



UCD GEARY INSTITUTE DISCUSSION PAPER SERIES

Decomposing Gender Differences in College Student Earnings Expectations

Liam Delaney
Senior Researcher
Geary Institute, UCD
Lecturer
School of Economics, UCD

Colm Harmon
Director
Geary Institute, UCD
Professor
School of Economics, UCD
Research Fellow
IZA, Bonn

Cathy Redmond
Research Assistant
Geary Institute, UCD
PhD Candidate
Dept. of Economics, UCL

September 2010

The views expressed here do not necessarily reflect those of the Geary Institute.
All errors and omissions remain those of the author.

Decomposing Gender Differences in College Student Earnings Expectations

Liam Delaney

Senior Researcher

Geary Institute, UCD

Lecturer

School of Economics, UCD

Colm Harmon

Director

Geary Institute, UCD

Professor

School of Economics, UCD

Research Fellow

IZA, Bonn

Cathy Redmond

Research Assistant

Geary Institute, UCD

PhD Candidate

Dept. of Economics, UCL

Decomposing Gender Differences in College Student Earnings Expectations

Abstract

Despite the increasing coverage and prevalence of equality legislation and the general alignment of key determining characteristics such as educational attainment, gender differentials continue to persist in labour market outcomes, including earnings. Recently, evidence has been found supporting the role of typically unobserved non-cognitive factors in explaining these gender differentials. We contribute to this literature by testing whether gender gaps in the earnings expectations of a representative group of Irish university students are explained by simultaneously controlling for gender heterogeneity across a wide array of cognitive and non-cognitive factors. Non-cognitive factors were found to play a significant role in explaining the gender gap, however, gender differentials persist even after controlling for an extensive range of cognitive and non-cognitive factors. Nearly three-quarters of the short run and two-thirds of the long run differential could not be explained.

Keywords: Gender, Education, Inequality, Discrimination, Earnings Expectations.

1. Introduction

Gender pay gaps have persisted in the face of equalising male–female education attainment and progressive equity legislation with the average gender pay gap in the OECD standing at 17.6 percent (OECD 2010).¹ Previous research has investigated whether these gender pay differentials can be explained by gender heterogeneity, often concluding that the persistent differential may be due to heterogeneity in unobservable factors (Anderson et al. 2001). An expanding volume of work has attempted to go beyond standard measures of attainment and cognitive skill to examine how differences in labour market outcomes across different groups might be explained by a variety of non-cognitive factors (e.g. Borghans et al. 2008; Manning and Swaffield 2008; Chevalier 2002 and 2007).

In this paper, we examine how gender heterogeneity across a comprehensive range of variables accounts for gender differentials in the short and long run earnings expectations of a representative sample of Irish university students. We test whether an extensive range of typically unobservable variables succeed in explaining gender differentials. Alongside educational choice and attainment variables, we control for risk preferences, future orientation, life ambitions and personality traits, incorporating well-understood and theoretically relevant metrics including the Big Five personality scale and the Consideration of Future Consequences scale (CFC).

Examining earnings expectations rather than earnings realisations is beneficial for our analysis. Earnings expectations have been shown to be an accurate estimate of realised earnings,

¹ Unadjusted gender wage gap of median full-time employees in 2006 (or, if data for 2006 was not available, latest year available).

with little systematic bias (Smith and Powell 1990; Dominitz and Manski 1996; Betts 1996; Carvajal et al. 2000; Webbink and Hartog 2004). In addition, analysing earnings expectations rather than realised earnings avoids endogeneity of motivation, discussed in Chevalier (2007). This is the potential problem caused by low paid workers being more inclined to state that they are less financially motivated than equally motivated, higher remunerated workers.

The rest of the paper is structured as follows: Section 2 outlines some of the previous literature. Section 3 describes the methodology and data source. In this section the outcome and control variables are also explained in detail. Section 4 presents the short and long run decomposition results, and Section 5 concludes and provides some suggestions for future research directions.

2. Context

Median full-time male earnings are higher than full-time female earnings in all OECD countries despite increasingly strict equality legislation and equalising gender education levels (OECD 2010). If we take Ireland as an example, it has experienced a changing legislative environment, increasing female education levels and a rapid increase in female labour market participation.^{2,3}

² A number of major legislative changes in relation to gender equality have occurred in Ireland since the 1970s. Firstly, the marriage bar, which prohibited females from continuing working in public service jobs after they married, was abolished in 1973. In addition, since Ireland joined the European Union in 1973, a number of EU directives relating to gender equality in the work place have been adopted, which are required to be incorporated into Irish law. Included in these are: the Equal Pay Directive – 1975, which stipulated that men and women performing the same

And although it experienced a substantial decrease in the gender pay gap, a persistent gap of 14 percent remains.

Previous research has shown the importance of a number of variables in explaining the gender pay gap. Gender differences in educational attainment have been found to contribute towards explaining the gender pay gap. O’Neill and Polachek (1993) and Blau and Kahn (1997) analysed the impact of educational attainment on the gender wage gap, and found that the equalising educational attainment of men and women in the United States helped explain the narrowing gender pay differential in the 1980s. Brown and Corcoran (1997) found that approximately 42 percent of the gender differential of college graduates in the United States is explained by college major, and Chevalier (2002) found that college major explains up to 20 percent of the graduate wage gap in the United Kingdom. Brown & Corcoran found that additionally controlling for exam performance in the SATs (college entrance exams) explains

work should receive equal remuneration; the Equal Treatment Directive – 1976, which requires equal treatment of men and women in relation to employment, promotion, vocational training and working conditions; and the Self Employment Directive – 1986, which requires equal treatment of men and women who are self-employed (Europa 2010).

³Between 1980 and 2008 Ireland experienced the fastest growth in female labour market participation rate in the OECD, increasing from 29.4 percent to 53.8 percent (World Bank 2010). In addition, historically males have outnumbered females in higher education, however, from the 1980s females enrolled in universities in Ireland have outnumbered males (Department of Education and Science 2007). Over the past four decades, Irish women’s earnings as a percentage of men’s have increased from 47 percent to 86 percent (European Commission 2010).

little of the gender differential in earnings. More recently, researchers have examined the extent to which gender heterogeneity in personality and character traits can help explain gender earnings differentials.

Character traits are increasingly being incorporated into economic models, with Borghans et al. (2008) advocating the extension of studies to include personality and preference measures. Recently, researchers have looked at the importance of character traits in earnings functions (Nyhus and Pons 2005). Gender heterogeneity has been found across a range of character traits including risk preferences, social preferences and personality (Croson and Gneezy 2009; Semykina and Linz 2007; Mueller and Plug 2006). In addition, gender differences in character traits partially explain the gender pay differential; Chevalier (2002) found that controlling for the following character traits; financial motivation, wanting to do socially useful work, ambition and workaholism, explains 30 percent of the gender pay gap in the United Kingdom; Semykina and Linz (2007) find using a Russian sample, that between 3 percent to 8.4 percent of the gender gap can be explained by male-female differences in personality. Mueller & Plug (2006) find, using the Big 5 personality scale that male-female differences in personality explain between 7.3 percent and 16.2 percent of the gender pay gap.

3. Data and Methodology

3.1 Methodology

The decomposition used in the study follows that of Neumark (1988), which is a variant of the Oaxaca-Blinder (1973) decomposition:

$$\text{Ln}(\bar{w}_m) - \text{Ln}(\bar{w}_f) = \underbrace{(\bar{X}_m - \bar{X}_f)' \beta^*}_{\text{Explained}} + \underbrace{[\bar{X}_m'(\beta_m - \beta^*) - \bar{X}_f'(\beta_f - \beta^*)]}_{\text{Unexplained}} \quad [1]$$

Where $\bar{w}_{m/f}$ = average male/female wages, $\bar{X}_{m/f}$ = average male/female characteristics, $\beta_{m/f}$ represents the realised labour market returns to male/female characteristics, and β^* represents the returns to characteristics in a discrimination free labour market. The Neumark decomposition assumes that the no discrimination β coefficients (β^*) are the coefficients from a pooled (males and females) regression of the wage structure.⁴

The left hand side of [1] measures the raw gender differential in earnings expectations. The first component on the right hand side of [1] is the component of the raw differential in male-female earnings that is explained by gender differences in the determinants of earnings. The second component is the unexplained component, which is potentially due to discrimination (or unobserved determinants). We estimate the contribution of each variable to both the explained and unexplained components of the earnings expectations differential.

