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Abstract

A large body of literature in economics aims to understand the transmission mechanisms through which intergenerational economic and social advantage persists. Evidence shows that individuals born into low socioeconomic status families tend to experience worse labour outcomes when adults than otherwise similar peers. Recessions, however, may have a significant impact on how certain elements of this transmission process operate in some countries but not in others (e.g. due to diverse changes in returns to education or occupation and the role of family networks). Using EU-SILC data for 2005 and 2011 we compare the different role of family background on labour outcomes in five EU countries before and after the Great Recession using a multidimensional family background indicator, that avoids undesirable cohort effects. Our results suggest that family background affects employment prospects and job quality (wages and being on a temporary contract) beyond its effect on education but we do not find significant evidence that this effect is substantially moderated by the economic cycle.

Keywords: family background, labour outcomes, returns to education, European Union, recession.

JEL Classification: I24, I26, J31, J62.

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Introduction

A large body of literature in economics documents the persistence of intergenerational economic and social advantage and aims to understand the mechanisms behind it (Bowles and Gintis, 2002; Blanden et al., 2007; Björklund and Jäntti, 2009, Black and Devereux, 2010; Smeeding *et al.* 2011, Ermisch *et al.* 2012 or Blanden, 2013). Several stylized facts have emerged from this literature. First, the lifetime earnings of parents and offspring are positively correlated in a large number of countries with the strength of the correlation varying cross-nationally (Blanden, 2009, 2013). Second, family background (FB), proxied by parental education or occupation, is known to be positively related to a large number of outcomes (e.g. school achievement, higher education, teenage pregnancy, cognitive and non-cognitive skills) both during early life and adulthood. Third, research on the relationship between children's economic outcomes (income and labour market position) and FB has also generally concluded that a better FB leads to higher employment probabilities, higher wages and access to more prestigious occupations (Blanden et al., 2011; Ermisch et al., 2012).

Adult labour market outcomes are key to individual welfare and family socioeconomic background (FB) may affect them in several ways. First, FB may influence (observed or unobserved) human capital that is valuable in the labour market, such as cognitive or social skills, educational attainment, motivation, grit, etc. (Becker and Tomes, 1986; Osborne, 2008). A variety of channels have been suggested in the literature to account for this, such as the genetic inheritance of abilities, transmission of family values and motivation, transmission of parental personalities (Osborne, 2008) as well as financial and non-financial parental inputs and investments (private tuition, school fees, parenting time etc.). Second, FB may affect individual labour outcomes through non-human capital related channels, such as family ties and networking linked to parental socioeconomic position. Evidence shows that family networks are an important resource in increasing individuals' access to a good school or a first job and may become more relevant when employment turns scarce or wages fall (Checchi et al., 1999, Pezzilari, 2010, Raitano and Vona, 2015b). Third, in addition to directly affecting observable and unobservable characteristics that determine labour market success, FB may have an impact on the labour market return to those characteristics. For example, FB may moderate the returns to education in terms of employment and wages (Harmon et al., 2003; Aakvik et al., 2010). Some evidence for Germany in Cornelissen et al. (2008) effectively shows that returns to schooling in that country depend on employee's parental background.

The most recent evidence points to FB having a substantive effect on earnings both for men and women, but with substantial cross-country variation in the magnitude of the effect (Franzini and Raitano, 2009; Raitano and Vona, 2014; Mazzona, 2014; Jerrim, 2014 and Raitano and Vona, 2015a, 2015b). The channels through which FB affects wages may also differ across countries. For example, Raitano and Vona (2015a) conclude that in the UK it

appears that family advantage is passed on through enhanced human capital accumulation in contrast with Southern European countries where family background acts as insurance for well-off children that end up in lower occupations.

Most of the current knowledge on the role of FB on individual life chances is still based only on the evidence from a handful of countries (mainly the US, the UK, Canada, Germany and Scandinavian countries)[1]. There is much less evidence for other countries so, it is still not clear that any specific conclusions from these few countries can be straightforwardly carried over to others with very different social norms and institutions (Jenkins and Siedler, 2007).

In this paper we aim to provide new comparative evidence on the role of a comprehensive FB measure on employment prospects and on two job quality dimensions (wages and contract insecurity) in five EU countries (The Netherlands, United Kingdom, Poland, Italy and Spain) at two different points of the economic cycle. We extend the literature on the impact of FB on labour market outcomes in three ways. First, we construct a new, more comprehensive measure of family background. Much of the existing evidence has focussed on the transmission of either worklessness (i.e. a proxy to "labour attachment") or occupational status from parents to children (O'Neill and Sweetman, 1998; Macmillan, 2010, 2013; Black and Devereux, 2011, Zwysen, 2015; Berloffa, 2016) ignoring other measures of disadvantage such as household structure (lone parent or couple), number of siblings or the incidence of financial difficulties in the family. Second, we investigate if a deep recession has the potential to modify the magnitude and/or the significance of the impact of FB on the offspring's main labour outcomes. More specifically, we investigate the existence of an interaction between FB and the economic cycle in determining employment, wages and the probability of holding a fixed-term contract. Third, we include in our analysis a number of European countries that have usually been omitted from studies of intergenerational transmission of advantage. We analyse five EU countries that had diverging labour market trends in recent years: three have experienced large or medium unemployment increases (Spain, Italy and the UK), one (Poland) enjoyed a large reduction in unemployment and one (The Netherlands) maintained its unemployment rate through the crisis period. These countries also represent diverse educational systems, welfare state models (Anglo-Saxon, Continental, Eastern and Southern European) (OECD, 2015;

[1] The literature on the impact of FB on labour market outcomes is strongly linked to that of the analysis of intergenerational income mobility (Blanden, 2013) so that the total unconditional effect of FB on offspring's wages is one of the most popular measures of intergenerational mobility, the beta coefficient (Corak, 2013; Jerrim, 2014). This coefficient is commonly estimated using the following type of regression: $\log(w_i) = \alpha + \beta F_i + \varepsilon_i$, where w_i are gross monthly wages in the offspring generation and FB_i is a measure of parents (father) socioeconomic status (Jäntti et al., 2006, Blanden, 2009, Björklund and Jäntti, 2009). If parents' socioeconomic status is identified with father's wages or family income this coefficient is generally referred to as the intergenerational (income) elasticity in a given country.

Sharpf, 2010) and, interestingly, also of intergenerational income elasticity estimates, as reported by Jerrim (2014) and Cervini-Pla (2015). Following Jerrim's (2014) meta-analysis, Poland is classified as an EU country with high intergenerational income elasticity between parents and offspring while in the Netherlands the intergenerational income elasticity is one of the lowest. Italy, Spain and the UK are somewhere in the middle. Cervini-Pla (2015) concludes, "intergenerational mobility in Spain is similar to France, lower than in the Nordic countries and the UK and higher than in Italy and the U.S".

Our results show that, considering a cohort-relative multidimensional index of FB in quantiles, in general, the probability of being in employment grows as family background improves. Nevertheless, this positive relationship is stronger in Spain, Italy and Poland and weaker in the UK and The Netherlands. Gross log hourly wages grow with the individual's family background in all countries but The Netherlands. It is noticeable however, that the increase is somewhat larger for Spain than for other countries. Finally, it also appears that individuals from more advantageous backgrounds are better able to avoid more unstable fixed-term contracts.

The paper is organized as follows. In the first section, we review the literature on intergenerational transmission of advantage focusing on the most recent evidence and we outline our main contributions to the topic. In the second section, we describe the labour market context in the five countries during the period under study, specify the main characteristics of the data source and explain the methodology used to construct our cohort-relative index of family socioeconomic position. In the third section, we discuss our empirical strategy and in the subsequent section, we present our main results. The last section concludes.

1. Intergenerational transmission of advantage: family background and labour outcomes.

Ermisch et al. (2012) summarize the main worldwide empirical findings on the relationship between children's economic outcomes (income and labour market position) and parental education as a proxy of FB. They conclude that a positive economic outcome (higher income or better labour market position) is positively correlated with a higher level of parental education. In a comprehensive cross-country analysis on income persistence across generations, Jäntti et al. (2006) underline that cross-country differences in income persistence are particularly observable in the tails of the distribution. Indeed, the literature on intergenerational transmission of worklessness and poverty also consistently points to the

persistence of unemployment (Berloffa, 2016) and of living on a low income across generations (Bird, 2013).[2]

Most recently, Franzini and Raitano (2009), Mazzona (2014) and Raitano and Vona (2015a, 2015b) provide comparisons of different aspects of the role of parental status on children's labour outcomes in a variety of EU countries. Their work concludes, similarly to Bowles and Gintis (2002) that, even when conditioning on the level of education and occupation, there remains a persistent residual positive correlation between family socioeconomic background and child earnings as an adult. In a recent comparative paper using data for 24 countries, Jerrim (2014) finds that the level of income inequality in the parent's population is associated with several key components of the intergenerational transmission process and the direct effect of parental education upon labour market earnings. He concludes also that it is the access to, rather than the returns from, education that are most likely to be driving the indirect effect of FB on child's earnings.

In a study that focuses on Italy, Raitano and Vona (2015b) exploit a special dataset containing detailed information about the wage profiles of Italian workers to assess the effect of parental background over the long run. They find that the direct effect of FB on children's earnings in Italy is large (over 10 percent) and mostly formed during the actual labour market career rather than being dependent on pre-labour market conditions. Good parental background pushes the experience-earnings profiles of Italians upwards through two mechanisms: a glass ceiling effect for high-ability individuals from low income families, due to the complementarity between family background (parent's education) and individual's idiosyncratic abilities, and a parachute effect for low-ability individuals which may be associated with better family network connections. In a different paper, Raitano and Vona (2015a) also suggest that the relatively low social mobility of Italy and Spain could be, at least partially, explained by this parachute effect, which ensures a wage premium to well-off individuals who end up in low and medium-paid occupations.

Berloffa (2016) provides more recent evidence on the transmission of labour market opportunities for a large group of EU countries; while Zwysen (2015) focusses on the UK. They both analyse the labour market opportunities of young Europeans and conclude that there is significant persistence of worklessness. This intergenerational correlation is larger in Mediterranean and Eastern countries, so that parental employment when the individual was an adolescent matters more. In the case of the UK, young adults whose fathers did not work when they were 14 were less likely to work themselves when adults and are often dissatisfied with

[2] Recent evidence for European countries before the crisis shows that being poor during childhood in Europe significantly decreases the level of income in adulthood increasing the probability of being poor (Pascual, 2009; Bellani and Bia, 2013 and Whelan et al., 2013)

their job. However, they did not seem to earn lower wages or be holding a more insecure contract than other similar peers whose fathers did work.

The literature has generally identified FB with the parental level of occupation or education in order to proxy the socioeconomic status of the family the individual is born in. We believe that the parents' potential to pass advantage to their children is related to the family's socioeconomic status in a wider sense. Other household characteristics such as household type, number of siblings or indicators of financial difficulties may play a role. Our FB index aims to proxy this wider concept of socioeconomic status by including information on a large list of proxies to family resources: both parents' occupation (including worklessness) and level of education, the number of siblings, the household structure (lone parent or couple) and the incidence of financial difficulties when the individual was an adolescent.

We then focus on the potential role of the economic cycle in moderating the effect of FB on labour market outcomes. There are several reasons we might expect the effect of FB to vary with the economic cycle. First, if some (observed or unobserved) individual characteristics that are valuable in the labour market are passed on (either genetically or through specific investments) from parents to children, the same characteristics may make an individual more resilient when a recession hits. In this case, we would expect children from well-off families to be less affected by a recessionary spell compared to children from less well-off families (lower probability of employment, higher probability of a wage loss, higher probability of downscaling occupation). We would also expect this difference to be relatively independent of the career stage the recession hits. Second, we might expect that better off families will be using some of their resources (family networks, monetary resources needed to invest in one's career or for labour mobility etc.) to shield their offspring from the negative impact of a recession. If this behaviour is stronger, or has stronger effects during a recession when jobs are scarce or wages fall, we would expect again that individuals from a higher FB do better in a recession compared to children with a more disadvantaged background. Since young workers are less well established in the labour market, we might also expect FB to matter more for this group.

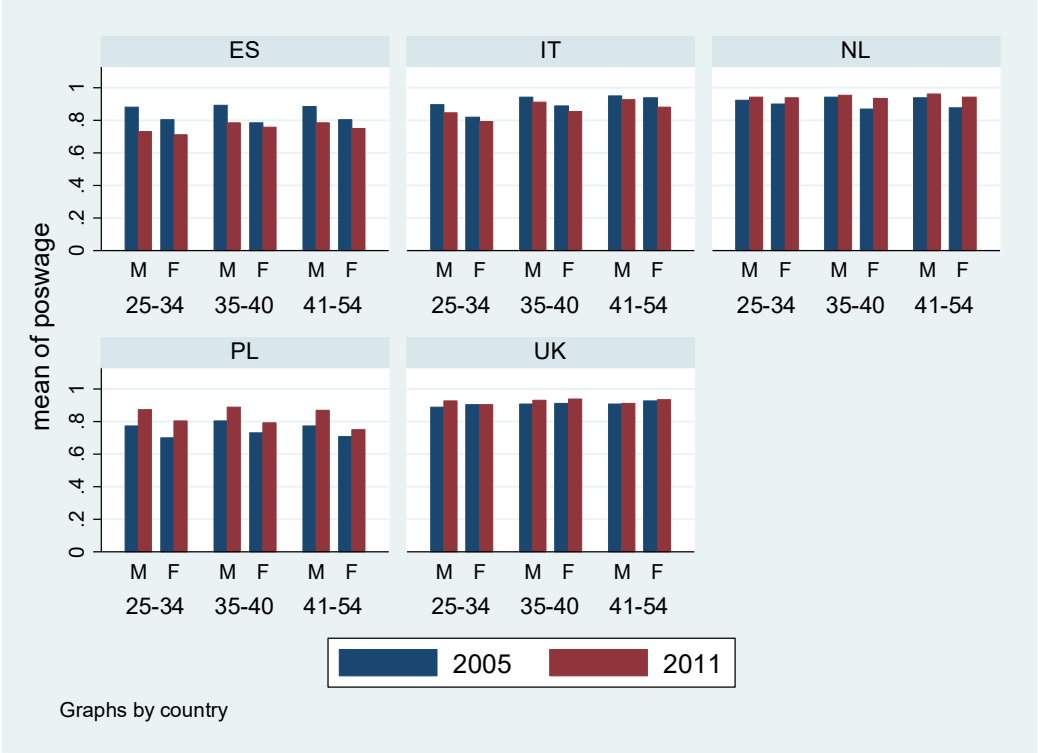
Our contribution is thus to check if children from well-off families are less affected by the recession in the probability of being employed and in two labour market outcomes that can largely be construed as job quality indicators, i.e. wage level and the probability to hold a fixed term contract. Additionally, if we find any significant differences between young and middle-aged or older workers, we could argue about which of the previous reasons could be playing a larger role in different countries.

2. The context, data sources and the measurement of family background.

2.1. The labour market context.

The evolution of employment and wages in the five countries we have chosen to analyse has been quite different during the period of analysis according to Eurostat. Unemployment has remained stable and low in The Netherlands throughout the crisis (the unemployment rate was at 5.9 percent in 2005 and it remained at 5.0 percent in 2011). In contrast, in the UK and Spain unemployment grew between 2005 and 2011. In the UK, it went from 4.8 to 8.1 while in Spain, which had a higher than average unemployment rate compared to the rest of the EU, it grew most: from 9.5 to 25 percent of the active population. In Italy, where the unemployment rate in 2005 was nearer to the EU average (7.7 percent) it followed a slowly increasing trend, similar to the average across the EU, and reached 8.4 percent in 2011. In contrast with the other countries, Poland was suffering from a high unemployment rate in 2005 (17.9 percent) which decreased to 9.7 in 2011.

Figure 3. Percentage of Employed individuals by age and year.

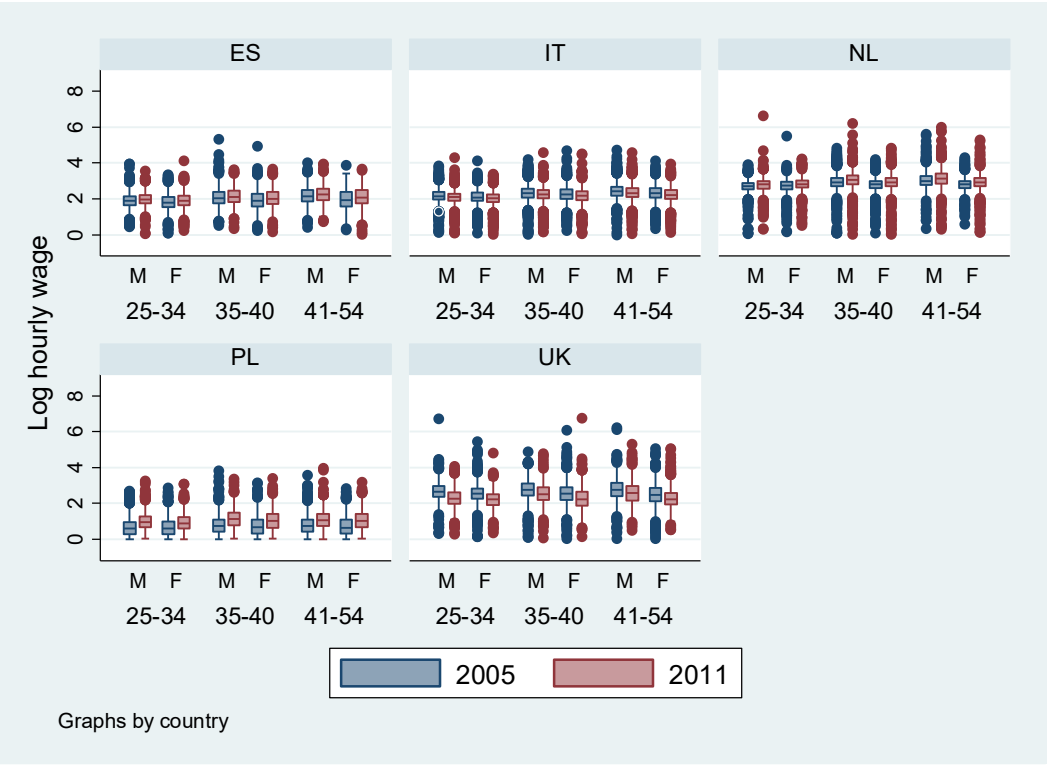


It should also be noted that male and female (unemployment) trends followed very different patterns in the countries we consider. Male employment rates fell 2 percentage points in the UK and Italy and 10 percentage points in Spain, while in Poland they grew by 8 percentage points. In the case of females, employment rates grew in all countries but the UK

according to Eurostat. This growth has been particularly high in The Netherlands (2.9pp) and in Poland (5.6pp). All these patterns are accurately captured by our sample (see Figure 3).[3]

[3] We identify some small differences between our sample for Spain, Italy and the UK and Eurostat employment data for females in 2005 and 2011. However, Eurostat employment data have been calculated for individuals between 20 and 64 years of age and the definition of employment is not exactly the same as the one we use here.

Figure 4. Distribution of wages by country.



Gross wages instead have increased in all countries but the UK between 2005 and 2011. Eurostat estimations are that gross wages grew 7.2 percent in The Netherlands and 7.9 percent in Spain while they fell by 5.4 percent in the UK (between 2008 and 2010). Our sample shows similar patterns for log hourly wages in this period (Figure 4). Mean gross hourly male and female wages fell in the UK and in Italy and grew in Spain, The Netherlands and Poland for both males and females. In terms of the wage distribution, the UK and The Netherlands have the highest mean and the most dispersed gross hourly wage distributions while Poland has the lowest and most compressed wages.

Use of temporary contracts is most widespread in Spain (around 34% in 2005 and 25%, in 2011) while being relatively restricted in the UK (5.5 to 6%)[4]. In Italy, Poland and The Netherlands the number of fixed-term contracts is in the middle of these two extremes with the percentage of temporary contracts ranging from 10% to 25%. Trends in the prevalence of fixed-term contracts vary across countries. Their use decreased in Spain for both females and males, following large employment destruction in sectors such as construction or services, and increased, particularly for young employees, in Italy, The Netherlands and in Poland, mirroring general employment growth. All these patterns are also accurately captured by our sample (see Figure 5).

[4] The number of temporary employees in the UK was 5.6% in the 4th quarter of 2005 and 5.9% in the same quarter in 2011 (EUROSTAT).

Figure 5. Percentage of individuals in a fixed-term contract by age and year.

2.2. An EU comparable data source on family background.

To carry out our analyses we use the European Union – Survey of Income and Living Conditions (EU-SILC). EU-SILC is an annual survey that provides information on individual and household income together with demographic and socioeconomic characteristics (Eurostat, 2013, 2014). The survey also collects educational credentials and labour market characteristics for all individuals aged 16 and over. We use two additional cross-sectional modules (2005 and 2011) that collected information on the intergenerational transmission of poverty and disadvantage. They provide data on parental circumstances when the individual was aged 14[5] . We have selected a sample of individuals in each country aged between 25 and 54 years that responded to an additional set of questions on some key family characteristics.[6]

[5] The EU-SILC survey also provides a longitudinal sample. However, there are no advantages of using the longitudinal sample given that the sample is a rotating one where individuals are kept in the panel for a maximum of four years. Even the longest standing panel data sources in Europe such as the British BHPS or the German GSOEP have only been running for approximately 20 years so they do not yet provide enough information to consider employment experiences when children grow to adults. We are conscious that using a cross-section may increase "measurement error" and rules out estimating any fixed-effects models. An advantage, however, is that we avoid all attrition problems. Note in any case that using the longitudinal sample is not possible because the additional modules that yield our FB index dimensions are in the cross-sectional dataset only.

[6] All individuals in our samples were between 25 and 54 years of age so were born either between 1957 and 1986 (2011 sample) or between 1951 and 1980 (2005 sample).

