Please tick one answer).

- My field of study is the only possible/the best field for this area of work_1
- Some other fields could also prepare people for this area of work_2
- Another field of study would have been more useful....._3
- The field of study does not matter very much for my area of work_4
- Other (please specify) ______5

Q39. Thinking of all aspects of your current job (e.g. position, tasks, pay etc.), to what extent is your current job appropriate to your level of education?

Completely appropriate  Not at all appropriate
1 2 3 4 5

Q40. How would you compare the typical level of education of others in your occupation and grade with your own? (Please tick one response)

Most people in my job have:

- A lower level of qualification than myself ₁
About the same level of qualifications as myself ₂
A higher level of qualification than myself ₃

JOB SEARCH & RECRUITMENT PROCESS

Q41a. Are you self employed? Yes ₁ →go to Q67 No..... ₁ →go to Q41b

Q41b. How did you first hear about your current job? (Tick one of the following.)

- From an advertisement in the newspaper/trade magazine..... ₁
By phoning/writing to/calling on employers ₂
Through personal contacts (i.e. from relatives, friends etc.) ₃
Through college careers office ₄
Through employment fair ₅
Through work experience placement ₆
Through FÁS or other public employment services..... ₇
Through private employment agency ₈
Internet/Web/Teletext ₉
Approached by employer ₁₀
Other (please specify) _____ ₁₁

Q42. When you were looking for your current job how much choice would you say you had over the job you could get?

- A great deal ₁ Some ₂ Hardly any ₃ No choice at all ₄ DK..... ₅

Q43. When you were looking for your current job did you turn down any other job offers?

- Yes ₁ No..... ₂

Q44. What of the following best describes your position regarding employment immediately before you took up your current job?

- Employed/self employed ₁ In education/training..... ₄
Unemployed ₂ Unable to work due to illness or disability ₅
On home duties..... ₃ Other (specify) _____ ₆

Q45. How long were you *actively* searching for work before you found your current job?

_____ Weeks or _____ Months

Q46. Would you say that everyone applying to your organisation for a job has an equal opportunity of recruitment regardless of their gender?

- Yes ₁ No..... ₂

Q47. Regardless of their gender does everyone in your organisation have:

- a.) the same pay and conditions for doing the same job? Yes..... ₁ No ... ₂
 b.) the same opportunities for career development and advancement? Yes..... ₁ No ... ₂

Q48. Is there a formal explicit policy on equal opportunities in your workplace?

- Yes..... ₁ No..... ₂ Don't Know..... ₃

Q49a. What factors influenced your decision to take the job? (tick as many as apply)

- | | |
|--|---|
| Pay level..... <input type="checkbox"/> ₁ | Lack of other offers <input type="checkbox"/> ₈ |
| Fringe benefits..... <input type="checkbox"/> ₂ | Flexible working arrangements <input type="checkbox"/> ₉ |
| Opportunities for advancement <input type="checkbox"/> ₃ | Opportunity to use skills/qualifications <input type="checkbox"/> ₁₀ |
| Interest in job content..... <input type="checkbox"/> ₄ | Security <input type="checkbox"/> ₁₁ |
| Holidays <input type="checkbox"/> ₅ | Opportunity to do something worthwhile <input type="checkbox"/> ₁₂ |
| Training opportunities..... <input type="checkbox"/> ₆ | Level of responsibility <input type="checkbox"/> ₁₃ |
| Hours of work <input type="checkbox"/> ₇ | Location <input type="checkbox"/> ₁₄ |

Q49b. Of these, which was the most important factor _____

Q49c. Of these, which was second most important factor _____

Q50. When you were recruited by your current employer were any of the following involved in the selection process?

	Yes	No	DK
Curriculum Vitae.....	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	
Application form	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	
First Interview	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	
Second Interview	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	
Psychometric/Aptitudes tests	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	
Written exam	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	
Oral Presentation	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	
References taken.....	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
Other (please specify) _____			

Q51. How was your starting salary decided?

- Fixed offer..... ₁ Negotiated offer ₂

Q52. Since starting work with your current employer have you been promoted to a higher position?

- Yes, once ₁ Yes, more than once ₂ No..... ₃

Q53. Since starting work with your current employer have you personally negotiated any increase in your own salary?

Yes, once..... ₁ Yes, more than once..... ₂ No..... ₃

Q54. Does the *organisation/firm* you work for have a formal promotion procedure?

Yes..... ₁ No..... ₂

PAY AND CONDITIONS

Now I'd like to ask you about the income or salary you usually get from your current job.