Three of our control variables are categorical: college, subject and grade attainment. As outlined in Oaxaca and Ransom (1999), the contributions of individual dummy variables that represent a categorical variable to the differential are not invariant to the choice of the omitted dummy category. Gardeazabal and Ugidos (2004) and Yun (2005) suggest an alternative approach that avoids this problem. This approach imposes a normalising restriction on the coefficients of the dummy variables, so that they all sum to zero. This can be interpreted as

⁴ If β^* equals β_f or β_m , then this decomposition simplifies to the Oaxaca-Blinder decomposition.

estimating the effect of each dummy category as a deviation from the grand mean (Jann 2008).⁵ Using this method, we can estimate the contribution each dummy category makes to the differential in a way that is invariant to the choice of omitted dummy.

3.2 Data & Variables

3.2.1 Data Set

This analysis is based on data from the Irish Universities Study, a large web based study of students in the seven Irish Universities.⁶ A number of waves of data were collected as part of this study, and this analysis uses data from two of these waves. The main data set used in this analysis was collected between January and June 2009. This data set does not contain information on life ambition; for this analysis we use a supplementary data set that was collected between January and June 2008. This is used as the supplementary data set as it does not contain information on grade attainment in university, and has less detailed information on secondary school outcomes. The earnings expectations data are also less detailed in this round as the reporting scale was compressed. Over 4,500 (3,500) students responded to the main (supplementary) round of the survey.⁷ The samples were restricted to Irish, full-time undergraduate students between the ages of 17 and 30, who were in fourth year or below. This

⁵ This methodology was implemented using the Oaxaca STATA command (Jann 2008)

⁶ Dublin City University, National University of Ireland Galway, National University of Ireland Maynooth, Trinity College Dublin, University College Cork, University College Dublin and University of Limerick

⁷ This corresponds to response rates of 19.2%/15.5%.

resulted in sample sizes of 2,472/1815.⁸ Descriptive statistics for both rounds of the study are presented in Table 1.

3.2.2 Earnings Expectations

Students were asked to report both their short and long run earnings expectations in terms of the current value of money. Students were asked to choose the category they expected their earnings to fall into. Students choose between a number of possible outcomes, presented in bands of €10,000 for short run earnings expectations and in bands of €20,000 for long run earnings expectations. Short run options ranged from €0 to greater than €100,000 and long run options ranged from €0 to greater than €200,000. For the purpose of the decomposition, the categorical responses were log linearised, first by taking a linear approximation through the band mid-points, and then converting into logs.⁹ (See Appendix for question wording). The distributions of the short and long run earnings expectations are shown in Figure 1. In the supplementary data set the short and long run possible answers were presented in bands of €10,000 for short run earnings expectations, ranging from €0 to greater than €70,000 and in bands of €20,000 for long run earnings expectations, ranging from €0 to greater than €140,000.¹⁰

⁸ Further details on sample restrictions: Main (Supplementary) – Total obs. 4679 (3720); dropping international students – 3873(2908); restricting to full-time undergraduate students in year 4 or below – 2582(1892); restricting to students aged between 17 and 30 – 2472(1815).

⁹ The bottom category was assigned the log of the top value in its range and the top category was assigned the log of the bottom value in its range.

¹⁰ In the supplementary data set students were not explicitly asked to report in terms of the current value of money.

3.2.3 Control Variables

Parental educational attainment was used to control for socio-economic status. Students were asked to report both their father's and their mother's highest qualification level. This was converted into approximate years of completed education. For example, primary school education is considered equivalent to eight years of completed education and a PhD is considered equivalent to 19 years of completed education. Father's years of education was summed to mother's years of education. Summed years of parental education were then used to control for socio-economic status.

We controlled for college, subject choice and grade attainment in university. Students were asked to report their main area of study, and to select one of the following main areas: education, humanities and arts, social science, business, law, science, maths, computing/computer science, engineering/manufacturing/construction, agriculture/veterinary, health/welfare, sport/catering/ services or other. Students were asked to report their average grade since they started college either on an A+, A, A-, B+, etc. scale or on a 1st, 2:1, 2:2, etc. scale. This was recoded to a single grade measurement scale. Grade distributions were compared to help define comparable categories. Four grade categories were created, A+/A/A- or 1st grades were assigned the top grade category, B+/B/B- or 2:1 grades were assigned the second grade category, C+/C/C- or 2:2 were assigned the third grade category, and D+ or below or 3rd or below was assigned the last grade category. (The supplementary data set does not contain information on grade attainment in university.)

In this analysis we additionally controlled for secondary school performance. In Ireland, almost every student leaving secondary school sits a set of national state exams called the Leaving Certificate. Students usually sit 7 subject exams. Entry to higher education is typically

determined solely by performance in the Leaving Certificate, and places are offered based on Leaving Certificate points.¹¹ Each grade category (A1, A2, B1, B2, etc.) corresponds to a number of points between 0 and 100. The points corresponding to a student's top 6 subjects are summed to get their Leaving Certificate points, which ranges between 0 and 600. In the main data set, students were asked to report their exact Leaving Certificate points, whereas in the supplementary data set students were asked to select the range corresponding to their Leaving Certificate points.

We control for personality using the Ten Item Personality Inventory (TIPI - Gosling et al. 2003), a condensed version of the Big Five Inventory (BFI) personality scale developed by a series of researchers including Allport and Odbert (1936), Tupes and Christal (1961), Norman (1963) and Goldberg (1981). The TIPI measures the following five personality constructs: extraversion, agreeableness, conscientiousness, neuroticism and openness. The five personality traits are measured on scales of 2-14 where higher values indicate more concentrated levels of that personality trait.

A subset of four questions from the consideration of future consequences (CFC) scale (Strathman et al. 1994) is used to control for future orientation. Students were asked four questions on how they think about the future and responded on a scale from 1 to 5. The responses from these four items were summed, resulting in a variable that ranges from 4 to 20 with higher values indicating higher levels of future orientation. Risk preferences are measured

¹¹ There are some alternative entry routes to higher education such as mature entry or access programmes for disadvantaged students.

on an 11-point scale (0 - 10) where higher values indicate higher levels of risk willingness, by asking students, in general, how willing they are to take risks.¹²

We also measure the importance of various life ambitions in explaining gender differentials in earnings expectations. Life ambitions were measured using a 13 item questionnaire which was adapted from the Self-Evaluation and Social Support interview (Andrews and Brown 1993) by Wilding and Andrews (2006). The life ambition questionnaire covers 13 life domains — which included the importance of having a fulfilling career, having a good social life, making a worthwhile contribution to society, being financially secure, obtaining a prominent position in society, having a good relationship with family, being in a committed love relationship, having a religious/spiritual commitment, being recognised for their achievements, getting to the top of their career, raising a family of own, contributing to the wellbeing of others and being very wealthy. (See Appendix for question wording and more detail).

4. Results

4.1 Earnings Expectations Gaps

Amongst recent Irish graduates, there is a gender pay gap of 8.2 percent in the private sector and 7.0 percent in the public sector (Russell et al. 2005). The raw earnings expectations differential of current Irish university students we estimate is similar, with men expecting approximately 8.3 percent higher earnings in the short run than females. The approximate raw gap in short run earnings expectations is €2,591 per annum (p-value < 0.01), with males on average expecting to earn €33,784 in their first job after graduating and females expecting to earn €31,193. The raw

¹² Dohmen et al. (2005) supports the use of this metric in measuring risk preferences

gap in long run earnings expectations is much larger at €21,909 (p-value < 0.01), with males expecting a maximum salary over their career of €118,024 and females expecting €96,115. Both raw differentials are highly significant. Using the supplementary data set, the raw differentials are similar but slightly smaller due to the compressed scale range. The raw gap in short run earnings expectations is €2,140 (p-value < 0.01) and in the long run the gap is €18,507 (p-value < 0.01).

Table 2a and Table 2b show the Neumark decomposition results from the main and supplementary data sets respectively. In the first specification, only 26 percent of the short run expectation gap can be explained by differences in determinants. Only 34 percent of the long run expectation gap can be explained. Slightly more of the differential can be explained in the second specification that controls for life ambition (supplementary data set). In this specification, 31 percent of the short run and 40 percent of the long run gender differential in earnings expectations can be explained. Section 4.2 explains individual variable contributions to both the explained and unexplained parts of the short run gender differentials, and Section 4.3 summarises the contributions to the long run gender differentials.

4.2 Short run differentials

4.2.1 Demographics & Education

As shown in Table 2a, in the short run, demographic variables do not contribute a great deal to the explained component of the gender differential (-0.1%; p-value > 0.1). Similarly, gender differences in college of study do not make a contribution to the explained component (combined contribution of -0.9%; p-value > 0.1). In aggregate, subject choice explains 8.8 percent of the differential; however, there are large variations in the contributions of specific subjects. Gender

differences in the proportions of students studying Humanities & Arts explains 15.0 percent of the gender differential in short run earnings expectations (p-value < 0.01). From the descriptive statistics displayed in Table 1a, it is clear that females are much more likely to be studying Humanities and Arts than males (26% versus 18%). Also, from the regression of short run earnings expectations (Table 3, column 1) you can see that studying Humanities & Arts imposes a significant and negative wage penalty (-0.167; p-value < 0.01). There are also a higher proportion of females than males studying Health/Welfare (14% versus 6%). However, Health/Welfare is significantly and positively related to short run earnings expectations (0.157; p-value < 0.01). Therefore, Health/Welfare actually favours female students (-15.5% of the differential is explained by this subject choice). Intuitively, this is because there are more females than males studying Health/Welfare, and since this subject is correlated with higher earnings expectations, all else being equal females should expect higher earnings than males.