The main variables we make use of are the father's and mother's occupation if employed, parents' worklessness (or inactivity), father's and mother's level of education, household structure (lone parent or couple), number of cohabiting siblings in the household and the frequency of financial problems in the household when the individual was a teenager. The module information in 2005 and 2011 differs in the detail of the parental occupation's classification scheme. We have nevertheless been able to construct some comparable ranking of occupations for both moments in time by using the ISEI (International Socio-Economic Index of occupational status, ISEI) following Gazeboom et al. (1992), Gazeboom, and Treiman (1996).[7]

The education variable is recorded according to the International Standard Classification of Education 1997 (ISCED-97) in both years. Due to the comparability restrictions between 2005 and 2011, we have only been able to use four levels of parental education: illiterate, low, medium or high.[8] The financial situation of the family when the individual was a teenager is constructed using the question: "When you were 14 years old, did your household have financial problems?" for 2005 and the question "What was the financial situation of your household when you were around 14 years old?" for 2011. Even if the wording of the question is not identical in all the countries or in the two waves, the response's graduation is largely comparable.[9]

We consider the probability of employment and two labour market outcomes that can largely be construed as job quality indicators, i.e. the gross hourly wages and the nature of the employment contract: temporary vs. non-fixed term. The information on hourly wages is derived

[7] The information on occupation in the 2005 survey comes from a two-digit ISCO-88 classification while that in the 2011 survey only provides one-digit information. However, note that even the two-digit data are not as detailed as other scales such as the European Socioeconomic Classification (Rose and Harrison, 2007). In order to consider both parent's worklessness we have added a category within the occupation variable labelled with a zero if both parents are out of employment (either unemployed or inactive). The occupation will also be zero if the household structure is lone parent and that parent is unemployed or inactive.

[8] The detail in the level of education attained by the father or mother is more limited in 2011 than in 2005. In 2005 six different levels of education were identified while the 2011 module only distinguishes four: not being able to read or write, low level (pre-primary, primary, and lower secondary) medium level, (upper secondary or post -secondary, not tertiary) and high level (tertiary). In regressions, we use education in three levels, integrating the first level in the second one. Thus, in regressions, a "Low level" of education corresponds to levels 0, 1, and 2 of ISCED-97 and includes illiterate persons, "Medium level" and "High level" of education corresponds respectively to levels 3 and 4, and 5 and 6 of ISCED-97.

[9] All answers for 2005 are graduated from 1 to 5 meaning "most of the time", "often", "occasionally", "rarely" or "never". In Italy the question is slightly different "Think about the time when you were between 12 and 16 years old. How frequently was your household obliged to cope with economic problems? but responses are graded equally. For 2011 answers are graduated from 1 to 6 meaning "very bad", "bad", "moderately bad", "moderately good", "good" and "very good".

from the gross monthly earnings for employees in the current period.[10] Given that for some employees in a variety of countries this information is missing, we also use the employee annual cash or near cash income (gross) information adjusted by the number of months in effective work during the past year in order to impute most of the missing information of currently employed individuals.[11] The wage distribution tails are trimmed for robustness: 1 percent of the observations at each tail of the national wage distribution in each period are dropped (Cowell and Victoria-Feser, 2006).

2.3. An index of family socioeconomic position using EU-wide comparable information

The definition of the socioeconomic status of an individual as determined by her family has been discussed at length in the sociological literature. In general, FB is measured using the occupational status (or level of education) of the parents as determined by a hierarchy of either prestige or earnings. Only in a few cases is this information supplemented by other variables such as income, housing tenure (as a proxy of family wealth) and/or, in some contexts, ethnicity, disability or a self-reported measure of financial difficulties (Bowles and Gintis, 2002).

A number of papers have used multiple dimensions to construct a family background index. For instance, Ashenfelter and Rouse (2000) used a weighted average of parent's education and occupation and the number of siblings as a proxy for economic resources when a teenager. Goodman et al., (2011) constructed an index of socioeconomic position that included log equivalized household income, reported experience of financial difficulties, mother and/or father's occupation and housing tenure. These authors argue that multidimensional indexes of family background take into account that advantage and disadvantage are multi-dimensional, particularly in a comparative context. They underline that these elements may work in a cumulative fashion, so a multidimensional index is better able to capture differentials between socio-economic groups compared to any single component.

[10] As Eurostat notes this gross monetary amount, (PY200G variable) consists in wages from the main job including overtime work, tips and commission and is reported before tax and social insurance contributions are deducted. It also includes 13th or 14th month payments or payments such as holiday pay, profit share, bonuses that are taken also into account in a monthly basis. Note that in the case of Spain and Italy gross wages in 2005 are missing entirely. Based on EUSILC 2006 we have derived average tax rates (ATRs) for each 5% of the net wage distribution (based on annual gross and net income variables) and applied these ATRs on the net series in 2005 to derive gross annual employment incomes.

[11] The income variable used in this case is PY010G and the number of months in employment is obtained from the calendar. Further, in the case months of employment are missing they are imputed using group averages. Hours of work are imputed in the same way as months in employment. A relatively large number of groups are constructed by considering three age cohorts and ten income intervals.

Several recent studies have showed that relying solely on parental occupation may be too restrictive. In a recent comparative paper using data for 24 countries, Jerrim (2014) concludes that unequal access to financial resources plays a central role in the intergenerational transmission of advantage. Goodman et al. (2011) suggest that in order to best proxy long-term material resources, an index of socioeconomic position in a comparative study should include log equivalized incomes, reported financial difficulties, parents' occupation and housing tenure. Marks (2011) puts forward that the preferred measure of socioeconomic background is a composite of both parents' occupation and education because these two indicators do not necessarily show a high correspondence cross-nationally. Therefore, even if parental occupation may capture unobservable aspects of human capital, it is likely that occupation, education and financial resources or wealth provide complementary information on dimensions that may play diverse roles in different societies.

Following this argument, we construct a composite index of socioeconomic position that seeks to capture the long-term material and non-material resources of the household the individual lived in during childhood. In addition to parental occupation, we also consider parental education, the number of siblings, household structure (lone parent versus couple) and the household's financial situation when the individual was an adolescent[12]. We use a "household dominance" approach to the coding of our FB indicator (Richards et al., 2016; Erikson, 1984) so that in two-parent households we consider only the highest occupation and education of either parent.[13] For those individuals who only had one employed parent when they were 14 years of age, the occupation variable uses the value of the employed parent. For individuals whose parents were both employed, the occupation variable equals the highest occupation out of that reported by the two. For individuals whose parents are both unemployed the occupation variable takes the value zero. The education variable is equal to the highest level of education out of that reported by the two parents or that of the present parent when the individual was 14.

[12] We undertake some sensitivity analysis regarding the definition of the FB index by constructing other occupation (education) variables taking into account both the mother's and the father's occupation (education) information (see section 5 for more details about sensitivity checks). In constructing these, we have considered giving a prominent weight to the highest occupation (education level) and giving some smaller weight to the lowest occupation. Further, we have also differenced the case in which one parent is missing in comparison with the case in which the parent exists but is not employed. In particular, we have slightly reduced the value of the occupation of the remaining parent if no other parent is there. Our results were robust to all of these changes.

[13] As Richards et al. (2016) note "This has the advantage that we treat SES [FB] positions of mothers and fathers equally" and, thus, deriving a single measure for the household. Nevertheless, this methodology considers that households where both parents have a high occupation or education are equal in FB to parents where one has a high occupation or education and the other does a routine job or has a low level of education (or is unemployed). This may not be the case. We have undertaken some robustness checks using different weights for each partner's occupation and education and our main results continue to hold.

Finally, in all our estimations we allow returns to education to vary with FB so that we can check if human capital remuneration differs by family socioeconomic status.

Figure 6. Differences in mean Multidimensional Family Background of total population and a particular cohort, 2005 and 2011.

We have constructed our individual multidimensional FB index using Multiple Correspondence Analysis (MCA).[14] Given that a higher score in our composite index is associated with a higher family socioeconomic background, we can define FB_i to be the composite index that summarizes the living conditions of individual *i* when she was 14 years of age. We then standardize our index by country so for each country, its mean is 0 and its variance is 1. The dispersion of the FB indices in different countries shows that in the Mediterranean countries the distribution of socioeconomic background is somewhat less dispersed than in Poland, the UK or The Netherlands.[15]

[14] Multiple Correspondence Analysis (MCA) generalizes Principal Components Analysis (PCA) when the variables included are categorical overcoming any concerns about the estimation adequacy of this methodology when variables are discrete (Kolenikov and Angeles, 2009; LeRoux and Rouanet, 2010). This procedure explores the internal structure of a covariance matrix of a group of relevant variables while producing an additive decreasing disaggregation of the total variance (inertia) of the matrix. We use scale readjustments of the solution after performing the components analysis. We consider two dimensions and the Burt adjusted total inertia explained by the first dimension ranges from 71 (PL, IT) to 90 percent (NL) while that explained by the second dimension ranges between 10 (NL) and 28 percent (PL). A similar procedure is used in the measurement of multidimensional poverty in Asselin (2009) and multidimensional deprivation in Gradín (2013).

[15] The mean absolute deviation is 0.73 for Spain and 0.75 for Italy (mean of both years) while it ranges from 0.77 to 0.80 for Poland, The Netherlands and the UK. If we also calculate the value of the interquartile range, we find that the tails of the distribution are also further apart in the UK, Poland or The Netherlands than in Spain or Italy. The value of the difference between p75 and p25 is 1.03 for Spain, 1.10 for Italy while it reaches 1.38 in the UK, 1.36 in Poland and 1.27 the Netherlands.

Figure 6 plots the differences between the mean of total population family background (FB_i) and that of a given cohort both in 2005 and 2011. These graphs show that the mean value of FB in a cross-section varies significantly by cohort in all countries. Younger individuals have, on average, higher FB levels than older individuals do. Secular educational expansion and changes in the occupational structure translate into rising parental educational and occupational levels over time. This pattern is present both in 2005 and 2011 in all the five countries considered even if it is more prominent in Poland than anywhere else. To account for these secular trends, we compute an individual's FB measure relative to the average of her cohort.[16] In doing so, we are also assuming that what actually matters in determining a labour market outcome is not the absolute level of the FB but an individual's relative position within the FB distribution of her cohort.

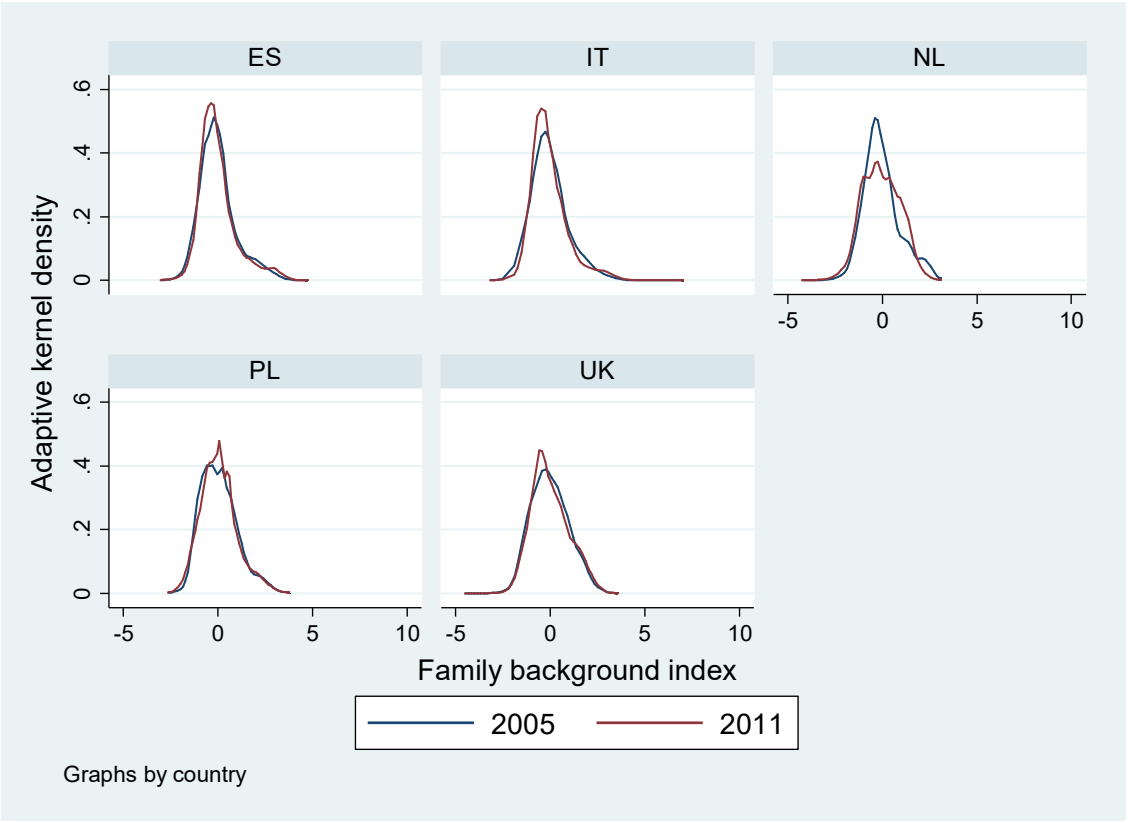
Our cohort-relative Multidimensional index ($FBrel_i$) measures the difference between the individual's socioeconomic status and the mean of her (5 year) cohort[17] and is plotted in Figure 7. As expected, this cohort-relative index eliminates most cohort effects: the distribution of FB in 2011 is just on top of that for 2005 in all countries and no shift to the right is observable anymore. We finally categorize our cohort-relative index into five quintiles in order to run all our estimations so that all individuals are placed into groups ranked by the value of the difference of their FB to the mean of their cohort.[18]

[16] Otherwise, if, for instance, the probability of employment was falling between 2005 and 2011 and the value of FB was growing due to a cohort effect, the impact of a growing FB on employment could be negative just due to this cohort effect.

[17] Obviously, we could have chosen a longer/shorter time span when defining a cohort; there are however two countervailing effects that should be kept in mind. On the one hand, choosing longer time windows increases the size of each cohort and thus, creates smoother estimates of cohort averages; on the other hand, longer time windows increase the sensitivity of the resulting relative FB indicator to cohort boundaries. As the windows get wider and the number of cohorts diminishes, the distance between the mean family background of adjoining cohort increases. As a result, choosing different cohort boundaries may significantly affect the relative measure of FB. To avoid this undesirable effect, we have restricted the size of the cohort to a five-year window.

[18] In this way, we are avoiding a full parameterization of the FB index and our variables of interest.

Figure 7. Distribution of the cohort-relative Multidimensional Family Background index, 2005 and 2011.



3. Empirical strategy

Our empirical analysis consists in quantifying the direct and indirect effects (through education) of family socioeconomic background on the probability of being employed, on the level of log gross hourly wages and on the probability of holding a fixed term contract. We estimate the probability of being employed fitting a logit model of binary response for males and females separately using maximum likelihood. Thus, we estimate the probability of being employed as:

$$Pr\left(y_i = employed \middle| X_j\right) = \frac{\exp(X_j\beta)}{1+\exp(X_j\beta)}$$

where X_j is a list of covariates that includes our relative measure of family background within the cohort at both moments in time (in quintiles) together with other relevant covariates. Employment status is defined as having a positive wage.

We then estimate a log earnings equation using a Heckman selection model where log wages are estimated separately for males and females and where we include several standard controls. The regression equation is:

$$\log(w_i) = \alpha + \theta_1 FBrel_i + \theta_2 FBrel_i \times year2011 + \gamma_1 E_i + \gamma_2 E_i \times year2011 + \delta_1 FBrel_i \times E_i + \delta_2 FBrel_i \times E_i \times year2011 + \vartheta X_i + \varepsilon_i$$

where $\varepsilon_i \sim N(0,\sigma)$, $w_i$are gross hourly wages, $FBrel_i$ is our relative measure of family background within the cohort, E_i is a set of dummy variables identifying the individual level of education, "year2011" indicates the recession year and X_i is a list of other control variables (age, age squared, immigrant status, experience (years in work), experience squared, regional dummies and an indicator for subjective bad health (0/1)). Because the dependent variable (log wages) is not always observed the model estimates a selection equation so that wages are observed only if:

$$\theta \mathrm{Z}_i + \mu_i > 0 \quad \text{where} \quad \mu_i \sim N(0,1) \quad \text{and} \quad corr(\varepsilon_i, \mu_i) = \rho$$

Note that this selection equation includes in Z_i the cohort-relative index, the level of education and large list of other control variables that may be influencing the individual's decision to participate in the labour market. These are covariates such as marital status, number of children in the household, number of children below 3 years of age, regional unemployment rates, experience (years of work), experience squared, the level of capital income in logs (as the sum of income from rents, investments and private pensions) and subjective bad health (0/1). Our best-fitted regressions use the five groups of $FBrel_i$ as an additional explanatory variable and include its interactions with the year of observation and individual educational dummies.

To estimate the probability of holding a fixed term contract, wefit a logit model for binary response using maximum likelihood. Thus, just as in the previous estimation of the probability of employment, we estimate the probability of holding a fixed-term contract as:

$$Pr\left(y_i = fixed - term\ contract \middle| X_j\right) = \frac{\exp(X_j\beta)}{1+\exp(X_j\beta)}$$

where X_j is a list of covariates that include our relative measure of family background within the cohort at both moments in time (in quintiles) together with other covariates. Unfortunately, we have not been able to consistently fit Heckman probit models in all countries. As a result, we do not model selection into employment jointly with the probability of holding a fixed term contract. For the countries where we are able to fit Heckman probit models, modelling selection does not influence the substantive results.

Both our wage and type of contract estimations rely on repeated cross-sectional data. To identify the role of FB on our two job quality indicators, we are comparing mean differences in our outcomes of interest between individuals with different ranks in the FB distribution (but otherwise similar characteristics) in 2005 and 2011. This specification implies that we cannot distinguish between period and cohort effects. Thus, by attributing any significant differences in patterns of association between FB and our two labour market indicators to the economic cycle,

we are implicitly assuming cohort effects are absent. Given that our two data points are only six years apart; this seems a reasonable assumption.

4. The determinants of employment and job quality: direct and indirect effects of family background on labour outcomes

Our goal in this paper is to provide a better understanding of the role of family background in determining labour market outcomes in a variety of developed countries. We look into the impact of FB on the probability of employment and on two main indicators of job quality, namely gross hourly wages and type of contract (fixed-term vs. permanent). In both cases, we investigate the potential interactions between FB and the economic cycle on the one hand and between FB and the individual's level of education on the other hand. Given that the level of FB is positively correlated with the observed individual level of education (individuals with a higher FB will, other things equal, reach a higher level of education than those who come from more disadvantaged households), we have estimated two different specifications. In the first specification, we do not include the individual level of education as an explanatory variable, so that FB captures the whole impact of the family socioeconomic status on outcomes both via educational attainment and through other channels (Model A). In the second model, we include the level of education as a separate regressor (Model B) to isolate any differential impact of FB on labour outcomes for individuals with similar levels of education.

Family background is measured by the quintile of the relative family index variable an individual finds herself in. For ease of interpretation, we only report the effect of being in the bottom or top quintile relative to the middle (i.e. third) quintile in the main text. The full estimation, including the coefficients for the second and fourth quantiles can be found in the Appendix (Tables A3 to A8).

4.1 Employment

As noted earlier, to measure the role of FB on employment probabilities before and after the recession we have estimated two different specifications (Model A and Model B) for the probability of having a positive wage, a proxy for employment.[19] Average Marginal Effects[20] (AMEs) for 2005 and 2011 are reported in Table 1.

[19] We have checked that our main results for employment hold even if we define employment differently using the information on labour status from the data and estimating the probability of employment as opposed to unemployment conditional on being active. In all our estimations, we regard inactivity and unemployment as a similar status. We do not consider this a strong assumption for middle-aged individuals below 54 years of age given that an important number of the inactive in that group may be discouraged workers more than inactive individuals, particularly during the recession.

As Raitano and Vona (2014) note: "it is not easy to assess how employability is affected by family background", due to the different participation patterns of individuals from high and low family background. In principle, individuals from disadvantaged backgrounds will have higher incentives to participate in the labour market but empirically are shown to have higher probabilities of being unemployed or inactive. The issue is particularly relevant for females, who have lower participation rates, and may be affected by assortative mating so that if partners are from similar FB backgrounds, the impact of family background will be reinforced by marriages. On the other hand, if couples take a joint decision about participation, richer households may tend to reduce their total labour supply, particularly during child-bearing periods.

Table 1: Marginal effects of family background on employment

	Model A		Model B			Model A		Model B	
	Males					Females			
ES	Q1	Q5	Q1	Q5	ES	Q1	Q5	Q1	Q5
2005	-0.015	0.004	-0.003	-0.010	2005	-0.039*	0.058***	0.002	0.022
s.e.	(0.012)	(0.012)	(0.011)	(0.012)	s.e.	(0.018)	(0.016)	(0.017)	(0.017)
2011	-0.080***	0.023	-0.031*	-0.010	2011	-0.064***	0.056***	-0.023	0.003
s.e.	(0.016)	(0.015)	(0.015)	(0.016)	s.e.	(0.018)	(0.017)	(0.017)	(0.017)
IT	Q1	Q5	Q1	Q5	IT	Q1	Q5	Q1	Q5
2005	-0.040***	-0.001	-0.020**	-0.005	2005	-0.061***	0.025*	-0.013	0.008
s.e.	(0.007)	(0.007)	(0.006)	(0.007)	s.e.	(0.012)	(0.010)	(0.010)	(0.010)
2011	-0.036***	0.021*	-0.012	0.004	2011	-0.032*	0.052***	0.008	0.009
s.e.	(0.010)	(0.010)	(0.009)	(0.010)	s.e.	(0.014)	(0.013)	(0.012)	(0.013)
NL	Q1	Q5	Q1	Q5	NL	Q1	Q5	Q1	Q5
2005	-0.011	0.001	-0.005	-0.005	2005	-0.029	0.032	-0.016	0.009
s.e.	(0.014)	(0.013)	(0.011)	(0.012)	s.e.	(0.022)	(0.019)	(0.017)	(0.018)
2011	-0.003	-0.007	0.002	-0.011	2011	0.009	-0.002	0.019	-0.004
s.e.	(0.012)	(0.012)	(0.012)	(0.014)	s.e.	(0.012)	(0.013)	(0.011)	(0.013)
PL	Q1	Q5	Q1	Q5	PL	Q1	Q5	Q1	Q5
2005	-0.018	0.064***	0.006	0.020	2005	-0.084***	0.126***	-0.026	0.046**
s.e.	(0.015)	(0.014)	(0.013)	(0.014)	s.e.	(0.017)	(0.015)	(0.015)	(0.016)
2011	-0.040**	0.022	-0.023	0.004	2011	-0.108***	0.089***	-0.059***	0.041*
s.e.	(0.014)	(0.013)	(0.013)	(0.014)	s.e.	(0.019)	(0.017)	(0.017)	(0.017)
UK	Q1	Q5	Q1	Q5	UK	Q1	Q5	Q1	Q5
2005	-0.030*	0.005	-0.018	-0.002	2005	-0.025*	-0.005	-0.017	-0.018
s.e.	(0.014)	(0.012)	(0.013)	(0.013)	s.e.	(0.013)	(0.012)	(0.012)	(0.013)
2011	-0.020	0.014	-0.007	0.011	2011	-0.037*	-0.012	-0.014	-0.031
s.e.	(0.018)	(0.016)	(0.018)	(0.018)	s.e.	(0.017)	(0.015)	(0.016)	(0.018)

Note: * p<0.05; **p<0.01; ***p<0.001

[20] We calculate this marginal effects assuming an individual with a mean value for all regressors. Our reference group is an individual who is at the third quantile in the distribution of cohort-relative FB index.