Q55. What is your USUAL GROSS Pay, including REGULAR overtime, allowances and commission? Euro € _____ . _____
(i.e. your usual pay without exceptional additions or deductions)

Q56. What is your usual NET or TAKE-HOME pay, including REGULAR overtime, allowances and commission after tax and PRSI deductions were made? Euro € _____ . _____

If earnings are not in Euros please record currency _____

Q57. How long a period do these particulars cover (week, fortnight, month etc.)?

One week..... ₁ Four weeks ₄
Two weeks ₂ One year ₅
Calendar month..... ₃ Other (specify) ₆ _____

Q58. Apart from your usual pay, have you received a bonus from your current employer in the last 12 months?

Yes..... ₁ No..... ₂

Q59. If yes, what was the value of the last bonus that you received? _____

Currency _____

Q60. What period did this bonus cover?

1 year..... ₁ Quarter..... ₂ Month..... ₃ Other (specify) ₄ _____

Q61. For each one please tell me if any of the following practices affects your earnings?

Yes *No*

- | | | |
|---|---------------------------------------|---------------------------------------|
| a) Profit sharing/share options/gain sharing | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ |
| b) Premium payments for working overtime, night shifts, weekend work, etc | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ |
| c) Performance related pay/incentive payment or commission | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ |

Q62. Do you receive any of the following benefits from your employer?

	Yes	No
Occupational Pension (with employer contributions)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
Company car/van.....	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
Free transport or help with other travel costs	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
Subsidised or free meals	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
Accommodation/housing.....	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
Private health scheme	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
Subsidised loans	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
Other (please list) _____		

Q63. How many days of paid holidays do you get per year, excluding bank holidays?

Write in number of days

Q64. Is your job one that is on an incremental pay scale where a person gets an automatic increase for each year of service, up to some maximum?

Yes ₁ No..... ₂

FAIRNESS OF PAY

Q65. Given your skills and effort would you say you earn?

Much less than you deserve.....	<input type="checkbox"/> ₁	More than you deserve	<input type="checkbox"/> ₄
Less than you deserve	<input type="checkbox"/> ₂	Much more than you deserve	<input type="checkbox"/> ₅
What you deserve.....	<input type="checkbox"/> ₃	Can't choose.....	<input type="checkbox"/> ₆

Q66. Using the following scale how satisfied are you with

A. your current earnings ?

B. your job as a whole?

Please tick one box on each row.

	Very Dissatisfied	Fairly dissatisfied	Neither satisfied or dissatisfied	Fairly satisfied	Very Satisfied
(a) Earnings.....	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
(b) Job as a whole	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅

SECTION D EMPLOYMENT HISTORY

Please provide details of the jobs you have held since January 2001 and **PRIOR TO YOUR CURRENT EMPLOYMENT SITUATION** (as described in Questions 12-67 above)

		JOB A Most recent job before current job	JOB B Job before Job A	JOB C Job before Job B	JOB D Job before Job c
Q67	Job title				
Q68	Type of work				
Q69	Were you an employee or self-employed <i>Please tick one only</i>	Employee __ Self-employed __	Employee __ Self-employed __	Employee __ Self-employed __	Employee __ Self-employed __
Q70	Main activity of employer				
Q71	When did you begin this job? Month/Year When did you end this job? Month/Year	Begin ___ ___ / ___ ___ End ___ ___ / ___ ___	Begin ___ ___ / ___ ___ End ___ ___ / ___ ___	Begin ___ ___ / ___ ___ End ___ ___ / ___ ___	Begin ___ ___ / ___ ___ End ___ ___ / ___ ___
Q72	Location	County _____ Country _____	County _____ Country _____	County _____ Country _____	County _____ Country _____
Q73	Was the job full or part-time <i>Please tick one only</i>	Full-time __ Part-time __	Full-time __ Part-time __	Full-time __ Part-time __	Full-time __ Part-time __
Q74	Was the contract temporary or permanent? <i>Please tick one only</i>	Temporary __ Permanent __	Temporary __ Permanent __	Temporary __ Permanent __	Temporary __ Permanent __
Q75	Gross Monthly income when you started <i>(before tax or other deductions)</i>	Amount _____ Currency _____	Amount _____ Currency _____	Amount _____ Currency _____	Amount _____ Currency _____

Q81a. Where are you currently living?

Ireland.....₁ Northern Ireland₂ Elsewhere (please record)....₂____

Q81b. If resident in Ireland please record county of residence

Q82. Do you have any chronic, physical or mental health problem, illness or disability?

Yes ₁ No ₂

Q83. Please fill out the date you completed this survey _____