School attainment also favours female students, although the estimate is not statistically significant (-3.3%; p-value > 0.1, of the differential is explained by school attainment). This is because females have marginally higher Leaving Certificate points (463 versus 461) which are positively associated with earnings expectations (0.0004; p-value < 0.01). Grade attainment in university explains very little of the differential (1.7%; p-value > 0.1), and it is not statistically significant.

4.2.2 Character Traits

In aggregate, gender heterogeneity in character traits explains 19.5 percent of the short run earnings differential, equivalent to 76.0 percent of the total explained component. Gender differences in risk preferences explain 7.4 percent (p-value < 0.05) of the short run differential. Female students have lower average levels of risk preference (6.37 versus 6.67), which is

positively associated with higher earnings (0.020; p-value < 0.01). Future orientation does not contribute to explaining the gender differential (-0.2%; p-value > 0.1). Finally, aggregate differences in the personalities of male and female students explains 12 percent of the short run differential (min. p-value < 0.1), although there are large variations in the contributions of individual personality traits. Neuroticism explains 10.0 percent (p-value < 0.1) of the gender differential, explained by higher mean neuroticism levels of females compared to males (7.14 versus 5.85), and the negative association between neuroticism and earnings expectations (-0.006; p-value < 0.1). Agreeableness also explains a large proportion (8.9%; p-value > 0.1) of the gender differential, although it is not statistically significant. Females have lower mean levels of agreeableness (5.85 versus 6.87) and agreeableness is positively correlated with earnings expectations (0.007; p-value > 0.1). Extraversion favours female students (contributes -4.9% towards the differential; p-value < 0.1). This is explained by the higher mean levels of extraversion amongst females (9.48 versus 8.92), which is positively associated with earnings expectations (0.007; p-value < 0.1). Conscientiousness and openness do not explain much of the differential (-2.1%; p-value > 0.1 and 0.5%; p-value > 0.1 respectively).

4.2.3 Life Ambition

Using the supplementary data set, we analyse which life ambitions are most important in explaining the gender differential in earnings expectations. Only two life ambitions significantly contribute to explaining the gender differential: the importance of being financially secure and the importance of contributing to the wellbeing of others. The life ambition “financial security” favours female students (it explains -6.6%; p-value < 0.05, of the differential). Females place more importance on financial security than males (4.41 versus 4.29), a variable that is positively associated with earnings expectations (0.040; p-value < 0.05). Contributing to the wellbeing of

other explains 19.0 percent (p -value < 0.01) of the gender differential. This is explained by the higher importance females place on this (4.34 versus 3.99) and the negative association between this personality trait and earnings expectations (-0.040; p -value < 0.01).

4.2.4 Unexplained Component

The unexplained component exists because females and males hold different expectations of the labour market returns to the various control variables. This is termed the unexplained component because it is not understood why males and females with the same attributes would expect to receive different returns in the labour market. There are five variables that significantly contribute to the unexplained component: studying education, studying health/welfare, and the personality traits extraversion, conscientiousness and neuroticism. Health/welfare and conscientiousness, “explain” the unexplained differential. Intuitively, this is because women expect to receive lower returns for these variables than males. Education, extraversion and neuroticism “explain” negative proportions of the unexplained differential. Intuitively, this is because women expect to receive higher returns for these variables than males. Using the supplementary data set, none of the life ambitions controls were found to contribute to the unexplained component.

4.3 Long run differentials

4.3.1 Demographics & Education

The long run earnings expectations decomposition is also shown in Table 2a. In the long run, socio-economic status explains 3.3 percent (p -value < 0.05) of the differential. Females in university have a slightly lower socio-economic status than males (27.12 years of parental education compared to 27.67 years), and socio-economic status is positively associated with long

run earnings expectations (0.013; p-value < 0.01).¹³ As in the short run, gender differences in age or college of study do not make a contribution to the explained component (age contributes 0.1%; p-value > 0.1 and college choice combined contributes -0.2%; min. p-value > 0.1).

In the long run, in aggregate, subject choice explains 15 percent of the differential (min p-value < 0.01). Studying Humanities & Arts significantly explains some of the differential (3.7%; p-value < 0.01). Health/Welfare positively explains 2.7 percent (p-value < 0.05) of the differential. This subject favoured female students in the short run; this reversal is because Health/Welfare is positively associated with short run earnings expectations (0.157; p-value < 0.01) but negatively associated with long run earnings expectations (-0.070; p-value < 0.05). Other subjects that are important in explaining the long run differential are: Computers/Computer Science (3.7%; p-value < 0.01) and Engineering/Manufacturing/Construction (5.7%; p-value < 0.01). Male students are more likely to be studying both Computers/Computer Science (5% versus 1%) and Engineering/Manufacturing/Construction (17% versus 4%), and both subjects are positively correlated with long run earnings expectations (0.206; p-value < 0.01 and 0.091; p-value < 0.05 respectively). School attainment favours female students in long run earnings expectations (this variables contributes -4.1 %; p-value < 0.1) of the differential and in contrast to the short run is significant in the long run. Grade attainment in university explains only 1.3 percent of the differential and is insignificant (min. p-value > 0.1).

¹³ This is explained by the high proportion of low SES male students who enter the labour market instead of progressing to higher education (Byrne et al. 2008).

4.3.2 Character Traits

In aggregate, gender heterogeneity in character traits explains 18.4 percent of the long run earnings differential, equivalent to 53.8 percent of the total explained component. Gender differences in risk preferences explain 3.8 percent (p-value < 0.05) of the long run differential. Again, future orientation explains none of the differential (-0.2%; p-value > 0.1). Aggregate differences in the personalities of male and female students explain 14.7 percent (min. p-value < 0.01) of the long run differential. Agreeableness and neuroticism are again the most important character traits in explaining the differential. Agreeableness explains 9.5 percent (p-value < 0.01) of the gender differential and neuroticism explains 8.7 percent (p-value < 0.01). Extraversion (-1.5%; p-value > 0.1), conscientiousness (0.0%; p-value > 0.1) and openness (-1.9%; p-value < 0.1) do make a large contribution in explaining the gender gap in long-run earnings expectations.

4.3.3 Life Ambition

As in the short run, the importance of contributing to the wellbeing of others explains a significant component (6.3%; p-value < 0.01) of the long run gender differential. However, unlike the short run, financial security is no longer important in explaining the differential (-0.7%; p-value > 0.1). There are four additional life domains that are significant in contributing to the gender differential in the long run that are not relevant in the short run. These are: making a worthwhile contribution to society (-2.4%; p-value < 0.1). On average, this is more important for females than males (4.05 versus 3.84), and it is positively associated with long run earnings expectations (0.026; p-value < 0.05). Wanting to maintain a good relationship with your family explains 5.2 percent (p-value < 0.01) of the differential, with women placing a higher importance on this than males (4.74 versus 4.50), and it is negatively associated with long run earnings

expectations (-0.048; p-value < 0.01). The importance of having a religious/spiritual commitment explains a further 2.5 percent (p-value < 0.1) of the differential, with this being negatively associated with long run earnings expectations (-0.014; p-value < 0.1) and more important for females (2.83 versus 2.42). Finally, wealth ambition explains 2.5 percent (p-value < 0.1) of the differential, with this ambition being positively correlated with long run earnings expectations (0.043; p-value < 0.01) and being less important for females than males (2.88 versus 3.01).

4.3.4 Unexplained Component

Using the main specification to analyse the unexplained component, none of the variables are significant in contributing to the unexplained component. In the second specification that controls for life ambition, wanting to make a worthwhile contribution to society negatively contributes to the unexplained component. This means that for students who place equal importance on this life ambition, females expect a higher return to this character trait in the labour market than males.¹⁴

5. Conclusion

Using a large web-based survey of university students we estimated a detailed decomposition of short and long run earnings expectations. Large raw gender differentials were found in both the short and long run. Variables included in the decomposition were socio-economic status, age,

¹⁴ Using a different specification, we also controlled for wanting to do further study (only asked to subset of sample), and whether or not one of your parents were a homemaker. Neither variable was significant in explaining the differential.

college, subject choice, academic performance in school and university, risk preferences, future orientation, personality and life ambitions. On average, males expect to earn €2,591 more than females in their first job after graduation and €21,909 more than females in terms of maximum salaries. Regardless of the decomposition specification, most of the short and long run differentials are not explainable. Gender differentials persist even after controlling for many typically unobserved variables, including the importance of raising a family. Furthermore, since we find persistent differentials in the short run as well as in the long run, female labour market absence due to childrearing can not fully explain gender earning differentials.