Source: Authors' calculations based on EU-SILC

Results suggest that FB has a limited impact on the probability of employment for males and females in most countries when the individual level of education is included as an explanatory variable too. In most countries, the impact of FB, if relevant, is working mostly through a higher educational attainment. Nevertheless, an independent impact of FB on employment is observable for males in Spain and Italy and in the case of females in Poland. In particular, coming from a low FB reduces the probability of employment for males before the recession in Italy and, during the recession in Spain. In the case of Polish females, having a high FB increases the probability of employment and having a low one decreases it both before and after the recession. Both in Poland and Spain, differences between the low FB group and the middle one are larger in 2011 than earlier. Therefore, although results are generally similar irrespective of the economic cycle, some small cycle effects on employment are observable for Spain and Poland (even if these countries experienced very different employment trends: a decreasing one in the former and an increasing one in the latter).

4.2 Wages

To assess the role of family background in determining wages, we estimated country specific Heckman type wage equations that account for selection into employment, separately for men and women. The dependent variable is the log gross hourly wage derived from the current gross monthly earnings and the number of hours worked per week. When the current monthly gross earnings are unavailable, we impute them based on annual employment income and the number of months spent in employment in the previous year. Effectively, this strategy increases our sample size and provides a 'potential wage' measure for some of the individuals who are not currently observed to be in employment. In the employment selection equation, we include a proxy for non-labour household income.[21]

All our wage equations control for a quadratic in age, a quadratic in experience[22], health, immigrant status, and education (measured on an ordinal scale as low, medium and high). The selection equation additionally controls for marital status, number of children under 18, number of children aged less than 3 of the individual[23], regional unemployment[24] and the log of the total

[21] We have constructed this proxy as a measure of capital income: the sum of rent, investment and private pension income. We believe that this is a relevant regressor for employment probabilities.

[22] This variable is missing in the UK in 2005 so it is not included in the UK equation.

[23] We have tried using the number of children and children under 3 in the household as control variables and the results do not change.

[24] Regions are missing in The Netherlands; therefore, this variable is not included in the NL equation.

earnings of the other adult members in the household. We have also included regional fixed effects. However, unfortunately, identification of region is not possible in The Netherlands and in the UK in 2005. As a result, region fixed effects could not be included for these two countries

The left half of Table 2 shows the estimated coefficients of family background on the log hourly wages for men. With only one exception, men coming from more disadvantaged families earn less compared to the middle quintile, even when they are similarly educated. The exceptions are The Netherlands and the UK where effects are statistically indistinguishable from zero. In Italy, Spain and Poland, , controlling for education and other relevant characteristics, men in the top quantile of the family index earn on average between 15 and 30% more compared to men in the bottom quantile, depending on country and year.

Table 2: Marginal effects of family background on log hourly wages

	Model A		Model B			Model A		Model B	
	Males					Females			
ES	Q1	Q5	Q1	Q5	ES	Q1	Q5	Q1	Q5
2005	-0.119***	0.245***	-0.072**	0.074	2005	-0.133***	0.224***	-0.026	0.090*
s.e.	(0.023)	(0.023)	(0.026)	(0.039)	s.e.	(0.028)	(0.026)	(0.031)	(0.045)
2011	0.069*	-0.012	0.054	0.013	2011	0.057	-0.023	0.027	-0.019
s.e.	(0.032)	(0.032)	(0.031)	(0.031)	s.e.	(0.036)	(0.034)	(0.036)	(0.033)
IT	Q1	Q5	Q1	Q5	IT	Q1	Q5	Q1	Q5
2005	-0.119***	0.178***	-0.074**	0.072*	2005	-0.076***	0.162***	-0.064*	0.078*
s.e.	(0.020)	(0.019)	(0.022)	(0.032)	s.e.	(0.021)	(0.019)	(0.026)	(0.038)
2011	0.072**	0.026	0.055*	0.040	2011	0.026	0.021	0.030	0.042
s.e.	(0.026)	(0.026)	(0.026)	(0.026)	s.e.	(0.028)	(0.026)	(0.029)	(0.027)
NL	Q1	Q5	Q1	Q5	NL	Q1	Q5	Q1	Q5
2005	-0.063	0.190***	0.029	0.116	2005	-0.052	0.093*	-0.075	0.069
s.e.	(0.042)	(0.042)	(0.066)	(0.105)	s.e.	(0.045)	(0.043)	(0.073)	(0.103)
2011	0.027	-0.050	0.052	-0.042	2011	0.014	0.042	0.032	0.007
s.e.	(0.057)	(0.058)	(0.054)	(0.055)	s.e.	(0.056)	(0.055)	(0.054)	(0.054)
PL	Q1	Q5	Q1	Q5	PL	Q1	Q5	Q1	Q5
2005	-0.163***	0.186***	-0.156*	-0.009	2005	-0.060*	0.245***	-0.069	0.167
s.e.	(0.030)	(0.027)	(0.069)	(0.135)	s.e.	(0.030)	(0.026)	(0.068)	(0.097)
2011	0.118**	0.066	0.121**	0.079*	2011	-0.003	-0.069	0.010	-0.010
s.e.	(0.041)	(0.039)	(0.040)	(0.038)	s.e.	(0.039)	(0.036)	(0.036)	(0.033)
UK	Q1	Q5	Q1	Q5	UK	Q1	Q5	Q1	Q5
2005	-0.172***	0.220***	-0.140	0.132	2005	-0.191***	0.155***	-0.041	0.063
s.e.	(0.042)	(0.040)	(0.089)	(0.206)	s.e.	(0.040)	(0.039)	(0.099)	(0.224)
2011	0.099	0.022	0.098	0.011	2011	0.108	0.051	0.131*	0.016
s.e.	(0.062)	(0.060)	(0.061)	(0.059)	s.e.	(0.059)	(0.057)	(0.059)	(0.057)

Note: * p<0.05; **p<0.01; ***p<0.001
Source: Authors' calculations based on EU-SILC

We find similar patterns in the case of women. Daughters born to families in the top quintile of the family index in Spain and Italy earn on average more than those born to the third quintile, even when education levels are similar. In contrast, in Poland, The Netherlands and the UK family background does not appear to have an effect on hourly wages over and above that which goes through education in the case of females. The differences between the earnings of women in the top quintile of the family index and those of women in the bottom quintile are similar to those observed in the case of men, ranging between 15-25%, depending on country and year.

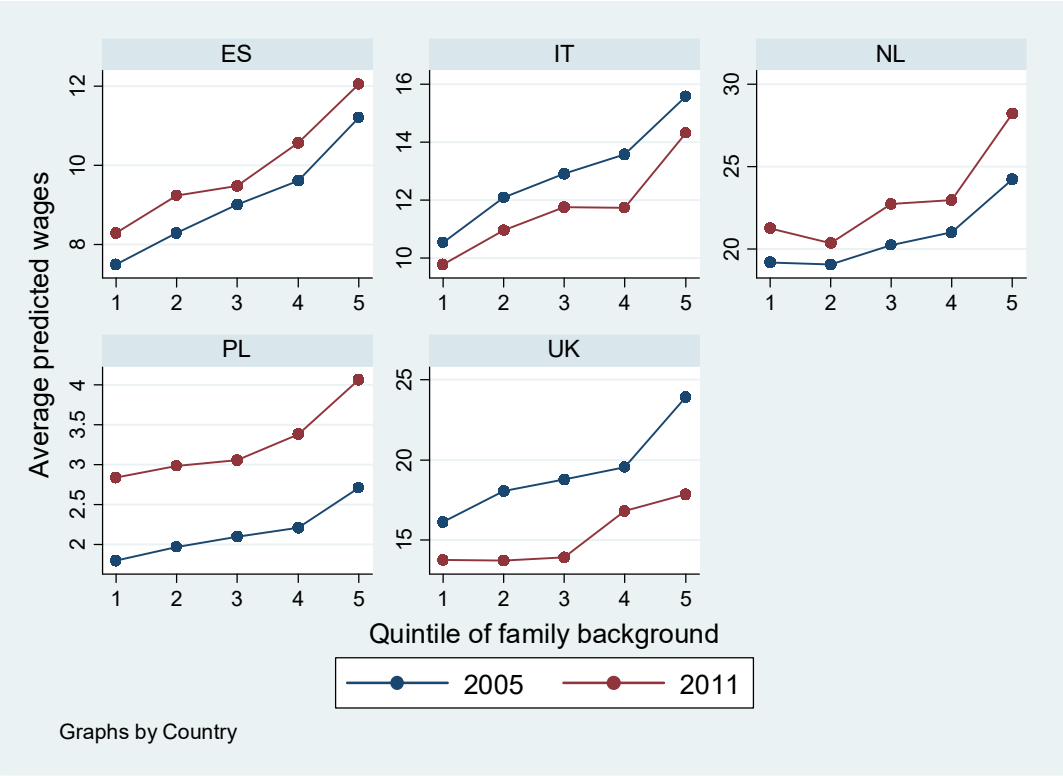
In most countries, the effect of family background is slightly non-linear with particularly strong effects at the very top and the very bottom (see complete regressions in Appendix Tables A3 to A6). This result is in line with previous research findings that have emphasized the much lower probability to be upwardly mobile/downwardly mobile for individuals coming from the most disadvantaged/advantaged families (Jäntti et al., 2006). Caro et al. (2015) find that family socioeconomic background is weakly but significantly related to adult offspring's earnings for the US.[25] We obtain similar results for Spain, Italy and Poland while we find that there is a non-linear relationship between family background and log hourly wages both in the case of both men and women. Similarly to the eight-country study by Raitano and Vona (2014), where they consider FB proxied by parental occupation only, Spain and Italy are the two countries where parental background has a stronger impact on offspring's wages. However, using only information on occupation, they obtain that in the UK the impact of FB is stronger on offspring's wages than in Italy and Spain, while, in our case, where FB is constructed as a multidimensional indicator, this is not the case.

We next examine possible changes in the effect of family background on individual log hourly wages that are correlated with the economic cycle. Average predicted log hourly wages for men by quintile of family background are shown in Figure 6, separately for 2005 and 2011. Spain, Italy and the UK experienced a significant recessionary spell in 2011 compared to 2005. The Netherlands was more or less unaffected, whereas Poland experienced significant economic growth during this period.

Estimation results in Table 2 suggest that family background has similar effects on the earnings of men, irrespective of the economic cycle. Fig 6 gives a graphical representation of this result. With the possible exception of the UK, the lines appear parallel. Even in the case of the UK we cannot reject the null that the lines are in fact parallel.

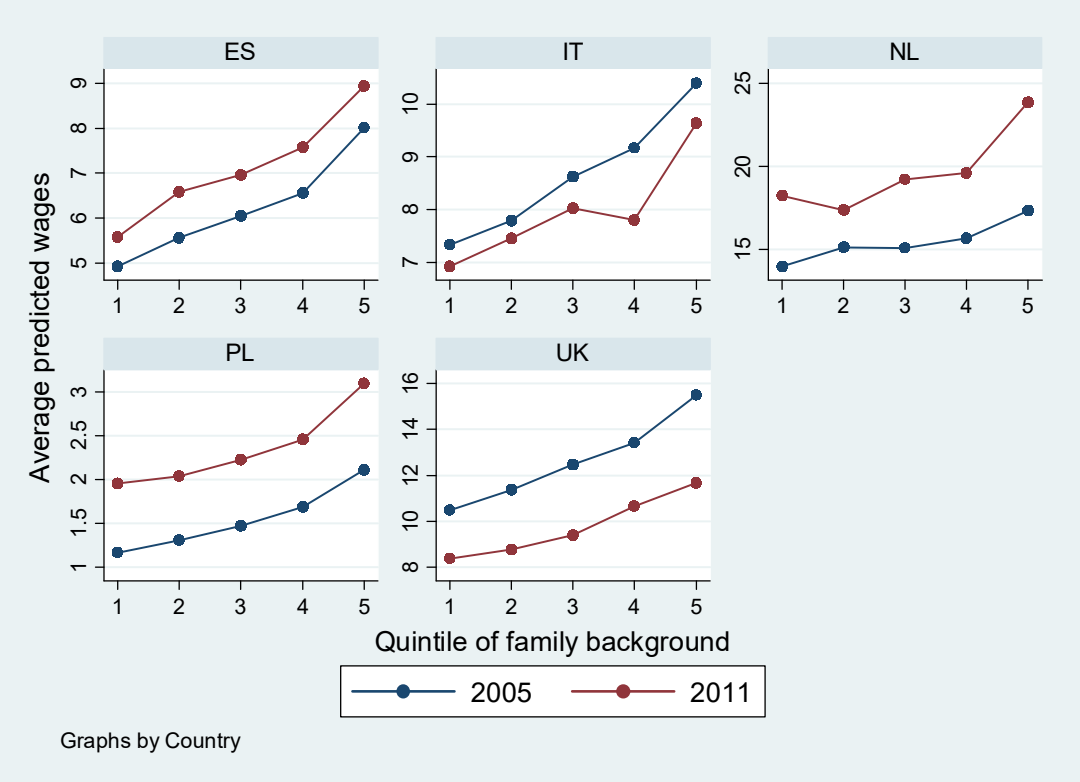
[25] These authors estimate log earnings using a Tobit model and including unemployed individuals in their sample. They control for education including years of schooling and also for some cognitive skills using information on student's achievements in Maths and Language.

Fig 6: Average predicted log hourly wages for men by family background and year of survey



Source: Authors' calculations based on EU-SILC

Fig 7: Average predicted log hourly wages for women by family background and survey year



Source: Authors' calculations based on EU-SILC

Fig 7 plots the same information for women. As in the case of men, the relationship between family background and log hourly wages does not seem to differ between the two survey years (the lines are roughly parallel). This is true both for countries that experienced a recession (Spain, Italy and the UK), as well as for the countries that experienced an economic boom (Poland). We thus conclude that family background appears to operate in a similar way on hourly wages, irrespective of the economic cycle. We next examine possible interactions between education and family background.

A comparison of results from Model A to Model B in Table 2, shows that FB is indirectly related to male and female wages via its relationship with the achieved educational level in all countries[26]. However, the importance of education in accounting for the relationship between FB and wages varies cross-nationally. The level of education accounts for most of the association between FB and wages in the UK, Spain and Italy whereas in Poland, it accounts for less than 5% for low FB individuals. If we focus on high FB male individuals, education accounts for a large part of the association between FB and wages in all countries. In the case of females, similar results arise: including education as an explanatory variable reduces the impact of FB significantly in all countries but in Italy for females with a low FB.

We go one-step further and consider a different impact of family background on log wages for each level of education. Results from our models that allow for the possibility of family background to have a different effect depending on education are shown in Table 3, for both men and women. Generally, the coefficients suggest that family background has similar effects on wages, irrespective of the level of education achieved. This contrasts with the results obtained by Cornelissen et al. (2008) for Germany where returns to schooling depend on the employee's parental background.[27] In four of our five countries (Spain, The Netherlands, Poland and the UK), there is no indication that family background affects individuals with different levels of education differently. This pattern is observed for both men and women. We find a statistically significant interaction between family background and education only in Spain. In particular, for Spanish men with a higher education, coming from an advantaged household is linked with higher wages in comparison with similar individuals coming from less advantaged households. In the case of Spanish women, for those that reach a high level of education, the fact that they come from a very disadvantaged background reduces their wage prospects compared to their higher FB peers. This result is consistent with a cumulative view of human

[26] Similar results have been found by Caro et al. (2015) in the US.

[27] These authors examine indirect and direct effects of parental background on earnings for Germany using GSOEP data. In order to measure the indirect effect they estimate the determinants of years of schooling first and, in a second step, they estimate a wage equation to identify direct effects. Their measure of FB includes mothers and father's education (distinguishing between them), maternal labour force status, parents' occupation status and fertility.

capital formation where investments made by the family reinforce and magnify the effects of formal education.

Table 3: Marginal effects of family background on log hourly wages, by education

	Model B	
	Males	
ES	Q1	Q5
Medium	0.026	0.019
s.e.	(0.039)	(0.046)
High	0.008	0.092*
s.e.	(0.042)	(0.043)
IT	Q1	Q5
Medium	0.008	-0.033
s.e.	(0.027)	(0.034)
High	0.035	0.051
s.e.	(0.058)	(0.044)
NL	Q1	Q5
Medium	-0.031	-0.054
s.e.	(0.071)	(0.110)
High	-0.111	-0.028
s.e.	(0.078)	(0.108)
PL	Q1	Q5
Medium	0.023	0.057
s.e.	(0.070)	(0.136)
High	0.054	0.050
s.e.	(0.092)	(0.140)
UK	Q1	Q5
Medium	0.004	-0.001
s.e.	(0.095)	(0.209)
High	0.042	0.056
s.e.	(0.101)	(0.208)

	Model B	
	Females	
ES	Q1	Q5
Medium	-0.038	0.048
s.e.	(0.044)	(0.053)
High	-0.091*	-0.014
s.e.	(0.043)	(0.047)
IT	Q1	Q5
Medium	0.062*	-0.005
s.e.	(0.031)	(0.042)
High	-0.001	-0.083
s.e.	(0.051)	(0.047)
NL	Q1	Q5
Medium	0.016	-0.090
s.e.	(0.076)	(0.107)
High	0.096	0.032
s.e.	(0.083)	(0.107)
PL	Q1	Q5
Medium	-0.026	-0.028
s.e.	(0.070)	(0.099)
High	0.024	-0.055
s.e.	(0.080)	(0.101)
UK	Q1	Q5
Medium	-0.123	-0.023
s.e.	(0.105)	(0.228)
High	-0.155	0.043
s.e.	(0.110)	(0.227)

Note: * p<0.05; **p<0.01; ***p<0.001
Source: Author's calculations based on EU-SILC.

Note however that family background also influences education. Thus, it is possible that highly educated individuals from disadvantaged families have other unobserved features (such as ability, motivation etc.) that make them both more likely to obtain more education and to earn

comparatively higher wages.[28] In fact, the more family background is positively correlated with education, the more we can expect high-educated individuals with a low SES background to be selected on unobservable characteristics.

4.3 Type of contract

In the following sub-section, we examine the probability of being on a temporary contract and the ways in which this probability varies with family background. Alongside wages, the type of contract provides another measure of job quality. Temporary jobs are by definition more insecure. Often, they are also worse paid and have fewer associated benefits.

Table 4: Marginal effects of family background on the probability of having a temporary contract

	Model A		Model B			Model A		Model B	
	Males					Females			
ES	Q1	Q5	Q1	Q5	ES	Q1	Q5	Q1	Q5
2005	0.139***	-0.024	0.102***	-0.007	2005	0.068**	-0.066**	0.051*	-0.049*
s.e.	(0.018)	(0.017)	(0.018)	(0.018)	s.e.	(0.025)	(0.021)	(0.024)	(0.022)
2011	0.087***	-0.034*	0.059**	-0.026	2011	0.044	-0.026	0.033	-0.011
s.e.	(0.020)	(0.017)	(0.019)	(0.018)	s.e.	(0.023)	(0.020)	(0.022)	(0.020)
IT	Q1	Q5	Q1	Q5	IT	Q1	Q5	Q1	Q5
2005	0.025*	0.004	0.018	-0.004	2005	0.045**	-0.006	0.028	-0.017
s.e.	(0.011)	(0.011)	(0.011)	(0.012)	s.e.	(0.017)	(0.014)	(0.017)	(0.014)
2011	0.024	0.002	0.022	-0.009	2011	0.049**	-0.011	0.034	-0.010
s.e.	(0.014)	(0.014)	(0.014)	(0.014)	s.e.	(0.018)	(0.016)	(0.018)	(0.016)
NL	Q1	Q5	Q1	Q5	NL	Q1	Q5	Q1	Q5
2005	0.008	0.017	0.008	0.019	2005	-0.023	-0.023	-0.024	-0.019
s.e.	(0.019)	(0.020)	(0.019)	(0.020)	s.e.	(0.024)	(0.023)	(0.023)	(0.023)
2011	0.012	0.031	-0.002	0.036	2011	-0.003	0.030	0.003	0.041
s.e.	(0.022)	(0.023)	(0.021)	(0.025)	s.e.	(0.023)	(0.024)	(0.022)	(0.025)
PL	Q1	Q5	Q1	Q5	PL	Q1	Q5	Q1	Q5
2005	0.065***	-0.025	0.027	-0.013	2005	0.007	-0.087***	-0.026	-0.053**
s.e.	(0.020)	(0.018)	(0.019)	(0.018)	s.e.	(0.021)	(0.017)	(0.019)	(0.017)
2011	0.037	-0.067**	0.011	-0.041	2011	0.063**	-0.022	0.021	0.021
s.e.	(0.023)	(0.021)	(0.022)	(0.021)	s.e.	(0.023)	(0.020)	(0.021)	(0.020)
UK	Q1	Q5	Q1	Q5	UK	Q1	Q5	Q1	Q5
2005	0.016	0.003	0.020	-0.001	2005	-0.005	0.013	-0.005	0.007
s.e.	(0.013)	(0.011)	(0.014)	(0.011)	s.e.	(0.012)	(0.013)	(0.013)	(0.013)
2011	0.024	-0.002	0.023	-0.005	2011	-0.012	0.039**	-0.013	0.033*
s.e.	(0.019)	(0.016)	(0.021)	(0.018)	s.e.	(0.011)	(0.015)	(0.012)	(0.015)

[28] These unobserved characteristics not included in the regression would be reducing the significance of the interaction between education and FB. If we could control for them, it could be that achieving a higher education level would have a higher return for those with high FB.