The variables which are significant in explaining the short run differential are: studying humanities and arts, risk preferences and the personality trait neuroticism. Using a different decomposition specification which controlled for life ambitions across various domains, it was found that wanting to contribute to the wellbeing of others significantly explains some of the differential in short run earnings expectations. Three variables significantly favour female students: studying health/ welfare, the personality trait extraversion, and the importance of being financially secure. Five variables are significant in determining the unexplained component. Male students expect higher labour market returns from studying health/welfare and from the personality trait conscientiousness than female students do. Female students expect higher returns to studying education than males and they also expect higher returns to the character traits extraversion and neuroticism.

The variables that are significant in explaining the long run differential are; socio-economic status and studying humanities & arts, health/welfare, computers/computer science or engineering/manufacturing/construction. A number of character traits are also significant in explaining the differential; risk preferences agreeableness and neuroticism. In the second

specification, life ambition in three domains was found to be significant in explaining the differential: wanting to contribute to the wellbeing of others, the importance of maintaining a good relationship with family and having a spiritual/religious relationship. Two variables significantly favour female students in the long run: school attainment and wanting to make a worthwhile contribution to society. In the long run, only one variable was found to significantly contribute towards the unexplained component; we found that female students expect significantly higher returns compared to male students for wanting to make a worthwhile contribution to society.

In summary, while men and women differ substantially across a wide range of measures related to personality, life ambitions and attainment, such differences do not fully explain why men and women form different earnings expectations. This is an important finding in itself, with our results strongly suggesting that differences in characteristics between men and women in themselves are limited in explaining pay differentials. It is also a strong impetus for future research, which should examine the extent to which gender differences reflect discrimination (actual or perceived) and the extent to which the formation of these expectations may lead to self-fulfilling patterns of search, bargaining and related labour market behaviour.

References

- Allport, Gordon and Henry Odbert. 1936. "Trait Names: A Psycho-Lexical Study." *Psychological Monographs* 47 No. 211.
- Anderson, Tracy, John Forth, Hilary Metcalf and Simon Kirby. 2001. *The Gender Pay Gap*. Report to Women Equality Unit, London.
- Andrews, Bernice and George Brown. 1993. "Self-Esteem and Vulnerability to Depression: The Concurrent Validity of Interview and Questionnaire Measures." *Journal of Abnormal Psychology* 102:565–572.
- Betts, Julian. 1996. "What Do Students Know about Wages? Evidence from a Survey of Undergraduates." *Journal of Human Resources* 31(1):27-56.
- Blau, Francine and Lawrence Kahn. 1997. "Swimming Upstream: Trends in the Gender Wage Differential in the 1980s." *Journal of Labor Economics* 15(1):1-42.
- Blinder, Alan. 1973. "Wage Discrimination: Reduced Form and Structural Estimates." *Journal of Human Resources* 8(4):436-455.
- Borghans, Lex, Angela Lee Duckworth, James Heckman, and Bas ter Weel. 2008. "The Economics and Psychology of Personality Traits." *Journal of Human Resources* 47(4):972-1059.
- Brown, Charles and Mary Corcoran. 1997. "Sex-Based Differences in School Content and the Male-Female Wage Gap." *Journal of Labor Economics* 15(3):431-465.
- Byrne, Delma, Selina McCoy and Dorothy Watson. 2008. *School Leavers' Survey Report 2007*. Dublin: The Economic and Social Research Institute and Department of Education and Science.

- Carvajal, Manuel, David Bendana, Alireza Bozorgmanesh, Miguel Castillo, Katayoun Pourmasiha, Priyo Rao, and Juan Torres. 2000. "Inter-Gender Differentials Between College Students' Earnings Expectations and the Experience of Recent Graduates." *Economics of Education Review* 19(3):229-243.
- Chevalier, Arnaud. 2002. "Education, Motivation and Pay of UK Graduates: Are they Different for Women?" *European Journal of Education* 37(4):347-369.
- Chevalier, Arnaud. 2007. "Education, Occupation and Career Expectations: Determinants of the Gender Pay Gap for UK Graduates." *Oxford Bulletin of Economics and Statistics* 69(6):819-842.
- Crosen, Rachel and Uri Gneezy. 2009. "Gender Differences in Preferences." *Journal of Economic Literature* 47(2):448-474.
- Department of Education and Science. 2007. *Sé Sí – Gender in Irish Education*. Dublin: Department of Education and Science.
<http://www.education.ie/home/home.jsp?pcategory=17216&ecategory=17325&language=E>
[N](#) Retrieved August 2010.
- Dohmen, Thomas, Armin Falk, David Huffman, Uwe Sunde, Jürgen Schupp and Gert Wagner. 2005. "Individual Risk Attitudes: New Evidence from a Large, Representative, Experimentally-Validated Survey." IZA Discussion Paper Series: IZA DP No. 1730.
- Dominitz, Jeff and Charles Manski. 1996. "Eliciting Student Expectations of the Returns to Schooling." *Journal of Human Resources* 31(1):1-26.
- Europa. 2010. *50 Years of EU Gender Equality Law*. Europa Press Releases.
<http://europa.eu/rapid/pressReleasesAction.do?reference=MEMO/07/426> Retrieved August 2010.

European Commission. 2010. *The EU and Irish Women*.

http://ec.europa.eu/ireland/ireland_in_the_eu/impact_of_eu_on_irish_women/index_en.htm

Retrieved August 2010.

Gardeazabal, Javier and Arantza Ugidos. 2004. "More on Identification in Detailed Wage Decompositions." *Review of Economics and Statistics* 86(4):1034-1036.

Goldberg, Lewis. 1981. "Language and Individual Differences: The Search for Universals in Personality Lexicons." In Wheeler L. (Ed.), *Review of Personality and Social Psychology*, Vol. 2 (pp. 141-165). Beverly Hills, CA: Sage Publications.

Gosling, Samuel, Peter Rentfrow and William Swann Jr. 2003. "A very brief measure of the big-five personality domains." *Journal of Research in Personality*, 37(6):504-528.

Higher Education Authority. 2010. *Student Statistics*. <http://www.hea.ie/en/statistics> Retrieved August 2010.

Jann, Ben. 2008. "A Stata Implementation of the Blinder-Oaxaca Decomposition." *Stata Journal* 8(4):453-479.

Manning, Alan and Joanna Swaffield. 2008. "The gender gap in early-career wage growth." *Economic Journal*, 118(530):983-1024.

Mueller, Gerrit and Erik Plug. 2006. "Estimating the Effect of Personality on Male and Female Earnings." *Industrial and Labor Relations Review* 60(1):3-22.

Neumark, David. 1988. "Employers' Discriminatory Behavior and the Estimation of Wage Discrimination." *Journal of Human Resources* 23(3):279-295.

Norman, Warren. 1963. "Toward an Adequate Taxonomy of Personality Attributes: Replicated Factor Structure in Peer Nomination Personality Ratings." *Journal of Abnormal and Social Psychology* 66(6):574-583.

- Nyhus, Ellen and Empar Pons. 2005. "The Effects of Personality on Earnings." *Journal of Economic Psychology* 26(3):363-384.
- O'Neill, June and Solomon Polachek. 1993. "Why the Gender Gap in Wages Narrowed in the 1980s." *Journal of Labor Economics* 11(1):205-228.
- Oaxaca, Ronald. 1973. "Male-Female Wage Differentials in Urban Labor Markets." *International Economic Review* 14(3):693-709.
- Oaxaca, Ronald and Michael Ransom. 1999. "Identification in Detailed Wage Decompositions." *Review of Economics and Statistics* 81(1):154-157.
- OECD. 2010. Gender Brief. OECD Social Policy Division – Directorate of Employment, Labour and Social Affairs. <http://www.oecd.org/dataoecd/23/31/44720649.pdf> Retrieved September 2010.
- OECD. 2010. *Gender Pay Gaps for Full-Time Workers and Earnings Differentials by Educational Attainment*. OECD Social Policy Division – Directorate of Employment, Labour and Social Affairs. http://www.oecd.org/document/4/0,3343,en_2649_34819_37836996_1_1_1_1,00.html Retrieved August 2010.
- Russell, Helen, Emer Smyth and Philip O'Connell. 2005. *Degrees of Equality: Gender Pay Differentials among Recent Graduates*. Dublin: The Economic and Social Research Institute.
- Semykina, Anastasia and Susan Linz. 2007. "Gender Differences in Personality and Earnings: Evidence from Russia." *Journal of Economic Psychology* 28(3):387-410.
- Smith, Herbert and Brian Powell. 1990. "Great Expectations: Variations in Income Expectations Among College Seniors." *Sociology of Education* 63(3):194-207.