Note: *p<0.05; **p<0.01; ***p<0.001
Source: Authors' calculations based on EU-SILC

We estimate simple logit[29] models of the probability of being on a temporary contract using a specification similar to our previous wage equations. In particular, we control for a quadratic in age, a quadratic in experience, immigrant status, health status, and education. Average marginal effects (AMEs) estimation results for this outcome are shown in Table 4 (see complete regression information in Tables A3 to A6 in the Appendix).

Men in the bottom quintile of the family index distribution are more likely to find themselves in a temporary rather than permanent contract only in Spain (the reference category is again the third quintile). Figure 8 shows a relatively large size of the average marginal effect relative to being in the third quintile of the FB distribution (about 10 percentage points). In contrast, in the other four countries, family background appears to have little impact on the likelihood of having a temporary contract subject to the controls included in our equations. Coefficients are too imprecisely estimated in the UK and The Netherlands.

We find similar patterns in the case of women. In particular, women from a disadvantaged background in Spain are more likely to have a temporary job compared to their counterparts in the third quintile of the family background distribution. The size of the effect is similar to that found in the case of men- around 10 percentage points. We also find that women in the top quintile of the family index distribution are less likely to be on temporary contracts in Poland. In the other countries, the coefficients for family background are statistically indistinguishable from zero.

As in the case of wages, we investigate whether the relationship between family background and the probability of being on a temporary contract varies with the economic cycle by allowing the relationship to be different between our two survey years. Generally, we do not find any evidence supporting an interaction effect between family background and the economic cycle but for the case of Spanish men. In this case, coming from a disadvantaged family background increases the probability of being in a fixed term contract less in 2011 than in 2005. This result may be due to the large employment destruction between 2008 and 2011 that hit temporary contracts first. A somewhat different pattern is present for females in the UK. In 2011, those from advantaged backgrounds are more likely to hold a temporary contract compared to 2005. In general, however, these interaction coefficients are either very small or too imprecisely estimated.

[29] We have also attempted to estimate Heckman probit equations to account for self-selection into employment; however, most of our models failed to converge.

To sum up, we find that family background affects the quality of job over and beyond its effect on education. This can be seen both when analyzing wages and to a lesser extent when looking at the type of contract. We do not find any strong evidence that this effect is moderated by the economic cycle.

4.4 Robustness checks

To ensure our estimates are not sensitive to some of our methodological choices, we perform a series of robustness checks. First, we assess the extent to which our results change when we (slightly) modify the way the index of family background is constructed. Because most of the literature emphasizes parental occupation and parental education as measures of socio-economic background, we have re-estimated all our models (those pertaining to employment probabilities, log hourly wages and type of contract) using a modified FB index score constructed solely using parental occupation and education. We do so first because the question on financial difficulties is formulated somewhat differently in 2005 compared to 2011 and second, because experiencing financial difficulties when aged 14 might be associated with temporary spells of low family income rather than with the long-term resources meant to be captured by family background. We include household financial difficulties as a separate regressor in our equations. None of the results change our main conclusions. Second, because our measure of family background is constructed as deviations from the cohort mean, it is possible that it is sensitive to outliers on any of the components that go into the construction of the index. To check if this is the case, we re-estimate our models using the deviation from the cohort median rather than the cohort mean as a relative measure of family background. Our substantive results remain unchanged. [30]

Third, we examine age related patterns in more depth. It is possible that family background is especially salient for younger age groups who are less well established in the labour market. Although we include a quadratic age profile, our main specification constrains the effect of family background to be the same at all ages. To test the validity of this constraint, we have relaxed the assumption and estimated separate employment, wage and type of contract equations separately for three[31] age groups: 25-34, 35-44 and 45-54 (see online Appendix, Tables S5-6, S13-14 and S21-22 where we report regressions for the youngest cohort). Our sample sizes are considerably diminished and so most of our results lack statistical power. However, even from a substantive point of view, family background coefficients are very similar across age groups. Thus, in this dataset, we do not find any evidence supportive of the hypothesis that family background matters more at young ages.

[30] This additional material on robustness checks is included in an online Appendix (Supplemental Material).
[31] Unfortunately, our sample size does not allow us to consider smaller age ranges.

Fourth, our preferred measure of employment is based on having a positive wage. This allows us to maximize the size of our samples and ensures consistency between our employment and wage equations. However, since we impute wages for a number of individuals whom are missing the current monthly gross wage (PY200g) and the variables we use for the imputation refer in part to last year's earnings, inconsistencies may arise due to the time reference mismatch. To check that our employment results are not determined by the particular way in which we define employment, we estimate two separate sets of equations based on the labour market status variable (PL030). We first estimate a model in which we distinguish activity from inactivity and a second model in which we distinguish between employment and unemployment, conditional on active participation in the labour market. Results are available in Tables S7-8 in the Supplemental Material (see online Appendix). While some differences with our main results do emerge, they are usually small and do not affect our conclusions.

Fifth, to check that our results are not sensitive to individuals whose wages have been imputed, we re-estimate all our wage equations after dropping all individuals whose wages are not derived from the current gross monthly wage.[32] We find that results remain substantively unchanged (see Table S15-16 in the Supplemental material).

Finally, we test whether our type of contract results change when we include the occupation of the individual in our models. In some countries (for ex. Spain), the use of temporary contracts is heavily associated with certain industries and sectors (García-Serrano and Malo, 2013). It is possible that results relating to type of contract are determined in large part by the occupation of the individual. To check this possibility, we re-estimate all type of contract equations controlling for occupation. Results do not change (see Table S23-24 in the Supplemental Material). Note however that, in this case, occupation is in principle endogenous to family background. In all likelihood, family background plays an important role in determining the occupation one chooses and so we opt for not including occupation among our controls in our preferred specifications.

5. Discussion and Conclusions

In this paper, we aim to provide new comparative evidence on the role of family background in shaping employment prospects and job quality in five EU countries as labour markets change due to the economic cycle. We undertake our analysis for five EU countries (The Netherlands, the United Kingdom, Poland, Italy and Spain) with different levels of intergenerational income elasticity, diverse trends in unemployment and different educational

[32] The variable in EU-SILC data on current monthly wages is PY200g.

systems and welfare state models (Anglo-Saxon, Continental, Eastern and Southern European).

We construct a comprehensive, multidimensional measure of family background that includes information on parental occupation, worklessness, education, household structure, number of siblings and the household's financial situation during the individual's childhood. We opt for a cohort-relative indicator to avoid our results being contaminated by the secular increase in education and occupational index over time. This methodological choice amounts to assuming that competition in the labour market takes place largely within cohort.

We find that family background affects employment prospects in some countries and the quality of jobs over and beyond its effect on education in all countries. This can be seen both when analyzing wages and when looking at the type of contract. Our results are consistent with recent evidence on the transmission of opportunities in EU countries by Berloffa (2016), Zwysen (2015) and Raitano and Vona (2014). The latter conclude that using 2005 data, there is a statistically significant direct effect of FB on earnings in a variety of EU countries. We confirm that result and also find that it holds using SILC 2011 data. In contrast with the results in Cornelissen et al. (2008) for Germany, we do not find that returns to schooling in countries like The Netherlands, UK or Poland depend on the employee's parental background. We could find this type of effects of FB on wages only in Spain.

Finally, we do not find any evidence that any of the effects of FB are substantially moderated by the economic cycle. Thus, three years after the outset of the recession, we cannot conclude that individuals with a better FB show more resilience than the rest in any of the countries analyzed. Potentially the timing is too early to observe any effects. Also, since young workers are less established in the labour market we could expect that FB would matter more for this group, but we do not find this either. We do not find any significant differences in the impact of FB on employment prospects or job quality between young, middle-aged or older workers.

References:

Aakvik, A., Salvanes, K.G., Vaage, K. (2010) Measuring heterogeneity in the returns to education using an education reform, European Economic Review, 54 (2010) 483–500.

Asselin, L.M. (2009) Analysis of Multidimensional Poverty: Theory and Case Studies. Economic Studies in Inequality, Social Exclusion and Well-being. IDRC-CRDI and Springer, p. 7. http://web.idrc.ca/openebooks/460-4/.

Ashenfelter, O. and Rouse, C., (2000) Schooling, intelligence and income in America. In: Arrow, K., Bowles, S., Durlauf, S. (eds.), *Meritocracy and Economic Inequality*, Princeton Univ. Press, Princeton.

Becker, G. S. and N. Tomes (1986) Human capital and the rise and fall of families. Journal of Labor Economics 4 (3), S1–39.

Bellani, L. and Bia, M. (2013) Measuring intergenerational transmission of poverty, paper presented at the ECINEQ meeting 2013, Bari, Italy.

Berloffa, G., Matteazi, E. and Villa, P. (2016) Family background and youth labour market outcomes, ECINEQ Working Paper 2016 – 393.

Black, S. and Devereux, P. (2011) Recent developments in intergenerational mobility, In: Ashenfelter, O. and Card, D. (eds.) Handbook of Labour Economics, Vol. 4 (Part B): 1487-1541.

Bird, K. (2013) The intergenerational transmission of poverty: an overview, chapter 4 (pages 60-85) in Chronic poverty: concepts, causes and policy, Sheperd, A. and Brunt, J. (eds.) Palgrave Macmillan.

Björklund, A. and Jäntti, M. (2009) Intergenerational Mobility and the Role of Family Background, in Oxford Handbook of Inequality, edited by Salverda, W., Nolan, B. and Smeeding, T. Oxford: Oxford University Press.

Black S.E. and Devereux P.J. (2010). Recent developments in intergenerational mobility. In O. Ashenfelter and D. Card (ed.), Handbook of Labor Economics, 4, 1487-1541. Amsterdam: Elsevier.

Blanden J., Gregg P., MacMillan L. (2007). Accounting for intergenerational income persistence: Noncognitive skills, ability and education. The Economic Journal, 117, C43-C60.

Blanden, J., Wilson, K, Haveman, R. and Smeeding, T, (2011) Understanding the mechanisms behind intergenerational persistence: a comparison of the United States and Great Britain, Chapter 2, in Smeeding, T. Erikson, R. and Jäntti, M. (eds.) Persistence, priviledge and parenting, The Comparative Study of Intergenerational Mobility. Rusell Sage Foundation.

Blanden, J. (2009) How much can we learn from International comparisons of Intergenerational mobility? Working paper 111, London: London School of Economics, Centre for the Economics of Education.

Blanden, J. (2013) Cross-country rankins in intergenerational mobility a comparison of approaches from economics and sociology, Journal of Economic Surveys, Vol. 27, No. 1, pp. 38–73.

Bowles S., Gintis H. (2002). The inheritance of inequality. Journal of Economic Perspectives, 16(3), 3-30.

Caro, D.H., Cortina, K.S. and Eccles, J.S. (2015) Socioeconomic background, Education and Labour Force Outcomes: Evidence from a Regional US Sample, British Journal of Sociology of Education, Vol. 36, issue 6: 934-957

Cervini-Pla, M. (2015) Intergenerational earnings and income mobility in Spain, Review of Income and Wealth, Series 61, Number 4: 812-828.

Checchi, D., Ichino, A. Rustichini, A. (1999) More equal but less mobile?: Education financing and intergenerational mobility in Italy and in the US. Journal of Public Economics, 74(3), 351-393.

Corak, M. (2013) Income inequality, equality of opportunity and Intergenerational mobility, Journal of Economic Perspectives, Vol. 27, Num. 3, pages 79-102.

Cornelissen, T., Jirjahn, U. and Tsertsvadze, G. (2008) Parental Background and Earnings: German Evidence on Direct and Indirect Relationships, *Jahrbücher für*

Nationalökonomie und Statistik / Journal of Economics and Statistics, Vol. 228, No. 5/6, Themenheft: Labormetrics (Dezember 2008), pp. 554-572

Cowell, F. A. and Victoria-Feser, M.P. (2006), Distributional Dominance with Trimmed Data, Journal of Business & Economic Statistics, American Statistical Association, vol. 24, pages 291-300, July.

Dustman, C. (2004) Parental background, secondary school track choice and wages, Oxford Economic Papers, 56, 209-230.

Erikson, R. (1984) Social class of men, women and families, Sociology, 18.

Ermisch, J., Jäntti, M., Smeeding, T. and Wilson J. A. (2012) Advantage in comparative perspective, chapter 1 in Ermisch, J., Jäntti, M., Smeeding, T. (eds.) From Parents to Children: the intergenerational transmission of advantage, Russell Sage Fountation, New York.

Eurostat (2013) Educational attainment: persistence or movement through the generations? news release, 188/2013.

Eurostat (2014) D5.1.3-Working paper with the description of 'Income and Living conditions dataset'. Luxembourg.

Franzini, M. and Raitano, M. (2009) Persistence of inequality in Europe: the role of family economic conditions, International Review of Applied Economics, 23:3, 345-366.

García-Serrano, C. and Malo, M.A., (2013) Beyond the contract type segmentation in Spain (Employment Working Paper No. 143). Geneva: International Labor Organization.

Gazeboom, H. De Graaf, P. Treiman, D. (1992) A standard international socio-economic index of occupational status, Social Sciences Research, 25, 201-239.

Gazeboom H. B. G. and Treiman, D. J. (1996) Internationally comparable measures of occupational status for the 1988 International Standard Classification of Occupations, Social Science Research 25, 201-239.

Goodman, A., Gregg, P. and Washbrook, E. (2011) Children's educational attainment and the aspirations and behaviours of parents and children through childhood in the UK, Longitudinal and life course studies 2(1):1-18.

Gradín, C. (2013) Race, poverty and deprivation in South Africa, Journal of African Economies, Vol. 22, number 2, pp. 187–238 doi:10.1093/jae/ejs019 online date 3 September 2012

Harmon, C. and Walker, I. (2001) The Returns to Education, A review of the evidence, issues and Deficiencies in the literature, Research Report Number 254. Department for Education and Employment.

Harmon, C., Vincent Hogan, Ian Walker (2003) Dispersion in the economic return to schooling, Labour Economics, Vol. 10, No. 2., pp. 205-214.

Jäntti, M., Røed, K., Naylor, R., Björklund, A., Bratsberg, B, Raaum, O., Österbacka, E. and Eriksson, T. (2006) American exceptionalism in a new light: A comparison of intergenerational earnings mobility in the Nordic Countries, the United Kingdom and the United States', Discussion Paper 1938, IZA, Bonn.

Jenkins, S.P. and Siedler, T. (2007) The intergenerational transmission of poverty in industrialized countries, Discussion paper of DIW Berlin (German Institute for Economic Research), no. 694.

Jerrim, J. (2014) The link between family background and later life income: how does the UK compare to other countries? Department of Quantitative Social Science, WP number 14-02, Institute of Education, University of London.

Kolenikov, S. and Angeles, G. (2009) Socioeconomic status measurement with discrete proxy variables: Is principal components analysis a reliable answer? Review of Income and Wealth, Series 55, Number 1, March.

LeRoux, B. and Rouanet, H. (2010) Multiple Correspondence Analysis (Quantitative Applications in the Social Sciences, SAGE.

MacMillan, L. (2010) The intergenerational transmission of worklessness in the UK, Centre for Market and Public Organisation, Bristol, WP (10) 231.

MacMillan, L. (2013) The role of non-cognitive and cognitive skills, behavioural and educational outcomes in accounting for the intergenerational transmission of worklessness, DoQSS Working Paper No. 13-10, Institute for Education, University of London, London.

Marks, G.N. (2011) Issues in the conceptualization and measurement of socioeconomic background: Do different measures generate different conclusions? Socioeconomic Indicators Research 104: 225-251.

Mazzona, F. (2014) The long-lasting effects of family background: A European cross-country comparison, Economics of Education Review, 40, 25-42.

OECD (2015) Education policy outlook: Making reforms happen, OECD report, Paris.

Osborne, M. (2008) Personality and the intergenerational transmission of economic status, Chapter 7, pages 208-232, Unequal chances, Princeton University Press.

Pascual, M. (2009) Intergenerational income mobility: the transmission of socioeconomic status in Spain, Journal of Policy Modeling, 31, 835-846.

Pezzilari, M. (2010) Do friends and relatives really help in getting a good job? Industrial Labour Relations Review, 63(3), 494-510.

Raitano, M and Vona F. (2014) Direct and Indirect influences of parental background on offspring earnings: a comparison across countries and genders, The Manchester School, 83(4).

Raitano, M. and Vona, F. (2015a) Measuring the link between intergenerational occupational mobility and earnings: evidence from 8 European Countries, Journal of Economic Inequality, vol. 13, n. 1, pp. 83-102.

Raitano, M. and Vona, F. (2015b) From the Cradle to the Grave: the impact of family background on carrier paths of Italian males, Document de Travail OFCE, 2015-5.

Richards, L., Garratt, E., Heath, A.F., Anderson, L. and Altintaş, E. (2016) The Childhood origins of Social Mobility: Socio-economic inequality and changing opportunities. Social Mobility Commission.

Rose, D. and E. Harrison (2007) The European Socio-economic Classification: A New Social Class Schema for European Research', European Societies, 9, 3: 459-490.

Rouse, C.E. and Barrow, L. (2006) US Elementary and Secondary Schools: Equalizing or replicating the Status Quo? Opportunity in America, Volume 16, Number 2, Fall.

Smeeding, T. Erikson, R. and Jäntti, M. (2011) Introduction, Chapter 1, in Smeeding, T. Erikson, R. and Jäntti, M. (eds.) Persistence, priviledge and parenting, The Comparative Study of Intergenerational Mobility. Rusell Sage Foundation.

Scharpf, F.W. (2010) The Asymmetry of European Integration or why the EU cannot be a "Social Market Economy"', Socio-Economic Review, 8:2, 2010, 211–

Whelan, Christopher T., Nolan, B. and Maître, B. (2013) Analysing intergenerational influences on income poverty and economic vulnerability with EU-SILC, European Societies, 15:1, 82-105, DOI: 10.1080/14616696.2012.692806

Zwysen, W. (2015) The effects of father's worklessness on young adults in the UK, IZA Journal of European Labour Studies 4(2): 1-15.

Appendix

Figure A1. Percentage of Employed individuals by cohort, year and family background.

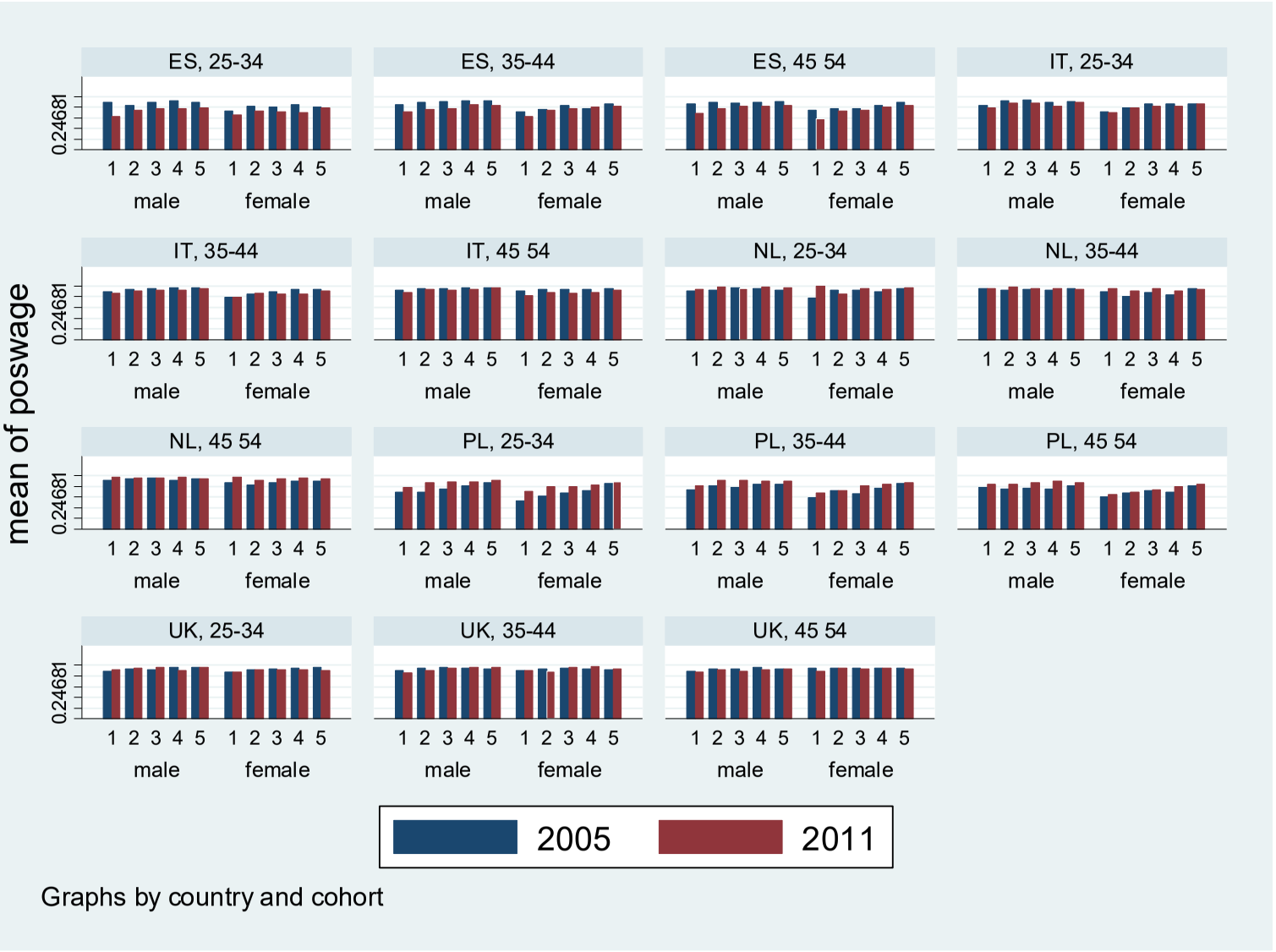


Figure A2. Percentage of Employed individuals by education, year and family background.

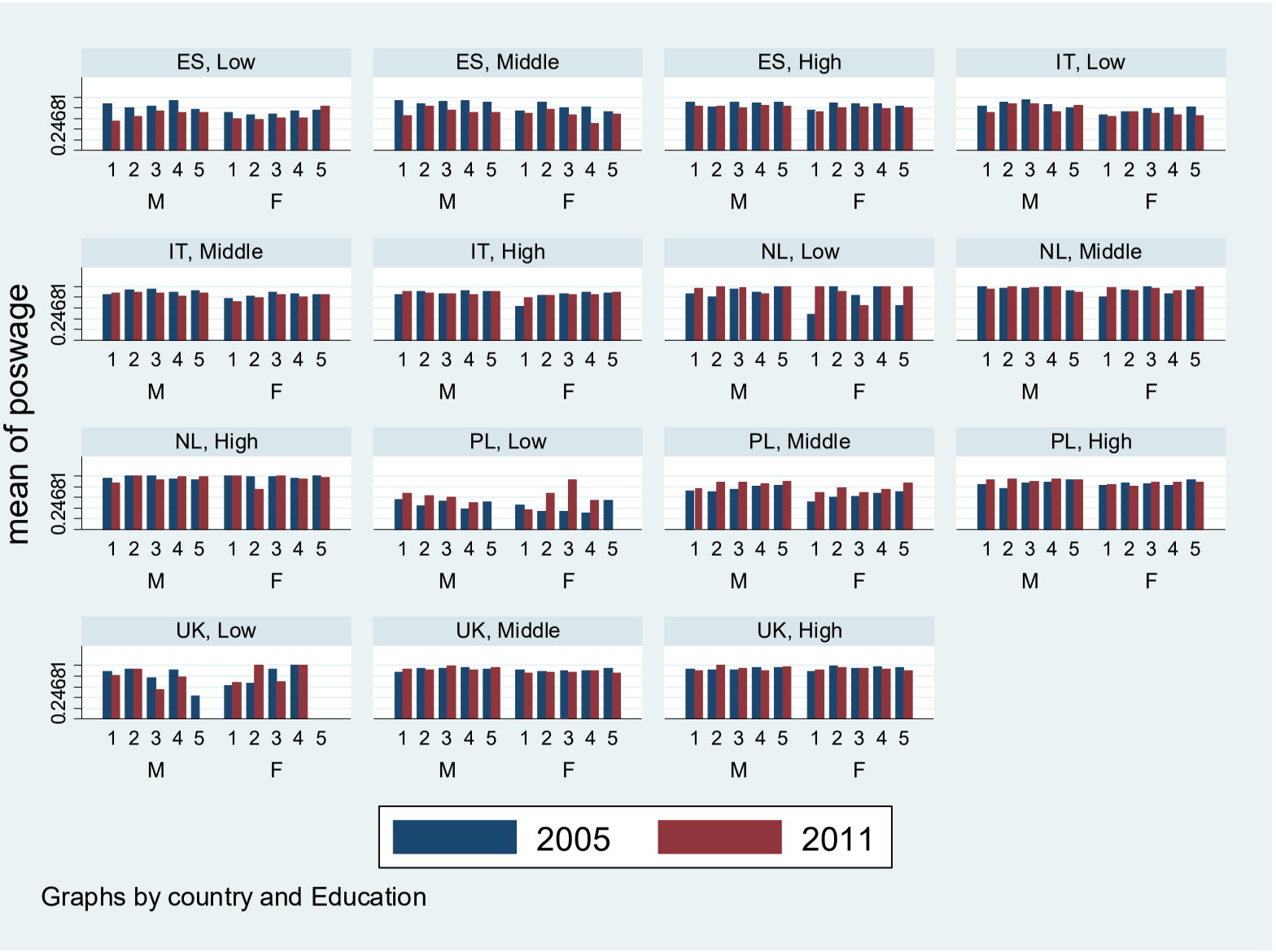


Figure A3. Distribution of wages by country, gender and family background.

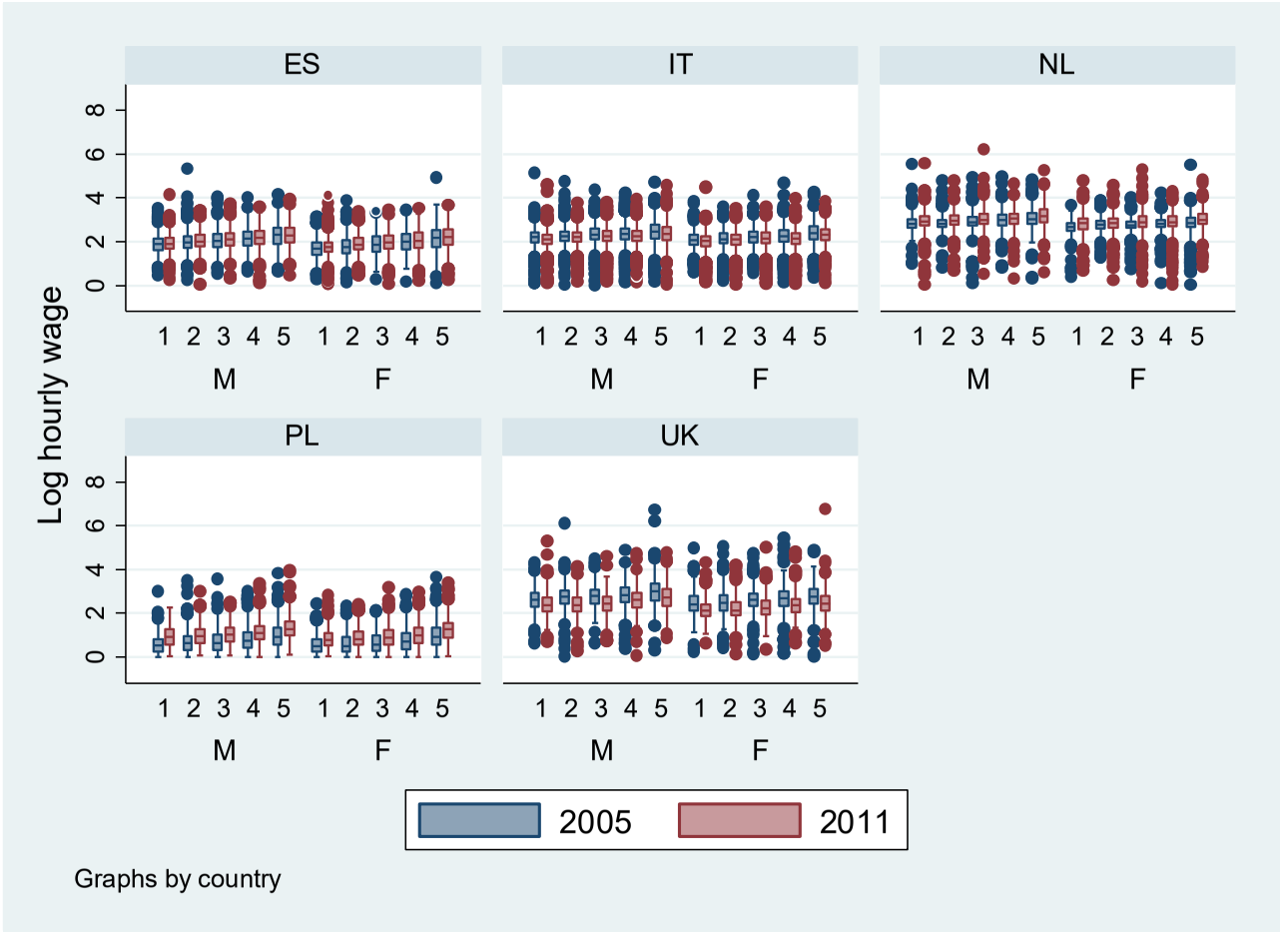


Figure A4. Percentage of individuals on a Fixed-term contract by level of education, year and family background.

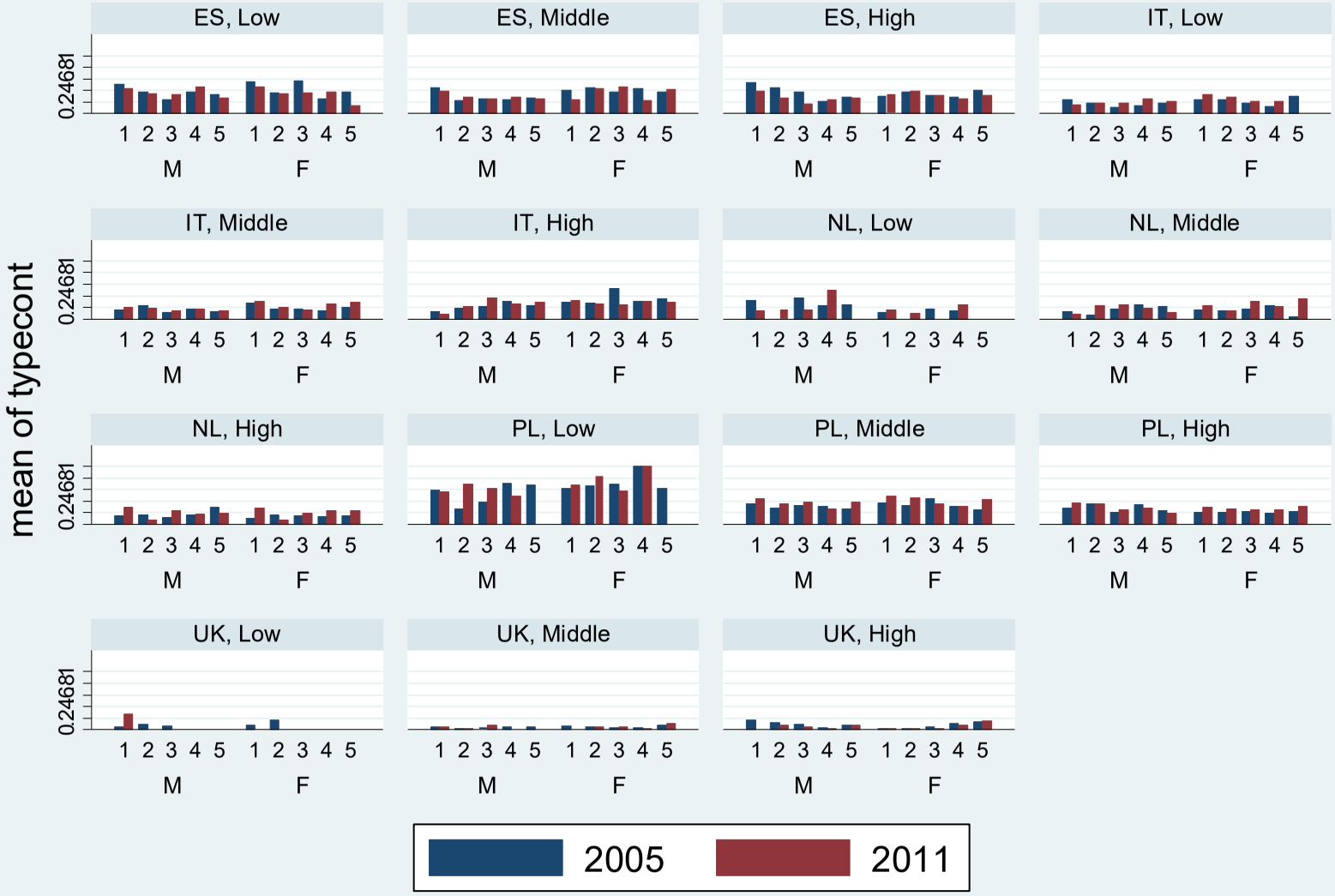


Table A1. Mean values of explanatory variables in regressions.

		Age	Experience	Immigrant	# young children	# children	Occupation	Hourly wage (mean)	Hourly wage (median)
ES	2005	39.47	16.44	0.07	0.12	0.79	40.64	1.95	1.92
	2011	40.53	17.05	0.11	0.10	0.73	42.06	2.03	2.00
	Total	39.98	16.73	0.09	0.11	0.76	41.32	1.99	1.96
IT	2005	39.56	15.22	0.07	0.11	0.71	42.60	2.23	2.22
	2011	40.77	16.03	0.10	0.10	0.72	44.07	2.13	2.15
	Total	40.10	15.59	0.08	0.10	0.71	43.26	2.19	2.20
NL	2005	40.43	15.51	0.06	0.19	1.14	50.01	2.73	2.78
	2011	41.53	16.95	0.07	0.16	1.10	51.36	2.88	2.92
	Total	40.97	16.22	0.07	0.17	1.12	50.72	2.80	2.85
PL	2005	40.37	16.96	0.00	0.09	0.92	40.42	0.62	0.58
	2011	39.96	16.86	0.00	0.12	0.85	41.49	1.02	0.97
	Total	40.20	16.92	0.00	0.10	0.89	40.85	0.80	0.77
UK	2005	39.64		0.13	0.15	0.96	47.27	2.62	2.61
	2011	40.66	18.35	0.14	0.15	0.96	47.51	2.36	2.34
	Total	40.05	18.35	0.13	0.15	0.96	47.36	2.51	2.50

Table A2. Descriptive sample values by year of survey.

Country: ES	Year of the survey		
	2005	2011	Total
Gender			
Male	48.6	48.7	48.6
Female	51.4	51.3	51.4
Total	100.0	100.0	100.0
Education			
Low	46.5	41.3	44.0
Middle	24.2	24.7	24.4
High	29.3	34.0	31.6
Total	100.0	100.0	100.0
General health			
Very good	19.5	24.0	21.7
Good	57.7	62.0	59.8
Fair	16.8	10.9	14.0
Bad	4.9	2.3	3.7
Very bad	1.0	0.7	0.9
Total	100.0	100.0	100.0
Economic status			
Employee working full-time	64.3	50.9	57.8
Employee working part-time	7.1	6.7	6.9
Self-employed working full-time (including family worker)	0.0	9.6	4.7
Self-employed working part-time (including family worker)	0.0	0.4	0.2
Unemployed	8.8	16.7	12.6
Pupil, student, further training, unpaid work experience	1.7	1.8	1.8
In retirement or in early retirement or has given up business	0.5	0.5	0.5
Permanently disabled or/and unfit to work	2.2	2.4	2.3
Fulfilling domestic tasks and care responsibilities	13.9	9.6	11.8
Other inactive person	1.4	1.4	1.4
Total	100.0	100.0	100.0

Country: IT	2005	2011	Total
Gender			
Male	49.2	48.5	48.9
Female	50.8	51.5	51.1
Total	100.0	100.0	100.0
Education			
Low	42.0	35.0	38.9
Middle	44.9	46.6	45.7
High	13.1	18.4	15.5
Total	100.0	100.0	100.0
General health			
Very good	17.2	15.5	16.5
Good	56.5	64.7	60.1
Fair	22.7	14.7	19.1
Bad	3.0	4.1	3.5
Very bad	0.6	1.0	0.8
Total	100.0	100.0	100.0
Employee working full-time	62.6	45.4	54.9
Employee working part-time	7.9	9.6	8.7
Self-employed working full-time (including family worker)	0.0	15.5	7.0
Self-employed working part-time (including family worker)	0.0	2.0	0.9

Table A2. Descriptive sample values by year of survey, continued.

Country: IT	2005	2011	Total
Economic status			
Unemployed	7.7	10.1	8.8
Pupil, student, further training, unpaid work experience	2.4	2.3	2.4
In retirement or in early retirement or has given up business	1.2	0.5	0.9
Permanently disabled or/and unfit to work	1.2	1.2	1.2
In compulsory military community or service	0.0	0.0	0.0
Fulfilling domestic tasks and care responsibilities	13.9	11.8	13.0
Other inactive person	3.0	1.4	2.3
Total	100.0	100.0	100.0

Country: NL	2005	2011	Total
Gender			
Male	48.4	48.1	48.2
Female	51.6	51.9	51.8
Total	100.0	100.0	100.0
Education			
Low	22.3	16.2	19.3
Middle	43.7	43.7	43.7
High	33.9	40.1	37.0
Total	100.0	100.0	100.0
General health			
Very good	22.2	26.6	24.4
Good	62.4	58.0	60.2
Fair	12.3	12.2	12.2
Bad	2.7	2.6	2.6
Very bad	0.4	0.6	0.5
Total	100.0	100.0	100.0
Economic status			
Employee working full-time	48.9	42.6	45.8
Employee working part-time	27.9	34.4	31.1
Self-employed working full-time (including family worker)	0.0	7.4	3.7
Self-employed working part-time (including family worker)	0.0	3.2	1.6
Unemployed	1.5	1.8	1.6
Pupil, student, further training, unpaid work experience	3.5	1.3	2.4
In retirement or in early retirement or has given up business	0.1	0.0	0.1
Permanently disabled or/and unfit to work	3.1	2.5	2.8
Fulfilling domestic tasks and care responsibilities	12.5	5.5	9.0
Other inactive person	2.7	1.2	2.0
Total	100.0	100.0	100.0

Country: PL	2005	2011	Total
Gender			
Male	48.0	49.4	48.6
Female	52.0	50.6	51.4
Total	100.0	100.0	100.0
Education			
Low	12.7	8.5	11.0
Middle	71.4	68.4	70.2
High	15.9	23.1	18.8
Total	100.0	100.0	100.0

Table A2. Descriptive sample values by year of survey, continued.

Country: PL	2005	2011	Total
General health			
Very good	12.9	18.4	15.2
Good	49.6	52.6	50.8
Fair	26.7	22.4	24.9
Bad	9.3	5.7	7.9
Very bad	1.5	0.9	1.3
Total	100.0	100.0	100.0
Economic status			
Employee working full-time	61.7	56.5	59.6
Employee working part-time	4.7	2.9	4.0
Self-employed working full-time (including family worker)	0.0	15.5	6.3
Self-employed working part-time (including family worker)	0.0	1.4	0.6
Unemployed	15.7	9.1	13.0
Pupil, student, further training, unpaid work experience	0.6	0.5	0.6
In retirement or in early retirement or has given up business	1.9	1.0	1.5
Permanently disabled or/and unfit to work	7.2	4.6	6.2
Fulfilling domestic tasks and care responsibilities	3.7	4.7	4.1
Other inactive person	4.4	3.7	4.1
Total	100.0	100.0	100.0

Country: UK	2005	2011	Total
Gender			
Male	48.0	47.1	47.6
Female	52.0	52.9	52.4
Total	100.0	100.0	100.0
Education			
Low	14.4	11.5	13.2
Middle	46.8	46.2	46.6
High	38.8	42.2	40.2
Total	100.0	100.0	100.0
General health			
Very good	40.2	40.4	40.3
Good	41.7	42.4	42.0
Fair	13.3	13.2	13.3
Bad	3.9	3.4	3.7
Very bad	0.9	0.6	0.8
Total	100.0	100.0	100.0
Economic status			
Employee working full-time	62.6	54.7	59.2
Employee working part-time	17.0	16.1	16.6
Self-employed working full-time (including family worker)	0.0	7.0	3.0
Self-employed working part-time (including family worker)	0.0	2.4	1.0
Unemployed	2.5	4.1	3.2
Pupil, student, further training, unpaid work experience	1.4	1.3	1.3
In retirement or in early retirement or has given up business	0.5	0.4	0.4
Permanently disabled or/and unfit to work	4.8	4.7	4.7
Fulfilling domestic tasks and care responsibilities	10.2	8.2	9.4
Other inactive person	1.1	1.2	1.1
Total	100.0	100.0	100.0

Table A3. Full regressions of the probability of being employed (males).