- Strathman, Alan, Faith Gleicher, David Boninger and C. Scott Edwards. 1994. "The Consideration of Future Consequences: Weighing Immediate and Distant Outcomes of Behavior." *Journal of Personality and Social Psychology* 66(4):742-752.
- Tupes, Ernest and Raymond Christal. 1961. *Recurrent Personality Factors Based on Trait Ratings. Technical Report ASD-TR-61-97*. Lackland Air Force Base. Texas: US Air Force.
- Webbink, Dinard and Joop Hartog. 2004. "Can Students Predict Starting Salaries? Yes!" *Economics of Education Review* 23(2):103-113.
- Wilding, John and Bernice Andrews. 2006. "Life Goals, Approaches to Study and Performance in an Undergraduate Cohort." *British Journal of Educational Psychology* 76:171-182.
- World Bank. 2010. *Labour Market Participation Rate, Female (% of Female Population ages 15+)*. The World Bank Data Indicators.
<http://data.worldbank.org/indicator/SL.TLF.CACT.FE.ZS/countries/latest?display=default>
Retrieved August 2010.
- Yun, Myeong-Su. 2005. "A Simple Solution to the Identification Problem in Detailed Wage Decompositions." *Economic Inquiry* 43(4):766-772.

Table 1a: Descriptive Statistics – main data set

Mean Values	Sample			Restricted Sample			T-test (p-values)
	Total	Males	Females	Total	Males	Females	
First Salary Expectation (000s)	31.87	33.48	30.98	32.10	33.78	31.19	0.00
Maximum Salary Expectation (000s)	102.96	117.25	95.06	103.84	118.02	96.14	0.00
Parental Education	27.25	27.65	27.04	27.31	27.67	27.12	0.02
Age	20.29	20.32	20.27	20.30	20.39	20.26	0.17
Leaving Certificate	464.92	463.31	465.82	467.62	463.44	469.89	0.07
Risk Preferences	6.47	6.65	6.37	6.47	6.67	6.37	0.00
Future Considerations	13.43	13.42	13.44	13.53	13.50	13.55	0.76
Extraverted	9.22	8.87	9.42	9.28	8.92	9.48	0.00
Agreeableness	6.23	6.88	5.87	6.21	6.87	5.85	0.00
Conscientiousness	10.21	10.01	10.32	10.23	10.04	10.34	0.02
Neuroticism	6.67	5.89	7.11	6.69	5.85	7.14	0.00
Openness	10.74	10.52	10.86	10.77	10.57	10.88	0.00
Gender Distribution (%)	-	35.96	64.04	-	35.13	64.87	-
College Distribution (%)							
UCC	16.79	14.06	18.32	16.55	13.68	18.11	-
UCD	22.90	23.28	22.68	22.16	22.95	21.73	-
NUIM	10.44	9.45	10.99	11.05	10.03	11.6	-
NUIG	16.14	16.54	15.92	14.84	15.65	14.4	-
TCD	16.99	17.10	16.93	17.94	17.78	18.02	-
UL	11.45	14.29	9.85	11.96	14.59	10.53	-
DCU	5.30	5.29	5.31	5.50	5.32	5.6	-
Subject Distribution (%)							
Education	2.39	2.70	2.22	2.40	2.89	2.14	-
Humanities & Arts	23.43	18.36	26.28	22.96	18.24	25.51	-
Social Science	9.32	7.32	10.45	9.34	6.23	11.03	-
Business	12.08	12.95	11.59	11.80	13.22	11.03	-
Law	5.51	5.29	5.64	5.50	5.02	5.76	-
Science	16.42	15.54	16.91	16.39	15.96	16.63	-
Maths	2.31	3.60	1.58	2.56	3.95	1.81	-
Computers/Comp. Sci	2.35	4.62	1.08	2.40	4.86	1.07	-
Eng., Manu., Const.	8.51	17.34	3.55	8.49	17.02	3.87	-
Agri./Veter.	1.78	1.69	1.84	1.49	1.37	1.56	-
Health/Welfare	10.99	6.08	13.74	11.59	6.38	14.4	-
Sport/Catering/Services	0.57	0.79	0.44	0.64	0.76	0.58	-
Other	4.34	3.72	4.69	4.43	4.10	4.61	-
Grade Distribution (%)							
3 rd /Fail	6.56	8.01	5.76	6.30	7.45	5.68	-

2:2	29.59	28.21	30.36	29.47	27.51	30.53	-
2:1	49.64	47.01	51.09	49.17	47.57	50.04	-
1 st	14.21	16.77	12.79	15.06	17.48	13.74	-

Table 1b: Descriptive Statistics – supplementary data set

Mean Values	Sample			Restricted Sample			T-test (p-values)
	Total	Males	Females	Total	Males	Females	
First Salary Expectation (000s)	30.19	31.64	29.33	30.29	31.63	29.49	0.00
Maximum Salary Expectation (000s)	89.85	101.89	82.75	89.98	101.56	83.07	0.00
Parental Education	27.53	28.07	27.21	27.54	28.07	27.23	0.00
Age	20.59	20.64	20.56	20.56	20.60	20.53	0.57
Leaving Certificate	460.90	459.90	461.49	462.15	461.41	462.59	0.76
Risk Preferences	6.66	6.89	6.52	6.65	6.90	6.50	0.00
Future Considerations	13.37	13.36	13.38	13.41	13.36	13.43	0.70
Fulfilling Career	4.62	4.54	4.67	4.62	4.52	4.68	0.00
Good Social Life	4.29	4.32	4.28	4.30	4.32	4.29	0.45
Worthwhile							0.00
Contribution to Society	3.97	3.85	4.04	3.97	3.84	4.05	
Financial Security	4.37	4.29	4.41	4.37	4.29	4.41	0.00
Prominent Position							0.34
Society	3.08	3.13	3.05	3.10	3.14	3.09	
Good Relationship with Family	4.65	4.51	4.74	4.65	4.50	4.74	0.00
Committed Love							0.00
Relationship	4.54	4.39	4.63	4.55	4.40	4.65	
Religious/Spiritual							0.00
Commitment	2.66	2.43	2.80	2.68	2.42	2.83	
Recognised for							0.00
Achievements	3.84	3.75	3.89	3.84	3.74	3.91	
Top of Career	3.87	3.90	3.85	3.87	3.88	3.87	0.87
Raising a Family of Own	4.17	4.10	4.21	4.19	4.11	4.23	0.03
Contributing to Wellbeing of Others	4.21	4.00	4.34	4.21	3.99	4.34	0.00
Being Very Wealthy	2.93	3.02	2.87	2.93	3.01	2.88	0.03
Gender Distribution (%)	-	37.19	62.81	-	37.36	62.64	-
College Distribution (%)							
UCC	9.86	8.74	10.53	9.82	8.54	10.58	-
UCD	36.58	38.52	35.44	36.38	38.59	35.06	-
NUIM	11.29	10.96	11.49	11.35	11.17	11.46	-
NUIG	7.55	7.26	7.72	7.61	7.39	7.74	-
TCD	18.40	16.89	19.30	17.91	16.58	18.71	-
UL	12.34	13.93	11.40	12.82	13.96	12.14	-
DCU	3.97	3.70	4.12	4.11	3.78	4.31	-
Subject Distribution (%)							
Education	2.42	2.52	2.37	2.45	2.63	2.35	-
Humanities & Arts	23.80	20.44	25.79	22.94	19.54	24.98	-
Social Science	8.04	6.37	9.04	8.16	6.73	9.01	-
Business	10.96	13.04	9.74	10.86	12.64	9.79	-

Law	5.90	4.59	6.67	6.13	4.93	6.86	-
Science	16.53	15.70	17.02	16.63	15.60	17.24	-
Maths	2.20	1.93	2.37	2.39	1.97	2.64	-
Computers/Comp. Sci	3.09	6.07	1.32	3.13	6.24	1.27	-
Eng., Manu., Const.	9.04	16.74	4.47	9.26	17.08	4.60	-
Agri./Veter.	2.20	2.81	1.84	2.21	2.79	1.86	-
Health/Welfare	9.59	3.41	13.25	9.57	3.61	13.12	-
Sport/Catering/Services	0.61	1.04	0.35	0.61	0.99	0.39	-
Other	5.62	5.33	5.79	5.64	5.25	5.88	-

Table 2a: Earnings Decomposition – main data set

Neumark Decomposition	(1) First		(2) Max	
Male (000s)	33.784***		118.024***	
Female (000s)	31.193***		96.115***	
Raw Differential (000s)	2.591***		21.909***	
Observations	1873		1873	
% Explained	25.63%*		34.11%***	
% Unexplained	74.37%***		65.89%***	
Variables	Explained	Unexplained	Explained	Unexplained
Parental Education	0.00%	-0.02%	3.32%**	-61.92%
Age	-0.10%	-62.50%	0.10%	172.01%
UCC	-1.38%	-3.62%	0.02%	0.10%
UCD	0.87%	6.69%	0.36%	-4.03%
NUIM	0.38%	-5.20%	0.23%	-4.11%
NUIG	-0.80%	6.73%	-0.13%	5.60%
TCD	0.00%	-6.09%	0.00%	6.02%
UL	0.03%	9.38%	-0.66%	-4.03%
DCU	0.04%	-2.42%	-0.04%	0.81%
Education	0.08%	-5.11%*	-1.06%	-1.94%
Humanities & Arts	14.95%***	6.98%	3.67%***	1.69%
Social Science	3.14%	-2.41%	-0.55%	4.42%
Business	-0.49%	1.25%	1.28%	3.37%
Law	-0.55%	9.74%	-0.60%	-0.93%
Science	0.26%	3.85%	0.24%	-1.37%
Maths	2.25%	0.12%	0.31%	-0.60%
Computers/Comp. Sci	1.15%	-4.14%	3.72%***	-1.32%
Eng., Manu., Const.	3.54%	4.53%	5.69%***	-3.79%
Agri./Veter.	-0.06%	-2.27%	0.09%	0.98%
Health/Welfare	-15.51%***	12.83%*	2.69%**	4.31%
Sport/Catering/Services	-0.19%	-0.33%	-0.03%	-0.22%
Other	0.18%	1.28%	-0.10%	-2.22%
3 rd /Fail	-0.35%	7.23%	0.16%	-0.24%
2:2	1.01%	-0.83%	0.75%	2.91%
2:1	-0.38%	-31.95%	-0.06%	5.08%
1 st	1.40%	-6.48%	0.49%	-2.68%
Leaving Certificate	-3.33%	-243.05%	-4.13%*	-71.07%
Risk preferences	7.38%**	43.64%	3.82%**	56.72%
Consideration Future	-0.21%	-96.07%	-0.21%	44.77%
Extraverted	-4.93%*	-164.14%*	-1.51%	-40.71%
Agreeableness	8.85%	-23.97%	9.52%***	-42.14%
Conscientiousness	-2.06%	304.29%***	0.01%	37.41%
Neuroticism	9.99%*	-99.36%*	8.65%***	12.92%
Openness	0.48%	122.59%	-1.93%*	37.61%
Constant		293.20%		-87.54%
Total	25.63%*	74.37%***	34.11%***	65.89%***

Table 2b: Earnings Decomposition – supplementary data set

Neumark Decomposition	(1) First		(2) Max	
Male (000s)	31.626***		101.560***	
Female (000s)	29.486***		83.053***	
Raw Differential (000s)	2.140***		18.507***	
Observations	1630		1631	
% Explained	30.65%**		40.26%***	
% Unexplained	69.35%***		59.74%***	
Variables	Explained	Unexplained	Explained	Unexplained
Parental Education	0.27%	331.21%***	2.68%**	69.13%
Age	0.71%	-261.54%	0.39%	-26.06%
UCC	0.50%	0.06%	0.07%	0.82%
UCD	2.33%	-28.80%*	0.67%	-2.57%
NUIM	-0.15%	-5.17%	0.02%	4.03%
NUIG	-0.02%	6.09%	0.05%	0.97%
TCD	-1.25%	18.64%**	-0.20%	2.25%
UL	-1.26%	2.46%	-0.47%	-0.95%
DCU	0.46%	-3.40%	-0.12%	-2.29%*
Education	0.24%	3.68%	-0.36%	0.92%
Humanities & Arts	7.96%**	3.46%	1.97%**	1.10%
Social Science	1.02%	-13.95%*	-0.16%	1.43%
Business	-1.14%	2.50%	2.00%*	-0.37%
Law	1.34%	-0.67%	-1.56%	-1.70%
Science	0.62%	18.05%*	0.06%	2.29%
Maths	-0.13%	5.53%	-0.16%	-0.88%
Computers/Computer Science	6.34%**	-3.66%	4.19%***	-3.09%***
Engineering, Manufacturing, Const.	0.33%	-2.62%	7.09%***	-3.23%
Agriculture/Veterinary	1.36%	-3.10%	-0.11%	-2.54%**
Health/Welfare	-9.87%***	-1.10%	6.92%***	-0.74%
Sport/Catering/Services	-0.52%	-0.89%	-0.47%	1.13%*
Other	0.38%	0.34%	-0.04%	-1.19%
Leaving Certificate	-1.21%	-150.42%	-0.63%	-93.26%
Risk preferences	9.65%***	215.76%**	4.51%***	-1.71%
Consideration Future	-0.48%	6.99%	-0.15%	1.91%
Fulfilling Career	1.76%	76.87%	0.69%	-1.06%
Good Social Life	-0.45%	-0.31%	0.26%	-15.59%
Worthwhile Contribution to Society	-2.79%	-205.08%	-2.39%*	-75.80%*
Financial Security	-6.59%**	3.29%	-0.67%	-6.12%
Prominent Position Society	1.68%	-29.41%	0.16%	-20.81%
Good Relationship with Family	-3.39%	4.69%	5.21%***	2.50%
Committed Love Relationship	-5.56%	-3.32%	-1.58%	-65.47%
Religious/Spiritual Commitment	4.23%	5.53%	2.53%*	4.56%
Recognised for Achievements	3.08%	-55.47%	1.10%	-13.53%
Top of Career	0.18%	-14.21%	0.27%	-12.41%
Raising a Family of Own	-1.16%	48.92%	-0.32%	62.71%
Contributing to Wellbeing of Others	19.02%***	135.06%	6.32%***	45.66%

Being Very Wealthy	3.12%	25.07%	2.48%*	11.88%
Constant		-61.75%		197.80%
Total	30.65%	69.35%	40.26%	59.74%

Table 3a: Earnings Expectations Regressions – main data set

VARIABLES	(1) Ln First – Pooled	(2) Ln First – Male	(3) Ln First – Female	(4) Ln Max – Pooled	(5) Ln Max – Male	(6) Ln Max – Female
Parental Education	-0.000 (0.002)	-0.000 (0.003)	-0.000 (0.003)	0.013*** (0.002)	0.009** (0.004)	0.014*** (0.003)
Age	-0.001 (0.005)	-0.002 (0.008)	0.000 (0.006)	0.002 (0.006)	0.011 (0.009)	-0.006 (0.007)
UCC	0.025 (0.022)	0.017 (0.039)	0.036 (0.026)	-0.001 (0.026)	0.006 (0.046)	0.003 (0.030)
UCD	0.058*** (0.020)	0.070** (0.033)	0.045* (0.025)	0.062*** (0.024)	0.032 (0.039)	0.069** (0.030)
NUIM	-0.020 (0.026)	-0.042 (0.046)	-0.003 (0.032)	-0.030 (0.031)	-0.078 (0.055)	0.002 (0.038)
NUIG	-0.052** (0.022)	-0.034 (0.037)	-0.070** (0.028)	-0.022 (0.027)	0.024 (0.044)	-0.053 (0.033)
TCD	0.001 (0.022)	-0.016 (0.037)	0.011 (0.028)	-0.001 (0.026)	0.044 (0.045)	-0.027 (0.032)
UL	0.001 (0.025)	0.032 (0.039)	-0.029 (0.033)	-0.034 (0.030)	-0.075 (0.047)	-0.011 (0.039)
DCU	-0.013 (0.035)	-0.026 (0.060)	0.010 (0.043)	0.026 (0.041)	0.047 (0.071)	0.016 (0.050)
Education	0.009 (0.057)	-0.090 (0.087)	0.070 (0.076)	-0.297*** (0.068)	-0.393*** (0.105)	-0.237*** (0.088)
Humanities & Arts	-0.167*** (0.024)	-0.147*** (0.042)	-0.175*** (0.030)	-0.106*** (0.028)	-0.089* (0.050)	-0.107*** (0.035)
Social Science	-0.053* (0.032)	-0.067 (0.061)	-0.043 (0.038)	0.024 (0.037)	0.141* (0.073)	0.006 (0.044)
Business	-0.018 (0.029)	-0.016 (0.045)	-0.025 (0.038)	0.123*** (0.034)	0.154*** (0.054)	0.096** (0.044)
Law	0.060 (0.039)	0.167** (0.069)	0.016 (0.049)	0.169*** (0.046)	0.142* (0.082)	0.180*** (0.056)
Science	-0.032 (0.026)	-0.020 (0.043)	-0.039 (0.033)	-0.074** (0.031)	-0.095* (0.052)	-0.077** (0.039)
Maths	0.085 (0.055)	0.099 (0.076)	0.111 (0.081)	0.030 (0.065)	0.013 (0.091)	0.062 (0.094)
Computers/Comp. Sci	0.025 (0.057)	-0.035 (0.069)	0.068 (0.104)	0.206*** (0.067)	0.140* (0.082)	0.166 (0.120)
Eng., Manu., Const.	0.022 (0.032)	0.024 (0.041)	-0.064 (0.057)	0.091** (0.038)	0.038 (0.049)	0.062 (0.066)
Agri./Veter.	0.027 (0.072)	-0.045 (0.125)	0.082 (0.089)	-0.097 (0.085)	0.016 (0.150)	-0.130 (0.103)
Health/Welfare	0.157*** (0.030)	0.278*** (0.064)	0.138*** (0.035)	-0.070** (0.035)	0.052 (0.076)	-0.079* (0.041)
Sport/Catering/Ser vices	-0.086 (0.106)	-0.123 (0.162)	-0.089 (0.140)	-0.039 (0.125)	-0.079 (0.194)	-0.012 (0.162)
Other	-0.028 (0.042)	-0.026 (0.073)	-0.049 (0.053)	0.041 (0.050)	-0.041 (0.087)	0.069 (0.062)
3 rd /Fail	-0.016	0.036	-0.051	0.019	0.020	0.029