	Model A					Model B				
Probability of a positive wage	ES	IT	NL	PL	UK	ES	IT	NL	PL	UK
Age	0.055	0.108**	-0.033	0.044	0.051	-0.182***	-0.007	-0.158	-0.131**	0.036
s.e.	(0.032)	(0.037)	(0.110)	(0.030)	(0.065)	(0.041)	(0.045)	(0.157)	(0.040)	(0.066)
Age squared	-0.001	-0.001*	0.000	-0.001	-0.001	0.001*	-0.001	0.001	0.000	-0.001
s.e.	(0.000)	(0.000)	(0.001)	(0.000)	(0.001)	(0.001)	(0.001)	(0.002)	(0.000)	(0.001)
No. of children (<18)	0.032	0.046	0.144	0.009	-0.049	0.013	0.030	0.162	0.035	-0.028
s.e.	(0.035)	(0.043)	(0.098)	(0.029)	(0.057)	(0.038)	(0.046)	(0.114)	(0.030)	(0.057)
No. of children (<3)	0.070	0.262*	-0.065	0.040	0.079	0.034	0.216	-0.040	0.053	0.082
s.e.	(0.087)	(0.111)	(0.229)	(0.084)	(0.153)	(0.094)	(0.117)	(0.292)	(0.087)	(0.154)
Married	0.849***	0.857***	0.705***	1.243***	0.812***	0.622***	0.651***	0.788***	0.829***	0.762***
s.e.	(0.064)	(0.074)	(0.186)	(0.060)	(0.117)	(0.071)	(0.080)	(0.215)	(0.065)	(0.118)
Bad health	-0.341***	-0.402***	-0.344**	-0.310***	-0.501***	-0.251***	-0.388***	-0.397**	-0.257***	-0.470***
s.e.	(0.036)	(0.037)	(0.117)	(0.031)	(0.063)	(0.039)	(0.041)	(0.135)	(0.033)	(0.064)
Immigrant	-0.728***	-0.301**	-0.744**	-0.210	-0.486***	Years of work	0.181***	0.176***	0.053	0.143***	
s.e.	(0.076)	(0.103)	(0.246)	(0.478)	(0.141)	s.e.	(0.014)	(0.015)	(0.045)	(0.013)	
Region 2	0.074	-1.184***		-0.059		Years of work squared	-0.002***	-0.002***	-0.001	-0.000	
s.e.	(0.162)	(0.083)		(0.075)		s.e.	(0.000)	(0.000)	(0.001)	(0.000)	
Region 3	0.059	-1.307***		-0.310***		Inmigrant	-0.636***	-0.144	-0.547	-0.152	-0.503***
s.e.	(0.183)	(0.098)		(0.070)		s.e.	(0.086)	(0.111)	(0.297)	(0.493)	(0.145)
Region 4	0.284	0.452***		-0.062		Region 2	0.179	-0.725***		-0.143	
s.e.	(0.157)	(0.106)		(0.080)		s.e.	(0.179)	(0.093)		(0.082)	
Region 5	0.586**	-0.202*		-0.221*		Region 3	-0.003	-0.937***		-0.275***	
s.e.	(0.197)	(0.092)		(0.087)		s.e.	(0.194)	(0.107)		(0.076)	
Region 6	-0.037			-0.085		Region 4	0.194	0.368***		-0.136	
s.e.	(0.165)			(0.079)		s.e.	(0.172)	(0.111)		(0.086)	
Region 7	0.193					Region 5	0.328	-0.115		-0.302**	
s.e.	(0.162)					s.e.	(0.207)	(0.098)		(0.093)	
Region 8	0.173					Region 6	-0.179			-0.165	
s.e.	(0.135)					s.e.	(0.174)			(0.084)	
Region 9	0.118					Region 7	0.054				
s.e.	(0.140)					s.e.	(0.171)				
Region 10	-0.239					Region 8	0.115				
s.e.	(0.139)					s.e.	(0.147)				
Region 11	-0.303*					Region 9	0.047				
s.e.	(0.150)					s.e.	(0.151)				
Region 12	0.113					Region 10	-0.310*				
s.e.	(0.126)					s.e.	(0.148)				
Region 13	-0.169					Region 11	-0.357*				
s.e.	(0.128)					s.e.	(0.162)				
Region 14	0.194					Region 12	0.102				
s.e.	(0.172)					s.e.	(0.139)				
Region 15	-0.561***					Region 13	-0.278*				
s.e.	(0.116)					s.e.	(0.137)				
Region 16	-0.185					Region 14	0.015				
s.e.	(0.149)					s.e.	(0.180)				
Region 17	-0.429*					Region 15	-0.540***				
s.e.	(0.197)					s.e.	(0.126)				
Region 18	-0.057					Region 16	-0.233				
s.e.	(0.329)					s.e.	(0.160)				
Region 19	-0.343*					Region 17	0.121				
s.e.	(0.138)					s.e.	(0.230)				
FB in Q1	-0.153	-0.641***	-0.257	-0.104	-0.434*	Region 18	-0.113				
s.e.	(0.120)	(0.123)	(0.328)	(0.085)	(0.197)	s.e.	(0.660)				
FB in Q2	-0.175	-0.149	-0.182	0.030	0.072	Region 19	-0.239				
s.e.	(0.122)	(0.135)	(0.327)	(0.085)	(0.215)	s.e.	(0.151)				
FB in Q4	0.013	-0.050	-0.374	0.202*	0.329	Secondary education	0.695***	0.988***	0.505	0.353***	0.613***
s.e.	(0.129)	(0.146)	(0.314)	(0.090)	(0.227)		(0.111)	(0.105)	(0.326)	(0.088)	(0.180)

Table A3. Full regressions of the probability of being employed (males), continued.

	Model A						Model B				
Probability of a positive wage	**ES**	**IT**	**NL**	**PL**	**UK**	***Probability of a positive wage***	**ES**	**IT**	**NL**	**PL**	**UK**
FB in Q5	0.044	-0.014	0.037	0.426***	0.091	**Tertiary education**	1.258***	1.473***	0.670	1.944***	0.820***
s.e.	(0.130)	(0.145)	(0.343)	(0.093)	(0.211)		(0.123)	(0.191)	(0.366)	(0.152)	(0.205)
Year = 2011	-0.799***	-0.672***	0.187	0.769***	-0.122	**FB in Q1**	-0.033	-0.421**	-0.172	0.042	-0.278
s.e.	(0.115)	(0.134)	(0.348)	(0.109)	(0.235)	**s.e.**	(0.131)	(0.138)	(0.419)	(0.093)	(0.202)
FB in Q1 x 2011	-0.310*	0.254	0.180	-0.231	0.157	**FB in Q2**	-0.124	-0.088	0.181	0.125	0.141
s.e.	(0.152)	(0.166)	(0.477)	(0.147)	(0.311)	**s.e.**	(0.130)	(0.148)	(0.446)	(0.093)	(0.216)
FB in Q2 x 2011	-0.059	0.136	1.362*	-0.086	0.008	**FB in Q4**	-0.055	-0.062	-0.321	0.113	0.294
s.e.	(0.156)	(0.182)	(0.610)	(0.152)	(0.336)	**s.e.**	(0.137)	(0.163)	(0.404)	(0.097)	(0.228)
FB in Q4 x 2011	0.099	0.068	0.563	-0.077	-0.324	**FB in Q5**	-0.115	-0.113	-0.189	0.143	-0.033
s.e.	(0.165)	(0.191)	(0.484)	(0.159)	(0.341)	**s.e.**	(0.145)	(0.168)	(0.433)	(0.102)	(0.217)
FB in Q5 x 2011	0.113	0.295	-0.223	-0.206	0.151	**Year = 2011**	-0.829***	-0.821***	-0.382	0.618***	-0.477
s.e.	(0.166)	(0.196)	(0.482)	(0.165)	(0.343)	**s.e.**	(0.132)	(0.155)	(0.510)	(0.180)	(0.343)
Constant	1.513*	1.108	4.306*	0.383	2.512*	**Secondary educ. x 2011**	-0.004	-0.126	-0.065	0.111	0.233
s.e.	(0.614)	(0.714)	(2.175)	(0.572)	(1.260)	**s.e.**	(0.139)	(0.137)	(0.458)	(0.156)	(0.296)
						Tertiary educ. x 2011	0.145	0.330	0.264	-0.526*	0.286
							(0.152)	(0.251)	(0.510)	(0.235)	(0.330)
						FB in Q1 x 2011	-0.180	0.262	0.221	-0.267	0.185
						s.e.	(0.167)	(0.182)	(0.548)	(0.159)	(0.321)
						FB in Q2 x 2011	-0.030	0.228	1309	-0.153	0.087
						s.e.	(0.167)	(0.197)	(0.719)	(0.162)	(0.342)
						FB in Q4 x 2011	0.119	-0.041	0.587	-0.098	-0.260
						s.e.	(0.177)	(0.210)	(0.560)	(0.169)	(0.343)
						FB in Q5 x 2011	0.046	0.174	-0.077	-0.105	0.205
						s.e.	(0.186)	(0.223)	(0.557)	(0.179)	(0.353)
						Constant	4.949***	2.481**	7.026*	3.653***	2.044
						s.e.	(0.757)	(0.844)	(3.036)	(0.728)	(1.277)

Notes: (1) Coefficients for the 19 Spanish Regions are shown only if they are significant in either Model A or B. (2) The reference individual is observed in 2005, lives in Region 1 (a different region depending on the country), has a low level of education (primary school or no education), is not married, has a good health, is not an immigrant, his Family Background is in the middle quintile of the FB variable (Q3) in his country.

Table A4. Full regressions of the probability of being employed (females).

	Model A					Model B				
Probability of a positive wage	ES	IT	NL	PL	UK	ES	IT	NL	PL	UK
Age	0.123***	0.129***	0.046	0.206***	0.247***	-0.096*	-0.013	-0.073	-0.005	0.221**
s.e.	(0.032)	(0.035)	(0.096)	(0.027)	(0.066)	(0.039)	(0.042)	(0.122)	(0.035)	(0.068)
Age squared	-0.001***	-0.001*	-0.001	-0.003***	-0.003***	0.001	-0.000	0.001	-0.001*	-0.003**
s.e.	(0.000)	(0.000)	(0.001)	(0.000)	(0.001)	(0.000)	(0.001)	(0.002)	(0.000)	(0.001)
No. of children (<18)	-0.127***	-0.109**	-0.307***	-0.253***	-0.436***	-0.118***	-0.092*	-0.366***	-0.162***	-0.414***
s.e.	(0.031)	(0.034)	(0.069)	(0.022)	(0.054)	(0.036)	(0.039)	(0.081)	(0.024)	(0.055)
No. of children (<3)	-0.046	0.119	0.367*	-0.067	-0.264*	-0.239**	-0.074	0.520*	-0.307***	-0.266
s.e.	(0.075)	(0.080)	(0.182)	(0.075)	(0.132)	(0.082)	(0.090)	(0.232)	(0.083)	(0.136)
Married	0.041	0.040	0.051	-0.154**	0.634***	0.023	0.024	0.134	-0.212***	0.594***
s.e.	(0.055)	(0.057)	(0.137)	(0.052)	(0.107)	(0.061)	(0.065)	(0.158)	(0.057)	(0.109)
Bad health	-0.239***	-0.243***	-0.540***	-0.300***	-0.472***	-0.180***	-0.274***	-0.543***	-0.218***	-0.431***
s.e.	(0.034)	(0.034)	(0.089)	(0.028)	(0.062)	(0.038)	(0.041)	(0.105)	(0.031)	(0.063)
Immigrant	-0.434***	-0.665***	-1.055***	0.337	-0.741***	0.179***	0.205***	0.083*	0.159***	
s.e.	(0.074)	(0.074)	(0.189)	(0.473)	(0.129)	(0.011)	(0.014)	(0.034)	(0.010)	
Region 2	-0.194	-1.287***		-0.023		-0.003***	-0.003***	-0.000	-0.002***	
s.e.	(0.137)	(0.075)		(0.063)		(0.000)	(0.000)	(0.001)	(0.000)	
Region 3	0.375*	-1.489***		-0.152*		-0.276**	-0.468***	-0.590*	0.229	-0.779***
s.e.	(0.169)	(0.092)		(0.061)		(0.085)	(0.084)	(0.246)	(0.491)	(0.135)
Region 4	0.425**	0.078		-0.060		0.126	-0.779***		0.098	
s.e.	(0.137)	(0.084)		(0.068)		(0.159)	(0.088)		(0.069)	
Region 5	0.987***	-0.489***		0.019		0.490*	-0.946***		-0.129	
s.e.	(0.178)	(0.076)		(0.077)		(0.198)	(0.108)		(0.067)	
Region 6	0.451**			-0.181**		0.220	-0.053		0.094	
s.e.	(0.157)			(0.066)		(0.150)	(0.091)		(0.074)	
Region 7	0.446**					0.725***	-0.370***		0.159	
s.e.	(0.147)					(0.193)	(0.084)		(0.085)	
Region 8	0.436***					0.317			-0.019	
s.e.	(0.118)					(0.173)			(0.073)	
Region 9	0.195					0.380*				
s.e.	(0.126)					(0.162)				
Region 10	0.116					0.256				
s.e.	(0.134)					(0.131)				
Region 11	-0.350**					0.201				
s.e.	(0.133)					(0.140)				
Region 12	0.544***					0.177				
s.e.	(0.113)					(0.151)				
Region 13	0.147					-0.187				
s.e.	(0.114)					(0.148)				
Region 14	0.795***					0.302*				
s.e.	(0.166)					(0.125)				
Region 15	-0.544***					0.051				
s.e.	(0.100)					(0.125)				
Region 16	0.105					0.718***				
s.e.	(0.137)					(0.185)				
Region 17	-0.630***					-0.464***				
s.e.	(0.171)					(0.113)				
Region 18	0.004					0.107				
s.e.	(0.316)					(0.153)				
Region 19	-0.123					-0.048				
s.e.	(0.123)					(0.211)				
FB in Q1	-0.222*	-0.530***	-0.324	-0.376***	-0.424*	0.665				
s.e.	(0.104)	(0.106)	(0.252)	(0.076)	(0.213)	(0.733)				
FB in Q2	0.020	-0.151	-0.260	-0.075	-0.216	-0.032				
s.e.	(0.106)	(0.109)	(0.259)	(0.078)	(0.224)	(0.139)				
FB in Q4	0.146	0.189	-0.017	0.173*	-0.221	0.017	-0.172	-0.279	-0.150	-0.305
s.e.	(0.108)	(0.119)	(0.263)	(0.078)	(0.221)	(0.119)	(0.126)	(0.305)	(0.085)	(0.217)

Table A4. Full regressions of the probability of employment (females), continued.

	Model A						Model B				
Probability of a positive wage	ES	IT	NL	PL	UK	*Probability of a positive wage*	ES	IT	NL	PL	UK
FB in Q5	0.391***	0.286*	0.500	0.694***	-0.097	**FB in Q2**	0.165	0.001	-0.318	0.013	-0.177
s.e.	(0.110)	(0.116)	(0.289)	(0.086)	(0.228)	**s.e.**	(0.118)	(0.128)	(0.310)	(0.086)	(0.226)
Year = 2011	-0.199	-0.512***	0.829**	0.278**	-0.142	**FB in Q4**	0.136	0.169	-0.155	0.061	-0.300
s.e.	(0.103)	(0.110)	(0.299)	(0.089)	(0.250)	**s.e.**	(0.119)	(0.138)	(0.320)	(0.087)	(0.223)
FB in Q1 x 2011	-0.117	0.299*	0.565	-0.151	-0.106	**FB in Q5**	0.163	0.108	0.186	0.284**	-0.324
s.e.	(0.141)	(0.146)	(0.427)	(0.122)	(0.322)	**s.e.**	(0.125)	(0.142)	(0.370)	(0.096)	(0.234)
FB in Q2 x 2011	-0.156	0.279	-0.114	-0.121	-0.091	**Year = 2011**	-0.290*	-0.652***	0.956*	0.194	-0.969**
s.e.	(0.145)	(0.152)	(0.399)	(0.125)	(0.337)	**s.e.**	(0.129)	(0.142)	(0.435)	(0.172)	(0.353)
FB in Q4 x 2011	-0.099	-0.016	-0.246	0.226	0.373	**Secondary education**	0.475***	0.856***	0.921***	0.419***	0.731***
s.e.	(0.148)	(0.161)	(0.407)	(0.130)	(0.352)	**s.e.**	(0.098)	(0.093)	(0.229)	(0.087)	(0.191)
FB in Q5 x 2011	-0.045	0.163	-0.542	-0.133	-0.102	**Tertiary education**	1.052***	2.002***	1.849***	1.923***	1.224***
s.e.	(0.150)	(0.162)	(0.433)	(0.137)	(0.338)	**s.e.**	(0.103)	(0.176)	(0.307)	(0.128)	(0.212)
Constant	-0.780	-0.100	2.862	-2.024***	-0.874	**Secondary educ. x 2011**	0.034	-0.127	-0.503	-0.011	0.800**
s.e.	(0.613)	(0.659)	(1.875)	(0.516)	(1.253)	**s.e.**	(0.132)	(0.124)	(0.380)	(0.154)	(0.297)
						Tertiary educ. x 2011	0.164	-0.211	-1.173**	-0.202	0.743*
						s.e.	(0.134)	(0.214)	(0.446)	(0.198)	(0.331)
						FB in Q1 x 2011	-0.174	0.244	0.975	-0.207	0.079
						s.e.	(0.162)	(0.170)	(0.520)	(0.135)	(0.333)
						FB in Q2 x 2011	-0.259	0.286	-0.103	-0.137	0.044
						s.e.	(0.162)	(0.175)	(0.444)	(0.137)	(0.344)
						FB in Q4 x 2011	-0.313	-0.161	-0.151	0.191	0.471
						s.e.	(0.164)	(0.183)	(0.465)	(0.142)	(0.359)
						FB in Q5 x 2011	-0.144	-0.019	-0.291	0.004	-0.130
						s.e.	(0.172)	(0.191)	(0.511)	(0.152)	(0.352)
						Constant	2.238**	1.595*	4.252	1.061	-1.431
						s.e.	(0.723)	(0.792)	(2.327)	(0.640)	(1.285)

Notes: (1) Coefficients for the 19 Spanish Regions are shown only if they are significant in either Model A or B. (2) The reference individual is observed in 2005, lives in Region 1 (a different region depending on the country), has a low level of education (primary school or no education), is not married, has a good health, is not an immigrant, her Family Background is in the middle quintile of the FB variable (Q3) in her country.

Table A5. Full regressions of wage determinants using country specific Heckman selection equations (males).

	Model A						Model B					
log (wage)	ES	IT	NL	PL	UK	*log (wage)*	ES	IT	NL	PL	UK
Age	0.031***	0.047***	0.074***	0.068***	0.060***	Age	0.006	0.029***	0.060***	0.044***	0.063***
s.e.	(0.007)	(0.007)	(0.015)	(0.009)	(0.013)	s.e.	(0.009)	(0.008)	(0.017)	(0.011)	(0.013)
Age squared	-0.000*	-0.000***	-0.001***	-0.001***	-0.001***	Age squared	0.000	-0.000	-0.000*	-0.000**	-0.001***
s.e.	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	s.e.	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Bad health	-0.014	-0.031***	-0.066***	-0.020*	-0.013	Years of work	0.012***	0.009**	0.006	0.020***	
s.e.	(0.009)	(0.007)	(0.016)	(0.010)	(0.015)	s.e.	(0.003)	(0.003)	(0.005)	(0.004)	
Year = 2011	0.102***	-0.131***	0.101*	0.326***	-0.285***	Years of work squared	-0.000***	-0.000***	-0.000*	-0.000***	
s.e.	(0.023)	(0.019)	(0.041)	(0.029)	(0.043)	s.e.	(0.000)	(0.000)	(0.000)	(0.000)	
Immigrant	-0.169***	-0.179***	-0.180***	0.146	0.001	Bad health	-0.008	-0.020**	-0.038*	-0.026**	-0.007
s.e.	(0.022)	(0.019)	(0.044)	(0.148)	(0.035)	s.e.	(0.008)	(0.007)	(0.015)	(0.010)	(0.014)
Region 1	-0.096**	0.063***		0.117***		Year = 2011	0.113***	-0.107***	0.051	0.325***	-0.339***
s.e.	(0.031)	(0.012)		(0.021)		s.e.	(0.026)	(0.022)	(0.060)	(0.057)	(0.086)
Region 2	0.018	-0.096***		0.112***		Secondary education	0.069*	0.155***	0.100	0.164**	0.151
s.e.	(0.035)	(0.014)		(0.021)		s.e.	(0.029)	(0.022)	(0.062)	(0.060)	(0.082)
Region 3	0.030	-0.068***		0.024		Tertiary education	0.337***	0.381***	0.356***	0.671***	0.305***
s.e.	(0.039)	(0.019)		(0.022)		s.e.	(0.030)	(0.037)	(0.064)	(0.071)	(0.085)
Region 4	0.162***	0.044***		-0.005		Immigrant	-0.172***	-0.170***	-0.190***	0.029	-0.019
s.e.	(0.033)	(0.012)		(0.023)		s.e.	(0.020)	(0.019)	(0.041)	(0.132)	(0.034)
Region 5	0.182***			0.076**		Region 1	-0.093**	0.069***		0.091***	
s.e.	(0.036)			(0.025)		s.e.	(0.030)	(0.011)		(0.020)	
Region 6	-0.008					Region 2	0.023	-0.106***		0.105***	
s.e.	(0.036)					s.e.	(0.034)	(0.013)		(0.020)	
Region 7	0.064					Region 3	0.053	-0.069***		-0.002	
s.e.	(0.033)					s.e.	(0.037)	(0.018)		(0.021)	
Region 8	0.086**					Region 4	0.132***	0.044***		-0.001	
s.e.	(0.030)					s.e.	(0.032)	(0.011)		(0.021)	
Region 9	0.059					Region 5	0.187***			0.070**	
s.e.	(0.032)					s.e.	(0.034)			(0.024)	
Region 10	0.035					Region 6	0.015				
s.e.	(0.032)					s.e.	(0.034)				
Region 11	-0.119***					Region 7	0.081*				
s.e.	(0.036)					s.e.	(0.032)				
Region 12	0.095***					Region 8	0.076**				
s.e.	(0.029)					s.e.	(0.028)				
Region 13	-0.013					Region 9	0.054				
s.e.	(0.029)					s.e.	(0.030)				
Region 14	0.048					Region 10	0.046				
s.e.	(0.035)					s.e.	(0.031)				
Region 15	-0.020					Region 11	-0.111**				
s.e.	(0.028)					s.e.	(0.034)				
Region 16	-0.003					Region 12	0.105***				
s.e.	(0.034)					s.e.	(0.027)				
Region 17	0.160***					Region 13	0.009				
s.e.	(0.045)					s.e.	(0.028)				
Region 18	-0.129					Region 14	0.085*				
s.e.	(0.161)					s.e.	(0.033)				
FB in Q1	-0.119***	-0.119***	-0.063	-0.163***	-0.172***	Region 15	-0.011				
s.e.	(0.023)	(0.020)	(0.042)	(0.030)	(0.042)	s.e.	(0.027)				
FB in Q2	-0.029	-0.075***	-0.016	-0.111***	-0.094*	Region 16	0.017				
s.e.	(0.024)	(0.019)	(0.042)	(0.029)	(0.041)	s.e.	(0.032)				
FB in Q4	0.103***	0.049*	0.078	0.001	0.013	Region 17	0.193***				
s.e.	(0.023)	(0.019)	(0.042)	(0.028)	(0.040)	s.e.	(0.043)				

Table A5. Full regressions of wage determinants using country specific Heckman selection equations (males), continued.