	(0.029)	(0.046)	(0.038)	(0.034)	(0.055)	(0.044)
2:2	-0.027	-0.023	-0.021	-0.052**	-0.035	-0.057**
	(0.017)	(0.029)	(0.022)	(0.021)	(0.035)	(0.025)
2:1	0.013	-0.020	0.033*	0.005	0.013	-0.009
	(0.016)	(0.025)	(0.020)	(0.018)	(0.030)	(0.023)
1 st	0.031	0.007	0.039	0.027	0.003	0.037
	(0.022)	(0.036)	(0.028)	(0.026)	(0.043)	(0.033)
Leaving Certificate	0.000***	0.000	0.001***	0.001***	0.001***	0.002***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Risk Preferences	0.020***	0.021**	0.016**	0.026***	0.035***	0.017*
	(0.006)	(0.010)	(0.008)	(0.007)	(0.012)	(0.009)
Consideration Future	0.003	-0.001	0.005	0.008**	0.011**	0.004
	(0.003)	(0.005)	(0.003)	(0.003)	(0.006)	(0.004)
Extraverted	0.007*	-0.000	0.014***	0.006	0.003	0.012**
	(0.004)	(0.006)	(0.005)	(0.004)	(0.007)	(0.005)
Agreeableness	0.007*	0.002	0.004	0.020***	0.003	0.016**
	(0.004)	(0.007)	(0.006)	(0.005)	(0.009)	(0.006)
Conscientiousness	0.006	0.022***	-0.003	-0.000	0.007	-0.001
	(0.004)	(0.006)	(0.005)	(0.005)	(0.008)	(0.006)
Neuroticism	-0.006*	-0.012*	0.001	-0.014***	-0.004	-0.010*
	(0.003)	(0.006)	(0.004)	(0.004)	(0.007)	(0.005)
Openness	-0.001	0.005	-0.004	0.013**	0.021**	0.013*
	(0.005)	(0.008)	(0.006)	(0.006)	(0.010)	(0.007)
Constant	9.841***	9.973***	9.735***	9.927***	9.802***	9.985***
	(0.159)	(0.262)	(0.204)	(0.188)	(0.314)	(0.237)
Observations	1873	658	1215	1873	658	1215
R-squared	0.112	0.135	0.123	0.183	0.198	0.178

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 3b: Earnings Expectations Regressions – supplementary data set

VARIABLES	(1) Ln First – Pooled	(2) Ln First – Male	(3) Ln First – Female	(4) Ln Max – Pooled	(5) Ln Max – Male	(6) Ln Max – Female
Parental Education	0.000 (0.002)	0.006** (0.003)	-0.003 (0.002)	0.007*** (0.002)	0.010*** (0.003)	0.005* (0.002)
Age	0.009** (0.004)	0.002 (0.007)	0.012** (0.005)	0.014*** (0.005)	0.011 (0.007)	0.014** (0.006)
UCC	-0.018 (0.024)	-0.020 (0.039)	-0.020 (0.030)	-0.008 (0.026)	0.011 (0.040)	-0.010 (0.032)
UCD	0.049*** (0.016)	0.012 (0.025)	0.069*** (0.020)	0.042** (0.017)	0.029 (0.026)	0.044** (0.022)
NUIM	0.038 (0.023)	0.016 (0.038)	0.050* (0.030)	-0.016 (0.025)	0.032 (0.039)	-0.048 (0.032)
NUIG	0.004 (0.027)	0.042 (0.045)	-0.019 (0.035)	-0.031 (0.030)	-0.015 (0.046)	-0.043 (0.038)
TCD	0.044** (0.019)	0.094*** (0.033)	0.014 (0.024)	0.020 (0.021)	0.041 (0.033)	0.012 (0.027)
UL	-0.052** (0.022)	-0.045 (0.034)	-0.059** (0.029)	-0.057** (0.024)	-0.070** (0.034)	-0.054* (0.031)
DCU	-0.065* (0.035)	-0.099* (0.058)	-0.036 (0.044)	0.049 (0.038)	-0.027 (0.059)	0.100** (0.048)
Education	0.066 (0.049)	0.128* (0.077)	0.018 (0.065)	-0.283*** (0.053)	-0.236*** (0.078)	-0.317*** (0.071)
Humanities & Arts	-0.109*** (0.021)	-0.099*** (0.034)	-0.112*** (0.028)	-0.079*** (0.022)	-0.050 (0.035)	-0.066** (0.030)
Social Science	-0.034 (0.029)	-0.127*** (0.048)	0.012 (0.037)	0.016 (0.031)	0.073 (0.049)	0.023 (0.041)
Business	-0.030 (0.026)	-0.026 (0.038)	-0.043 (0.036)	0.155*** (0.028)	0.150*** (0.038)	0.157*** (0.039)
Law	-0.052 (0.033)	-0.050 (0.056)	-0.043 (0.041)	0.180*** (0.035)	0.160*** (0.057)	0.221*** (0.045)
Science	-0.028 (0.022)	0.029 (0.035)	-0.055* (0.030)	-0.008 (0.024)	0.030 (0.035)	-0.003 (0.033)
Maths	0.014 (0.049)	0.144* (0.084)	-0.046 (0.061)	0.054 (0.053)	0.001 (0.086)	0.088 (0.067)
Computers/Comp. Sci	0.095** (0.044)	0.058 (0.051)	0.129 (0.086)	0.187*** (0.047)	0.090* (0.052)	0.248*** (0.094)
Eng., Manu., Const.	0.002 (0.028)	-0.018 (0.034)	-0.028 (0.048)	0.126*** (0.030)	0.082** (0.034)	0.117** (0.053)
Agri./Veter.	0.109** (0.052)	0.054 (0.073)	0.151** (0.074)	-0.027 (0.056)	-0.169** (0.074)	0.063 (0.081)
Health/Welfare	0.077*** (0.028)	0.068 (0.065)	0.081** (0.033)	-0.161*** (0.030)	-0.100 (0.066)	-0.132*** (0.036)
Sport/Catering/Services	-0.065 (0.094)	-0.111 (0.118)	-0.011 (0.151)	-0.174* (0.102)	-0.026 (0.120)	-0.439*** (0.165)
Other	-0.046 (0.033)	-0.050 (0.053)	-0.054 (0.043)	0.015 (0.036)	-0.006 (0.054)	0.041 (0.047)
Leaving Certificate	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)
Risk Preferences	0.018*** (0.005)	0.032*** (0.008)	0.008 (0.007)	0.025*** (0.005)	0.021*** (0.008)	0.021*** (0.007)