	Model A						Model B				
log (wage)	ES	IT	NL	PL	UK	*log (wage)*	ES	IT	NL	PL	UK
FB in Q5	0.245***	0.178***	0.190***	0.186***	0.220***	**Region 18**	-0.061				
s.e.	(0.023)	(0.019)	(0.042)	(0.027)	(0.040)	**s.e.**	(0.158)				
FB in Q1 x 2011	0.069*	0.072**	0.027	0.118**	0.099	**Secondary educ. x 2011**	0.009	-0.056**	-0.026	-0.001	0.019
s.e.	(0.032)	(0.026)	(0.057)	(0.041)	(0.062)	**s.e.**	(0.028)	(0.021)	(0.057)	(0.053)	(0.082)
FB in Q2 x 2011	-0.001	0.054*	-0.056	0.101*	0.037	**Tertiary educ. x 2011**	-0.114***	-0.104**	0.103	-0.062	0.068
s.e.	(0.032)	(0.026)	(0.058)	(0.040)	(0.060)	**s.e.**	(0.027)	(0.032)	(0.059)	(0.060)	(0.084)
FB in Q4 x 2011	-0.013	0.040	-0.032	0.063	0.084	**FB in Q1**	-0.072**	-0.074**	0.029	-0.156*	-0.140
s.e.	(0.031)	(0.026)	(0.057)	(0.039)	(0.059)	**s.e.**	(0.026)	(0.022)	(0.066)	(0.069)	(0.089)
FB in Q5 x 2011	-0.012	0.026	-0.050	0.066	0.022	**FB in Q2**	-0.031	-0.044	0.030	-0.142*	-0.110
s.e.	(0.032)	(0.026)	(0.058)	(0.039)	(0.060)	**s.e.**	(0.027)	(0.023)	(0.070)	(0.072)	(0.096)
Constant	1.287***	1.396***	1.294***	-0.593***	1.528***	**FB in Q4**	0.037	0.022	-0.026	-0.155	-0.114
s.e.	(0.144)	(0.131)	(0.297)	(0.166)	(0.262)	**s.e.**	(0.029)	(0.024)	(0.082)	(0.090)	(0.116)
						FB in Q5	0.074	0.072*	0.116	-0.009	0.132
						s.e.	(0.039)	(0.032)	(0.105)	(0.135)	(0.206)
						Secondary educ. x FB in Q1	0.026	0.008	-0.031	0.023	0.004
						s.e.	(0.039)	(0.027)	(0.071)	(0.070)	(0.095)
						Secondary educ. x FB in Q2	0.071	-0.032	-0.003	0.064	0.039
						s.e.	(0.037)	(0.026)	(0.075)	(0.073)	(0.100)
						Secondary educ. x FB in Q4	0.070	0.006	0.067	0.149	0.081
						s.e.	(0.037)	(0.027)	(0.089)	(0.091)	(0.120)
						Secondary educ. x FB in Q5	0.019	-0.033	-0.054	0.057	-0.001
						s.e.	(0.046)	(0.034)	(0.110)	(0.136)	(0.209)
						Terciary educ. x FB in Q1	0.008	0.035	-0.111	0.054	0.042
						s.e.	(0.042)	(0.058)	(0.078)	(0.092)	(0.101)
						Terciary educ. x FB in Q2	0.049	0.007	-0.048	0.062	0.036
						s.e.	(0.038)	(0.050)	(0.080)	(0.089)	(0.105)
						Terciary educ. x FB in Q4	0.061	0.012	0.060	0.108	0.170
						s.e.	(0.036)	(0.043)	(0.089)	(0.099)	(0.122)
						Terciary educ. x FB in Q5	0.092*	0.051	-0.028	0.050	0.056
						s.e.	(0.043)	(0.044)	(0.108)	(0.140)	(0.208)
						FB in Q1 x 2011	0.054	0.055*	0.052	0.121**	0.098
						s.e.	(0.031)	(0.026)	(0.054)	(0.040)	(0.061)
						FB in Q2 x 2011	-0.014	0.052*	-0.033	0.096*	0.054
						s.e.	(0.031)	(0.025)	(0.055)	(0.038)	(0.059)
						FB in Q4 x 2011	-0.015	0.034	-0.049	0.065	0.073
						s.e.	(0.030)	(0.025)	(0.054)	(0.037)	(0.058)
						FB in Q5 x 2011	0.013	0.040	-0.042	0.079*	0.011
						s.e.	(0.031)	(0.026)	(0.055)	(0.038)	(0.059)
						Constant	1.466***	1.513***	1.212***	-0.582**	1.236***
						s.e.	(0.163)	(0.142)	(0.325)	(0.204)	(0.263)

Table A5. Full regressions of wage determinants using country specific Heckman selection equations (males), continued.

Heckman Selection equation						*Heckman Selection equation*					
Age	-0.127***	-0.040*	0.067	-0.030	-0.036	**Age**	-0.108***	-0.021	0.078	-0.029	-0.041
s.e.	(0.021)	(0.016)	(0.051)	(0.022)	(0.027)	**s.e.**	(0.023)	(0.017)	(0.053)	(0.024)	(0.028)
Age squared	0.001***	0.000	-0.001	-0.001*	0.000	**Age squared**	0.001**	0.000	-0.001*	-0.001**	0.000
s.e.	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)	**s.e.**	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)
Married	0.215***	0.185***	0.188**	0.418***	0.257***	**Married**	0.234***	0.191***	0.200**	0.446***	0.266***
s.e.	(0.033)	(0.023)	(0.066)	(0.037)	(0.044)	**s.e.**	(0.034)	(0.023)	(0.068)	(0.040)	(0.044)
Bad health	-0.159***	-0.072***	-0.188***	-0.235***	-0.218***	**Bad health**	-0.180***	-0.087***	-0.221***	-0.257***	-0.234***
s.e.	(0.019)	(0.015)	(0.043)	(0.017)	(0.025)	**s.e.**	(0.019)	(0.015)	(0.043)	(0.018)	(0.025)
No. of children (<18)	0.028	0.035**	-0.005	-0.040**	0.024	**No. of children (<18)**	0.017	0.034**	-0.005	-0.050**	0.024
s.e.	(0.016)	(0.012)	(0.029)	(0.015)	(0.020)	**s.e.**	(0.017)	(0.012)	(0.030)	(0.016)	(0.021)
No. of children (<3)	0.044	0.007	-0.050	-0.018	-0.020	**No. of children (<3)**	0.060	0.007	-0.045	-0.041	-0.023
s.e.	(0.037)	(0.027)	(0.063)	(0.041)	(0.051)	**s.e.**	(0.039)	(0.027)	(0.065)	(0.045)	(0.052)
Years of work	0.075***	0.023***	0.018	0.060***		**Years of work**	0.067***	0.013*	0.013	0.059***	
s.e.	(0.007)	(0.005)	(0.014)	(0.007)		**s.e.**	(0.008)	(0.006)	(0.016)	(0.008)	
Years of work squared	-0.001***	-0.000	-0.000	0.000		**Years of work squared**	-0.001***	0.000	0.000	0.000*	
s.e.	(0.000)	(0.000)	(0.000)	(0.000)		**s.e.**	(0.000)	(0.000)	(0.000)	(0.000)	
Secondary education	0.381***	0.250***	0.187	0.360***	0.477***	**Secondary education**	0.293***	0.080*	0.080	0.221***	0.342***
s.e.	(0.043)	(0.026)	(0.103)	(0.054)	(0.071)	**s.e.**	(0.049)	(0.032)	(0.112)	(0.059)	(0.080)
Tertiary education	0.998***	0.693***	0.768***	1.441***	0.887***	**Tertiary education**	0.566***	0.215***	0.370**	0.920***	0.576***
s.e.	(0.046)	(0.041)	(0.113)	(0.070)	(0.077)	**s.e.**	(0.052)	(0.049)	(0.121)	(0.077)	(0.087)
Immigrant	-0.079	0.172***	0.271*	-0.311	-0.238***	**Immigrant**	-0.090	0.171***	0.286*	-0.216	-0.225***
s.e.	(0.048)	(0.043)	(0.130)	(0.265)	(0.064)	**s.e.**	(0.049)	(0.043)	(0.131)	(0.269)	(0.064)
Secondary educ. x 2011	-0.081	0.082*	0.145	-0.213*	-0.166	**Secondary educ. x 2011**	-0.108	0.147**	0.189	-0.224*	-0.181
s.e.	(0.058)	(0.038)	(0.150)	(0.091)	(0.127)	**s.e.**	(0.067)	(0.045)	(0.162)	(0.098)	(0.142)
Tertiary educ. x 2011	-0.087	-0.066	-0.030	-0.569***	-0.071	**Tertiary educ. x 2011**	0.061	0.051	-0.139	-0.553***	-0.130
s.e.	(0.057)	(0.054)	(0.152)	(0.106)	(0.131)	**s.e.**	(0.065)	(0.064)	(0.166)	(0.116)	(0.146)
Year = 2011	-0.068	-0.136***	-0.049	0.265*	0.247	**Year = 2011**	-0.051	-0.163***	-0.011	0.321**	0.298*
s.e.	(0.051)	(0.031)	(0.128)	(0.108)	(0.131)	**s.e.**	(0.054)	(0.033)	(0.136)	(0.114)	(0.142)
FB in Q1	0.040	0.075*	-0.061	-0.075	0.058	**FB in Q1**	-0.022	0.024	-0.131	-0.108*	0.010
s.e.	(0.043)	(0.034)	(0.088)	(0.042)	(0.065)	**s.e.**	(0.044)	(0.034)	(0.088)	(0.042)	(0.065)
FB in Q2	-0.075	0.054	0.136	0.028	0.061	**FB in Q2**	-0.105*	0.033	0.093	0.010	0.039
s.e.	(0.042)	(0.033)	(0.095)	(0.041)	(0.064)	**s.e.**	(0.043)	(0.033)	(0.095)	(0.042)	(0.064)
FB in Q4	-0.103*	-0.065*	-0.005	0.093*	-0.010	**FB in Q4**	-0.070	-0.037	0.063	0.129**	0.011
s.e.	(0.043)	(0.033)	(0.092)	(0.042)	(0.063)	**s.e.**	(0.043)	(0.033)	(0.092)	(0.042)	(0.063)
FB in Q5	-0.266***	-0.175***	-0.186*	-0.092*	-0.093	**FB in Q5**	-0.144**	-0.059	-0.060	0.024	-0.033
s.e.	(0.044)	(0.034)	(0.092)	(0.042)	(0.065)	**s.e.**	(0.045)	(0.034)	(0.092)	(0.043)	(0.065)
Regional unemp. Rate	-0.013***	-0.011***		-0.006	-0.041**	**Regional unemp. Rate**	-0.017***	-0.010***		-0.004	-0.041**
s.e.	(0.003)	(0.003)		(0.008)	(0.015)	**s.e.**	(0.003)	(0.003)		(0.008)	(0.015)
Log other hh. Income	0.067***	0.028**	-0.005	0.031*	0.075***	**Log other hh. Income**	0.067***	0.027**	-0.000	0.023	0.073***
s.e.	(0.013)	(0.010)	(0.027)	(0.012)	(0.019)	**s.e.**	(0.014)	(0.010)	(0.027)	(0.013)	(0.019)
Constant	2.278***	0.869**	-0.126	1.110*	0.765	**Constant**	2.280***	0.778*	0.037	1.486**	1.137*
s.e.	(0.414)	(0.327)	(1.000)	(0.443)	(0.572)	**s.e.**	(0.434)	(0.338)	(1.031)	(0.467)	(0.577)
inverse tangent of rho	-1.143***	-1.272***	-1.096***	-0.898***	-1.123***	**inverse tangent of rho**	-0.925***	-1.221***	-1.015***	-0.469***	-1.041***
s.e.	(0.033)	(0.026)	(0.049)	(0.035)	(0.042)	**s.e.**	(0.042)	(0.026)	(0.051)	(0.069)	(0.046)
ln(sigma)	-0.664***	-0.629***	-0.619***	-0.521***	-0.392***	**ln(sigma)**	-0.767***	-0.672***	-0.686***	-0.682***	-0.432***
s.e.	(0.011)	(0.010)	(0.015)	(0.012)	(0.015)	**s.e.**	(0.013)	(0.010)	(0.016)	(0.016)	(0.015)

Table A6. Full regressions of wage determinants using country specific Heckman selection equations (females).

	Model A						Model B					
log (wage)	ES	IT	NL	PL	UK	*log (wage)*	ES	IT	NL	PL	UK
Age	0.062***	0.045***	0.072***	0.019*	0.042***	**Age**	0.018*	0.035***	0.039*	0.035***	0.040***
s.e.	(0.008)	(0.007)	(0.014)	(0.008)	(0.013)	**s.e.**	(0.008)	(0.007)	(0.016)	(0.009)	(0.012)
Age squared	-0.001***	-0.000***	-0.001***	-0.000	-0.001***	**Age squared**	-0.000	-0.000***	-0.000*	-0.001***	-0.000**
s.e.	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	**s.e.**	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Bad health	-0.008	-0.031***	0.030	-0.023*	-0.022	**Bad health**	-0.034***	-0.023***	0.035*	-0.091***	-0.019
s.e.	(0.010)	(0.008)	(0.016)	(0.010)	(0.014)	**s.e.**	(0.008)	(0.007)	(0.015)	(0.009)	(0.013)
Year = 2011	0.091***	-0.128***	0.011	0.374***	-0.324***	**Year = 2011**	0.118***	-0.129***	-0.152*	0.547***	-0.313***
s.e.	(0.025)	(0.019)	(0.040)	(0.027)	(0.041)	**s.e.**	(0.029)	(0.024)	(0.064)	(0.058)	(0.087)
Immigrant	-0.219***	-0.118***	-0.035	0.365*	0.125***	**Secondary education**	0.241***	0.252***	0.038	0.262***	0.278**
s.e.	(0.023)	(0.018)	(0.045)	(0.145)	(0.032)	**s.e.**	(0.033)	(0.024)	(0.065)	(0.059)	(0.091)
Region 1	-0.067*	0.051***		0.118***		**Tertiary education**	0.662***	0.562***	0.115	1.104***	0.455***
s.e.	(0.033)	(0.012)		(0.020)		**s.e.**	(0.033)	(0.034)	(0.069)	(0.064)	(0.094)
Region 2	-0.041	-0.025		0.008		**Immigrant**	-0.195***	-0.169***	-0.044	0.265*	0.083**
s.e.	(0.039)	(0.015)		(0.020)		**s.e.**	(0.019)	(0.016)	(0.042)	(0.120)	(0.031)
Region 3	0.010	0.056**		0.026		**Region 1**	-0.070*	0.065***		0.074***	
s.e.	(0.042)	(0.021)		(0.021)		**s.e.**	(0.032)	(0.012)		(0.018)	
Region 4	0.190***	0.037**		-0.005		**Region 2**	-0.023	-0.104***		-0.008	
s.e.	(0.035)	(0.012)		(0.021)		**s.e.**	(0.038)	(0.014)		(0.018)	
Region 5	0.155***			-0.009		**Region 3**	0.019	-0.023		-0.022	
s.e.	(0.038)			(0.023)		**s.e.**	(0.040)	(0.021)		(0.019)	
Region 6	-0.011					**Region 4**	0.196***	0.053***		-0.014	
s.e.	(0.039)					**s.e.**	(0.033)	(0.012)		(0.019)	
Region 7	0.076*					**Region 5**	0.170***			0.004	
s.e.	(0.036)					**s.e.**	(0.035)			(0.021)	
Region 8	0.069*					**Region 6**	0.023				
s.e.	(0.031)					**s.e.**	(0.037)				
Region 9	0.008					**Region 7**	0.115***				
s.e.	(0.034)					**s.e.**	(0.034)				
Region 10	0.047					**Region 8**	0.092**				
s.e.	(0.035)					**s.e.**	(0.029)				
Region 11	-0.007					**Region 9**	0.015				
s.e.	(0.038)					**s.e.**	(0.032)				
Region 12	0.069*					**Region 10**	0.053				
s.e.	(0.030)					**s.e.**	(0.034)				
Region 13	-0.010					**Region 11**	-0.023				
s.e.	(0.031)					**s.e.**	(0.037)				
Region 14	0.096**					**Region 12**	0.099***				
s.e.	(0.036)					**s.e.**	(0.029)				
Region 15	0.045					**Region 13**	0.023				
s.e.	(0.030)					**s.e.**	(0.030)				
Region 16	-0.055					**Region 14**	0.153***				
s.e.	(0.037)					**s.e.**	(0.035)				
Region 17	0.315***					**Region 15**	0.005				
s.e.	(0.052)					**s.e.**	(0.030)				
Region 18	0.130					**Region 16**	-0.035				
s.e.	(0.212)					**s.e.**	(0.036)				
FB in Q1	-0.133***	-0.076***	-0.052	-0.060*	-0.191***	**Region 17**	0.292***				
s.e.	(0.028)	(0.021)	(0.045)	(0.030)	(0.040)	**s.e.**	(0.052)				
FB in Q2	-0.059*	-0.067***	0.017	-0.008	-0.135***	**Region 18**	-0.076				
s.e.	(0.027)	(0.020)	(0.044)	(0.028)	(0.039)	**s.e.**	(0.206)				
FB in Q4	0.067*	0.051**	0.051	0.066*	0.043	**Secondary educ. x 2011**	-0.065*	-0.019	0.127*	-0.127*	-0.105
s.e.	(0.026)	(0.019)	(0.044)	(0.026)	(0.038)	**s.e.**	(0.029)	(0.021)	(0.061)	(0.055)	(0.082)

Table A6. Full regressions of wage determinants using country specific Heckman selection equations (females), continued.

	Model A						Model B				
log (wage)	ES	IT	NL	PL	UK	*log (wage)*	ES	IT	NL	PL	UK
FB in Q5	0.224***	0.162***	0.093*	0.245***	0.155***	**Tertiary educ. x 2011**	-0.067*	-0.066*	0.256***	-0.316***	0.036
s.e.	(0.026)	(0.019)	(0.043)	(0.026)	(0.039)	**s.e.**	(0.027)	(0.027)	(0.063)	(0.058)	(0.084)
FB in Q1 x 2011	0.057	0.026	0.014	-0.003	0.108	**FB in Q1**	-0.026	-0.064*	-0.075	-0.069	-0.041
s.e.	(0.036)	(0.028)	(0.056)	(0.039)	(0.059)	**s.e.**	(0.031)	(0.026)	(0.073)	(0.068)	(0.099)
FB in Q2 x 2011	-0.013	0.051	-0.076	-0.055	0.082	**FB in Q2**	-0.002	-0.040	-0.058	-0.052	-0.188
s.e.	(0.035)	(0.027)	(0.055)	(0.037)	(0.058)	**s.e.**	(0.032)	(0.026)	(0.074)	(0.073)	(0.103)
FB in Q4 x 2011	-0.016	-0.012	0.004	-0.022	0.037	**FB in Q4**	0.046	0.010	-0.015	0.054	0.066
s.e.	(0.034)	(0.026)	(0.056)	(0.036)	(0.057)	**s.e.**	(0.035)	(0.029)	(0.079)	(0.087)	(0.130)
FB in Q5 x 2011	-0.023	0.021	0.042	-0.069	0.051	**FB in Q5**	0.090*	0.078*	0.069	0.167	0.063
s.e.	(0.034)	(0.026)	(0.055)	(0.036)	(0.057)	**s.e.**	(0.045)	(0.038)	(0.103)	(0.097)	(0.224)
Constant	0.728***	1.437***	1.452***	0.335*	1.964***	**Secondary educ. x FB in Q1**	-0.038	0.062*	0.016	-0.026	-0.123
s.e.	(0.162)	(0.131)	(0.280)	(0.164)	(0.244)	**s.e.**	(0.044)	(0.031)	(0.076)	(0.070)	(0.105)
						Secondary educ. x FB in Q2	0.003	0.023	0.076	0.065	0.113
						s.e.	(0.042)	(0.030)	(0.077)	(0.074)	(0.109)
						Secondary educ. x FB in Q4	-0.020	0.021	0.008	0.012	-0.056
						s.e.	(0.043)	(0.032)	(0.084)	(0.088)	(0.135)
						Secondary educ. x FB in Q5	0.048	-0.005	-0.090	-0.028	-0.023
						s.e.	(0.053)	(0.042)	(0.107)	(0.099)	(0.228)
						Terciary educ. x FB in Q1	-0.091*	-0.001	0.096	0.024	-0.155
						s.e.	(0.043)	(0.051)	(0.083)	(0.080)	(0.110)
						Terciary educ. x FB in Q2	-0.072	-0.049	0.118	0.044	0.029
						s.e.	(0.039)	(0.044)	(0.082)	(0.080)	(0.112)
						Terciary educ. x FB in Q4	-0.030	-0.013	0.110	-0.020	-0.053
						s.e.	(0.040)	(0.042)	(0.086)	(0.091)	(0.136)
						Terciary educ. x FB in Q5	-0.014	-0.083	0.032	-0.055	0.043
						s.e.	(0.047)	(0.047)	(0.107)	(0.101)	(0.227)
						FB in Q1 x 2011	0.027	0.030	0.032	0.010	0.131*
						s.e.	(0.036)	(0.029)	(0.054)	(0.036)	(0.059)
						FB in Q2 x 2011	-0.017	0.043	-0.062	-0.036	0.090
						s.e.	(0.033)	(0.027)	(0.053)	(0.034)	(0.057)
						FB in Q4 x 2011	-0.031	-0.015	-0.024	-0.017	0.052
						s.e.	(0.033)	(0.027)	(0.054)	(0.032)	(0.055)
						FB in Q5 x 2011	-0.019	0.042	0.007	-0.010	0.016
						s.e.	(0.033)	(0.027)	(0.054)	(0.033)	(0.057)
						Years of work	0.030***	0.018***	0.015**	0.039***	
						s.e.	(0.003)	(0.003)	(0.005)	(0.004)	
						Years of work squared	-0.001***	-0.000***	-0.000*	-0.000***	
						s.e.	(0.000)	(0.000)	(0.000)	(0.000)	
						Constant	0.805***	0.985***	1.882***	-0.868***	1.584***
						s.e.	(0.151)	(0.125)	(0.292)	(0.177)	(0.245)

Table A6. Full regressions of wage determinants using country specific Heckman selection equations (females), continued.