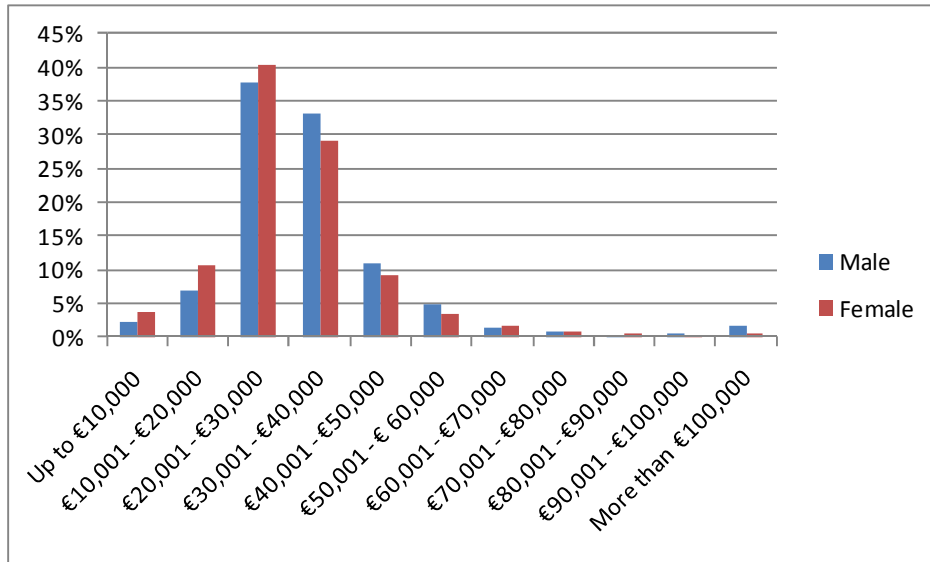
Consideration Future	0.005** (0.002)	0.006 (0.004)	0.005 (0.003)	0.005* (0.003)	0.004 (0.004)	0.004 (0.004)
Fulfilling Career	-0.008 (0.015)	0.004 (0.021)	-0.009 (0.020)	-0.010 (0.016)	-0.002 (0.021)	-0.002 (0.022)
Good Social Life	-0.011 (0.011)	-0.018 (0.018)	-0.018 (0.015)	0.020 (0.012)	0.003 (0.018)	0.011 (0.017)
Worthwhile Contribution to Society	0.010 (0.012)	-0.014 (0.018)	0.025 (0.016)	0.026** (0.013)	-0.001 (0.018)	0.042** (0.017)
Financial Security	0.040*** (0.012)	0.043** (0.019)	0.043** (0.017)	0.012 (0.013)	0.018 (0.019)	0.021 (0.018)
Prominent Position Society	0.022** (0.009)	0.018 (0.013)	0.025** (0.012)	0.006 (0.009)	-0.011 (0.013)	0.004 (0.013)
Good Relationship with Family	0.011 (0.013)	0.017 (0.019)	0.016 (0.019)	-0.048*** (0.015)	-0.036* (0.019)	-0.038* (0.021)
Committed Love Relationship	0.017 (0.013)	0.019 (0.019)	0.019 (0.019)	0.014 (0.015)	0.003 (0.019)	0.035* (0.021)
Religious/Spiritual Commitment	-0.008 (0.007)	-0.004 (0.010)	-0.006 (0.009)	-0.014* (0.007)	-0.005 (0.010)	-0.010 (0.010)
Recognised for Achievements	-0.013 (0.009)	-0.014 (0.014)	-0.003 (0.013)	-0.014 (0.010)	-0.009 (0.014)	-0.002 (0.014)
Top of Career	0.016 (0.010)	0.011 (0.016)	0.014 (0.013)	0.071*** (0.011)	0.065*** (0.017)	0.073*** (0.015)
Raising a Family of Own	0.007 (0.009)	0.014 (0.014)	0.005 (0.012)	0.006 (0.010)	0.025* (0.015)	-0.008 (0.013)
Contributing to Wellbeing of Others	-0.040*** (0.013)	-0.024 (0.020)	-0.048*** (0.018)	-0.040*** (0.014)	-0.012 (0.020)	-0.038* (0.020)
Being Very Wealthy	0.018* (0.009)	0.018 (0.015)	0.012 (0.012)	0.043*** (0.010)	0.048*** (0.015)	0.039*** (0.013)
Constant	9.310*** (0.147)	9.244*** (0.236)	9.290*** (0.194)	9.845*** (0.159)	10.016*** (0.240)	9.578*** (0.212)
Observations	1630	609	1021	1631	609	1022
R-squared	0.143	0.194	0.146	0.311	0.336	0.294

Standard errors in parentheses

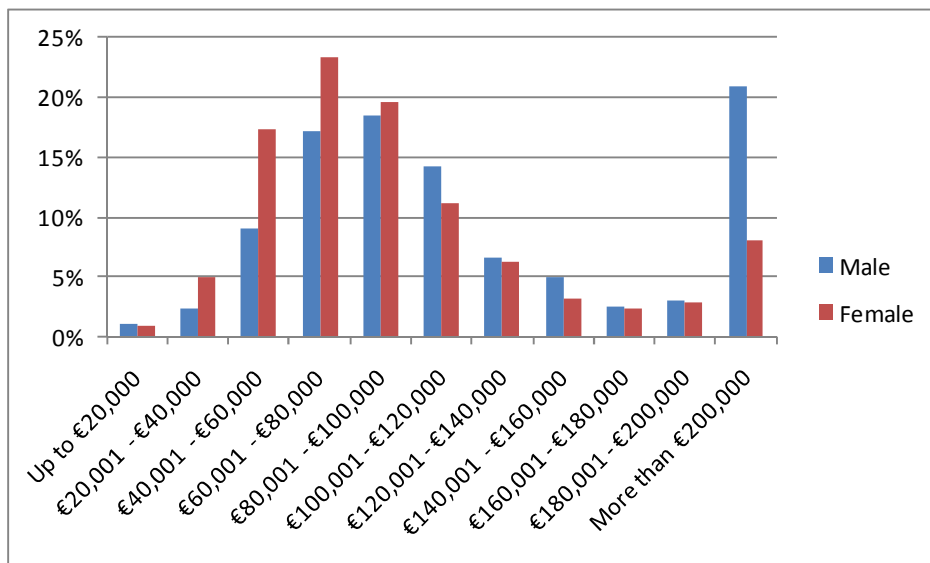
*** p<0.01, ** p<0.05, * p<0.1

Figure 1: Earnings Expectations Distributions

a) Short Run



b) Long Run



Appendix

Salary Question Wording

First Salary: “What is the annual salary in Euro that you expect to earn in your first job after graduation? (Please give your answer in terms of the current value of money.)”

1 Up to €10,000

2 €10,001 - €20,000

3 €20,001 - €30,000

4 €30,001 - €40,000

5 €40,001 - €50,000

6 €50,001 - € 60,000

7 €60,001 - €70,000

8 €70,001 - €80,000

9 €80,001 - €90,000

10 €90,001 - €100,000

11 More than €100,000

Maximum Salary: “What is the maximum annual salary in Euro that you expect to earn over your career? (Please give our answer in terms of the current value of money.)”

1 Up to €20,000

2 €20,001 - €40,000

3 €40,001 - €60,000

4 €60,001 - €80,000

5 €80,001 - €100,000

6 €100,001 - €120,000

7 €120,001 - €140,000

8 €140,001 - €160,000

9 €160,001 - €180,000

10 €180,001 - €200,000

11 More than €200,000

Risk Preference Question Wording

“Please indicate on a scale of 0-10, how willing you are to take risks in general, where 0 indicates unwilling to take risks' and 10 indicates 'fully prepared to take risks'.”

Consideration of Future Consequences Question Wording

The response scale for this question was:

1 Extremely uncharacteristic

2 Somewhat uncharacteristic

3 Uncertain

4 Somewhat characteristic

5 Extremely characteristic

“For each of the statements below, please indicate whether or not the statement is characteristic of you

- a) I consider how things might be in the future, and try to influence those things with my day to day behaviour
- b) Often I engage in a particular behaviour in order to achieve outcomes that may not result for many years
- c) I only act to satisfy immediate concerns, figuring the future will take care of itself
- d) My behaviour is only influenced by the immediate i.e. a matter of days or weeks”

Big Five Question Wording

The response scale for this question was:

1 Disagree Strongly

2 Disagree Moderately

3 Disagree a little

4 Neither agree nor disagree

5 Agree a little

6 Agree Moderately

7 Agree Strongly

“Here are a number of personality traits that may or may not apply to you. Please indicate next to each statement the extent to which you agree or disagree with that statement. You should rate the extent to which the pair of traits applies to you, even if one characteristic applies more strongly than the other. I see myself as:”

a) Extraverted, enthusiastic

b) Reserved, quiet

c) Critical, quarrelsome

d) Sympathetic, warm

e) Dependable, self-disciplined

f) Disorganized, careless

g) Anxious, easily upset

h) Calm, emotionally stable

i) Open to new experiences, complex

j) Conventional, uncreative

} Extraversion

} Agreeableness

} Conscientiousness

} Neuroticism

} Openness

Life Ambition Question Wording

The response scale for this question was:

1 Not at all important

2

3

4

5 Very important

“These statements are about general life ambitions. To what extent are the following important to you?”

- a) Having a fulfilling career
- b) Having a good social life
- c) Making a worthwhile contribution to society
- d) Being financially secure
- e) Attaining a prominent position in society
- f) Maintaining a good relationship with my family
- g) Having a religious/spiritual commitment
- h) Being recognised for my achievements
- i) Raising a family of my own
- j) Getting to the top of my chosen career
- k) Developing/maintaining a committed love relationship
- l) Contributing to the well-being of other people
- m) Being very wealthy