Heckman Selection equation	ES	IT	NL	PL	UK
Age	-0.082***	-0.012	-0.062	0.061**	0.111***
s.e.	(0.019)	(0.016)	(0.038)	(0.019)	(0.025)
Age squared	0.001*	-0.000	0.000	-0.001***	-0.001***
s.e.	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Married	-0.112***	-0.055*	-0.038	-0.062	0.077*
s.e.	(0.029)	(0.023)	(0.051)	(0.032)	(0.039)
Bad health	-0.097***	-0.008	-0.218***	-0.192***	-0.250***
s.e.	(0.018)	(0.016)	(0.033)	(0.017)	(0.023)
No. of children (<18)	-0.064***	-0.015	-0.191***	-0.092***	-0.251***
s.e.	(0.015)	(0.012)	(0.022)	(0.012)	(0.018)
No. of children (<3)	-0.066*	-0.002	0.073	-0.308***	-0.205***
s.e.	(0.032)	(0.027)	(0.047)	(0.035)	(0.041)
Years of work	0.097***	0.076***	0.063***	0.087***	
s.e.	(0.005)	(0.005)	(0.010)	(0.005)	
Years of work squared	-0.001***	-0.001***	-0.001*	-0.001***	
s.e.	(0.000)	(0.000)	(0.000)	(0.000)	
Secondary education	0.446***	0.648***	0.363***	0.399***	0.638***
s.e.	(0.040)	(0.028)	(0.070)	(0.050)	(0.068)
Tertiary education	1.188***	1.233***	1.035***	1.730***	0.949***
s.e.	(0.040)	(0.040)	(0.079)	(0.061)	(0.072)
Immigrant	0.063	-0.088*	-0.119	0.070	-0.404***
s.e.	(0.046)	(0.037)	(0.095)	(0.261)	(0.053)
Secondary educ. x 2011	-0.100	-0.150***	0.130	-0.259**	-0.040
s.e.	(0.056)	(0.041)	(0.113)	(0.083)	(0.121)
Tertiary educ. x 2011	-0.109*	-0.259***	0.010	-0.526***	0.074
s.e.	(0.052)	(0.054)	(0.119)	(0.092)	(0.123)
Year = 2011	0.141**	0.117***	0.384***	0.339***	0.022
s.e.	(0.052)	(0.034)	(0.100)	(0.100)	(0.122)
FB in Q1	0.045	0.046	-0.054	-0.107**	-0.009
s.e.	(0.042)	(0.034)	(0.072)	(0.039)	(0.058)
FB in Q2	0.068	0.054	-0.098	-0.006	0.020
s.e.	(0.040)	(0.033)	(0.071)	(0.038)	(0.057)
FB in Q4	-0.051	-0.051	-0.079	0.053	-0.068
s.e.	(0.040)	(0.033)	(0.074)	(0.038)	(0.057)
FB in Q5	-0.150***	-0.158***	-0.069	0.027	-0.167**
s.e.	(0.041)	(0.034)	(0.075)	(0.039)	(0.058)
Regional unemp. Rate	-0.013***	-0.019***		-0.001	-0.003
s.e.	(0.003)	(0.003)		(0.007)	(0.014)
Log other hh. Income	0.060***	0.003	-0.014	0.019	0.046*
s.e.	(0.014)	(0.012)	(0.028)	(0.011)	(0.020)
Constant	0.917*	-0.090	1.740*	-1.174**	-1.940***
s.e.	(0.390)	(0.327)	(0.781)	(0.381)	(0.508)
inverse tangent of rho	-1.197***	-1.162***	-1.227***	-1.149***	-0.847***
s.e.	(0.032)	(0.027)	(0.047)	(0.029)	(0.044)
ln(sigma)	-0.597***	-0.676***	-0.627***	-0.516***	-0.419***
s.e.	(0.012)	(0.010)	(0.017)	(0.011)	(0.015)

Heckman Selection equation	ES	IT	NL	PL	UK
Age	-0.046*	0.031	-0.032	0.071***	0.115***
s.e.	(0.021)	(0.017)	(0.040)	(0.020)	(0.025)
Age squared	0.000	-0.001***	-0.000	-0.002***	-0.001***
s.e.	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Married	-0.206***	-0.135***	-0.050	-0.144***	0.080*
s.e.	(0.034)	(0.027)	(0.052)	(0.035)	(0.040)
Bad health	-0.142***	-0.025	-0.246***	-0.233***	-0.270***
s.e.	(0.019)	(0.016)	(0.034)	(0.017)	(0.023)
No. of children (<18)	-0.146***	-0.101***	-0.213***	-0.142***	-0.272***
s.e.	(0.018)	(0.015)	(0.023)	(0.014)	(0.019)
No. of children (<3)	-0.147***	-0.053	0.077	-0.461***	-0.245***
s.e.	(0.040)	(0.033)	(0.048)	(0.040)	(0.044)
Years of work	0.115***	0.092***	0.048***	0.105***	
s.e.	(0.006)	(0.006)	(0.012)	(0.006)	
Years of work squared	-0.002***	-0.001***	-0.000	-0.001***	
s.e.	(0.000)	(0.000)	(0.000)	(0.000)	
Secondary education	0.386***	0.557***	0.335***	0.301***	0.504***
s.e.	(0.047)	(0.033)	(0.083)	(0.058)	(0.073)
Tertiary education	0.787***	0.879***	0.856***	1.175***	0.695***
s.e.	(0.047)	(0.049)	(0.092)	(0.072)	(0.077)
Immigrant	-0.025	-0.118**	-0.121	0.086	-0.396***
s.e.	(0.047)	(0.037)	(0.096)	(0.259)	(0.053)
Secondary educ. x 2011	-0.076	-0.145**	-0.029	-0.201*	0.047
s.e.	(0.067)	(0.049)	(0.130)	(0.096)	(0.130)
Tertiary educ. x 2011	-0.088	-0.156*	-0.307*	-0.349**	0.054
s.e.	(0.062)	(0.064)	(0.136)	(0.107)	(0.131)
Year = 2011	0.208***	0.127***	0.615***	0.378***	0.015
s.e.	(0.056)	(0.038)	(0.111)	(0.111)	(0.129)
FB in Q1	-0.019	0.008	-0.077	-0.177***	-0.046
s.e.	(0.043)	(0.035)	(0.073)	(0.039)	(0.059)
FB in Q2	0.050	0.045	-0.109	-0.039	-0.005
s.e.	(0.042)	(0.034)	(0.071)	(0.039)	(0.058)
FB in Q4	0.004	-0.024	-0.037	0.076*	-0.060
s.e.	(0.041)	(0.034)	(0.074)	(0.038)	(0.057)
FB in Q5	-0.004	-0.075*	0.014	0.139***	-0.118*
s.e.	(0.043)	(0.035)	(0.076)	(0.041)	(0.059)
Regional unemp. Rate	-0.017***	-0.021***		0.004	-0.003
s.e.	(0.003)	(0.003)		(0.008)	(0.014)
Log other hh. Income	0.031	-0.027	-0.013	-0.024	0.038
s.e.	(0.017)	(0.014)	(0.029)	(0.013)	(0.021)
Constant	0.938*	-0.323	1461	-0.581	-1.629**
s.e.	(0.425)	(0.354)	(0.804)	(0.404)	(0.516)
inverse tangent of rho	0.247***	0.192***	-1.082***	0.672***	-0.666***
s.e.	(0.066)	(0.042)	(0.056)	(0.067)	(0.062)
ln(sigma)	-0.876***	-0.917***	-0.701***	-0.758***	-0.487***
s.e.	(0.012)	(0.009)	(0.019)	(0.018)	(0.017)

Table A7. Full regressions of the probability of holding a fixed-term contract (males).

	Model A					Model B					
Type of contract = fixed term	ES	IT	NL	PL	UK	*Type of contract = fixed term*	ES	IT	NL	PL	UK
Age	-0.211***	-0.252***	-0.282***	-0.349***	-0.151	**Age**	0.108*	-0.213***	-0.096	-0.159***	-0.158
s.e.	(0.034)	(0.038)	(0.074)	(0.031)	(0.093)	**s.e.**	(0.047)	(0.044)	(0.100)	(0.044)	(0.094)
Age squared	0.002***	0.002***	0.003**	0.004***	0.002	**Age squared**	-0.002**	0.003***	0.001	0.003***	0.002
s.e.	(0.000)	(0.000)	(0.001)	(0.000)	(0.001)	**s.e.**	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Bad health	0.170***	0.038	0.123	0.224***	0.301**	**Years of work**	-0.194***	-0.096***	-0.122***	-0.136***	
s.e.	(0.042)	(0.044)	(0.091)	(0.036)	(0.104)	**s.e.**	(0.016)	(0.015)	(0.030)	(0.016)	
Year = 2011	-0.308*	0.115	0.478*	0.006	-0.446	**Years of work squared**	0.004***	0.001*	0.002**	0.001**	
s.e.	(0.134)	(0.140)	(0.239)	(0.121)	(0.363)	**s.e.**	(0.000)	(0.000)	(0.001)	(0.000)	
Immigrant	1.254***	0.541***	0.499*	0.040	0.961***	**Bad health**	0.133**	0.038	0.127	0.198***	0.316**
s.e.	(0.087)	(0.094)	(0.202)	(0.574)	(0.184)	**s.e.**	(0.043)	(0.045)	(0.097)	(0.037)	(0.105)
FB in Q1	0.768***	0.261*	0.110	0.360***	0.354	**Year = 2011**	-0.309*	0.093	0.325	-0.021	-0.618
s.e.	(0.104)	(0.120)	(0.269)	(0.109)	(0.287)	**s.e.**	(0.151)	(0.173)	(0.273)	(0.153)	(0.387)
FB in Q2	0.205	0.265*	-0.205	0.067	-0.007	**Secondary education**	-0.791***	-0.498***	-0.220	-0.769***	0.320
s.e.	(0.110)	(0.121)	(0.283)	(0.110)	(0.302)	**s.e.**	(0.098)	(0.089)	(0.257)	(0.118)	(0.361)
FB in Q4	-0.220	-0.012	-0.051	-0.009	-0.251	**Tertiary education**	-1.010***	-0.175	-0.311	-1.454***	0.652
s.e.	(0.117)	(0.131)	(0.273)	(0.107)	(0.313)	**s.e.**	(0.104)	(0.134)	(0.274)	(0.152)	(0.366)
FB in Q5	-0.162	0.045	0.229	-0.154	0.087	**Immigrant**	1.295***	0.459***	0.298	-0.082	0.928***
s.e.	(0.116)	(0.130)	(0.261)	(0.109)	(0.288)	**s.e.**	(0.093)	(0.096)	(0.220)	(0.594)	(0.191)
FB in Q1 x 2011	-0.076	0.007	-0.064	0.072	0.171	**Secondary educ. x 2011**	-0.127	-0.007	0.662	-0.126	1047
s.e.	(0.173)	(0.182)	(0.347)	(0.166)	(0.484)	**s.e.**	(0.148)	(0.195)	(0.361)	(0.227)	(0.654)
FB in Q2 x 2011	0.091	-0.234	-0.073	0.274	-0.254	**Tertiary educ. x 2011**	0.071	0.091	0.392	0.165	0.343
s.e.	(0.180)	(0.189)	(0.369)	(0.165)	(0.569)	**s.e.**	(0.163)	(0.183)	(0.276)	(0.148)	(0.391)
FB in Q4 x 2011	0.120	0.026	-0.083	0.242	-0.060	**FB in Q1**	0.604***	0.191	0.124	0.160	0.435
s.e.	(0.184)	(0.197)	(0.348)	(0.164)	(0.540)	**s.e.**	(0.109)	(0.123)	(0.284)	(0.114)	(0.291)
FB in Q5 x 2011	0.308	-0.098	-0.083	0.045	-0.206	**FB in Q2**	0.044	0.236	-0.193	-0.038	0.036
s.e.	(0.187)	(0.200)	(0.353)	(0.164)	(0.595)	**s.e.**	(0.114)	(0.122)	(0.296)	(0.114)	(0.303)
Region 2	-0.036	0.807***		-0.330***		**FB in Q4**	-0.201	0.004	0.024	0.035	-0.284
s.e.	(0.178)	(0.090)		(0.082)		**s.e.**	(0.121)	(0.132)	(0.282)	(0.109)	(0.314)
Region 3	-0.173	0.851***		-0.046		**FB in Q5**	-0.047	-0.041	0.269	-0.081	-0.021
s.e.	(0.206)	(0.113)		(0.080)		**s.e.**	(0.124)	(0.136)	(0.276)	(0.115)	(0.292)
Region 4	-0.184	0.189*		0.007		**FB in Q1 x 2011**	-0.006	0.092	-0.237	0.060	0.020
s.e.	(0.168)	(0.091)		(0.084)		**s.e.**	(0.196)	(0.203)	(0.383)	(0.180)	(0.531)
Region 5	-0.659**	0.217*		0.061		**FB in Q2 x 2011**	0.285	-0.203	-0.250	0.247	-0.347
s.e.	(0.202)	(0.092)		(0.094)		**s.e.**	(0.197)	(0.203)	(0.401)	(0.176)	(0.599)
Region 6	-0.347			0.158		**FB in Q4 x 2011**	0.175	0.060	-0.095	0.161	-0.067
s.e.	(0.194)			(0.082)		**s.e.**	(0.196)	(0.207)	(0.372)	(0.172)	(0.559)
Region 7	-0.186					**FB in Q5 x 2011**	0.394*	-0.076	-0.227	0.011	-0.412
s.e.	(0.173)					**s.e.**	(0.198)	(0.207)	(0.373)	(0.170)	(0.635)
Region 8	-0.353*					**Region 2**	-0.040	0.650***		-0.317***	
s.e.	(0.150)					**s.e.**	(0.185)	(0.092)		(0.084)	
Region 9	0.015					**Region 3**	-0.190	0.695***		-0.080	
s.e.	(0.153)					**s.e.**	(0.213)	(0.115)		(0.082)	
Region 10	0.270					**Region 4**	-0.101	0.223*		0.009	
s.e.	(0.155)					**s.e.**	(0.173)	(0.092)		(0.086)	
Region 11	0.666***					**Region 5**	-0.519*	0.187*		0.046	
s.e.	(0.163)					**s.e.**	(0.205)	(0.092)		(0.097)	
Region 12	-0.432**					**Region 6**	-0.330			0.158	
s.e.	(0.141)					**s.e.**	(0.199)			(0.084)	
Region 13	-0.145					**Region 7**	-0.160				
s.e.	(0.143)					**s.e.**	(0.179)				
Region 14	-0.025					**Region 8**	-0.300				
s.e.	(0.179)					**s.e.**	(0.154)				

Table A7. Full regressions of the probability of holding a fixed-term contract (males), continued.

	Model A						Model B				
Type of contract = fixed term	ES	IT	NL	PL	UK	*Type of contract = fixed term*	ES	IT	NL	PL	UK
Region 15	0.678***					**Region 9**	0.011				
s.e.	(0.128)					**s.e.**	(0.160)				
Region 16	0.246					**Region 10**	0.295				
s.e.	(0.158)					**s.e.**	(0.159)				
Region 17	0.380					**Region 11**	0.698***				
s.e.	(0.208)					**s.e.**	(0.169)				
Region 18	0.356					**Region 12**	-0.364*				
s.e.	(0.395)					**s.e.**	(0.146)				
Region 19	0.260					**Region 13**	-0.101				
s.e.	(0.155)					**s.e.**	(0.148)				
Constant	3.482***	3.240***	4.040**	5.725***	-0.436	**Region 14**	-0.025				
s.e.	(0.647)	(0.723)	(1.413)	(0.582)	(1.762)	**s.e.**	(0.183)				
						Region 15	0.610***				
						s.e.	(0.133)				
						Region 16	0.227				
						s.e.	(0.165)				
						Region 17	0.128				
						s.e.	(0.224)				
						Region 18	-0.591				
						s.e.	(1.143)				
						Region 19	0.253				
						s.e.	(0.160)				
						Constant	-0.890	2.975***	1085	3.209***	-0.785
						s.e.	(0.825)	(0.804)	(1.812)	(0.774)	(1.802)

Notes: (1) Coefficients for Spanish Regions over that of Region 6 are shown only if they are significant in either Model A or B. (2) The reference individual in Model A is observed in 2005, lives in Region 1 (a different region depending on the country), has a good health, is not an immigrant, his Family Background is in the middle quintile of the FB variable (Q3) in his country. In Model B, the reference individual also has a low level of education (primary school or no education).

Table A8. Full regressions of the probability of holding a fixed-term contract (females).

	Model A					Model B				
Type of contract = fixed term	ES	IT	NL	PL	UK	ES	IT	NL	PL	UK
Age	-0.159***	-0.089*	-0.150*	-0.270***	-0.155	0.081*	-0.036	0.112	-0.127**	-0.149
s.e.	(0.034)	(0.036)	(0.065)	(0.033)	(0.080)	(0.041)	(0.040)	(0.081)	(0.043)	(0.081)
Age squared	0.001**	0.000	0.001	0.003***	0.002	-0.001	0.000	-0.001	0.002***	0.002
s.e.	(0.000)	(0.000)	(0.001)	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Bad health	0.034	0.010	0.138	0.299***	0.092	**Years of work**	-0.193***	-0.094***	-0.141***	-0.167***	
s.e.	(0.041)	(0.040)	(0.080)	(0.039)	(0.092)	**s.e.**	(0.014)	(0.014)	(0.027)	(0.015)	
Year = 2011	-0.190	-0.048	0.754**	0.470***	0.154	**Years of work squared**	0.003***	0.001**	0.003***	0.001***	
s.e.	(0.114)	(0.120)	(0.232)	(0.117)	(0.237)	**s.e.**	(0.000)	(0.000)	(0.001)	(0.000)	
Immigrant	0.757***	0.432***	0.585**	0.562	0.847***	**Bad health**	-0.001	0.018	0.163	0.243***	0.125
s.e.	(0.089)	(0.090)	(0.188)	(0.541)	(0.167)	**s.e.**	(0.043)	(0.042)	(0.083)	(0.041)	(0.092)
FB in Q1	0.317**	0.319**	-0.272	0.043	-0.109	**Year = 2011**	-0.073	-0.134	0.728**	0.531***	0.046
s.e.	(0.116)	(0.117)	(0.283)	(0.122)	(0.268)	**s.e.**	(0.125)	(0.137)	(0.258)	(0.141)	(0.249)
FB in Q2	0.173	0.158	-0.131	-0.246*	-0.629*	**Secondary education**	-0.494***	-0.589***	-0.332	-0.611***	-0.204
s.e.	(0.113)	(0.112)	(0.272)	(0.119)	(0.305)	**s.e.**	(0.103)	(0.088)	(0.265)	(0.147)	(0.349)
FB in Q4	-0.175	-0.102	-0.153	-0.480***	-0.196	**Tertiary education**	-0.782***	-0.168	-0.421	-1.671***	0.275
s.e.	(0.114)	(0.114)	(0.269)	(0.113)	(0.262)	**s.e.**	(0.100)	(0.114)	(0.278)	(0.172)	(0.344)
FB in Q5	-0.341**	-0.048	-0.263	-0.590***	0.249	**Immigrant**	0.736***	0.383***	0.442*	0.281	0.767***
s.e.	(0.111)	(0.111)	(0.265)	(0.114)	(0.239)	**s.e.**	(0.095)	(0.091)	(0.201)	(0.611)	(0.173)
FB in Q1 x 2011	-0.251	0.091	-0.273	-0.154	-0.895	**Secondary educ. x 2011**	-0.118	0.238	-0.033	-0.128	0.142
s.e.	(0.167)	(0.171)	(0.349)	(0.175)	(0.458)	**s.e.**	(0.141)	(0.165)	(0.359)	(0.264)	(0.717)
FB in Q2 x 2011	-0.109	-0.080	-0.464	0.188	0.052	**Tertiary educ. x 2011**	-0.067	0.251	0.225	0.024	0.243
s.e.	(0.164)	(0.168)	(0.342)	(0.170)	(0.438)	**s.e.**	(0.145)	(0.144)	(0.256)	(0.138)	(0.319)
FB in Q4 x 2011	-0.178	0.049	-0.521	-0.456**	-0.567	**FB in Q1**	0.262*	0.207	-0.300	-0.176	-0.104
s.e.	(0.165)	(0.172)	(0.333)	(0.165)	(0.397)	**s.e.**	(0.125)	(0.120)	(0.296)	(0.130)	(0.270)
FB in Q5 x 2011	-0.152	0.106	-0.134	-0.033	-0.744	**FB in Q2**	0.067	0.130	-0.110	-0.328**	-0.647*
s.e.	(0.167)	(0.172)	(0.331)	(0.163)	(0.432)	**s.e.**	(0.119)	(0.113)	(0.283)	(0.126)	(0.306)
Region 2	-0.058	0.863***		-0.099		**FB in Q4**	-0.208	-0.107	-0.141	-0.435***	-0.242
s.e.	(0.176)	(0.084)		(0.084)		**s.e.**	(0.121)	(0.116)	(0.281)	(0.119)	(0.263)
Region 3	-0.110	0.848***		-0.231**		**FB in Q5**	-0.272*	-0.136	-0.229	-0.376**	0.132
s.e.	(0.190)	(0.115)		(0.088)		**s.e.**	(0.120)	(0.117)	(0.283)	(0.123)	(0.244)
Region 4	-0.255	0.144		0.081		**FB in Q1 x 2011**	-0.259	0.000	-0.262	-0.200	-0.959
s.e.	(0.157)	(0.079)		(0.089)		**s.e.**	(0.189)	(0.189)	(0.376)	(0.194)	(0.499)
Region 5	-0.308	0.333***		0.253**		**FB in Q2 x 2011**	-0.032	-0.152	-0.497	0.110	0.013
s.e.	(0.169)	(0.079)		(0.097)		**s.e.**	(0.179)	(0.180)	(0.368)	(0.186)	(0.460)
Region 6	-0.088			0.027		**FB in Q4 x 2011**	-0.202	-0.053	-0.590	-0.514**	-0.574
s.e.	(0.176)			(0.090)		**s.e.**	(0.178)	(0.181)	(0.358)	(0.177)	(0.410)
Region 7	0.051					**FB in Q5 x 2011**	-0.076	0.066	-0.132	-0.025	-0.703
s.e.	(0.158)					**s.e.**	(0.178)	(0.178)	(0.350)	(0.173)	(0.439)
Region 8	-0.254					**Region 2**	-0.150	0.758***		-0.202*	
s.e.	(0.136)					**s.e.**	(0.185)	(0.086)		(0.088)	
Region 9	-0.097					**Region 3**	-0.046	0.735***		-0.280**	
s.e.	(0.151)					**s.e.**	(0.202)	(0.117)		(0.093)	
Region 10	0.017					**Region 4**	-0.099	0.186*		-0.024	
s.e.	(0.160)					**s.e.**	(0.166)	(0.080)		(0.094)	
Region 11	0.895***					**Region 5**	-0.095	0.310***		0.166	
s.e.	(0.166)					**s.e.**	(0.177)	(0.080)		(0.102)	
Region 12	-0.379**					**Region 6**	0.033			-0.102	
s.e.	(0.131)					**s.e.**	(0.184)			(0.095)	
Region 13	-0.016					**Region 7**	0.189				
s.e.	(0.137)					**s.e.**	(0.166)				
Region 14	-0.287					**Region 8**	-0.054				
s.e.	(0.166)					**s.e.**	(0.143)				

Table A8. Full regressions of the probability of holding a fixed-term contract (females), continued.

	Model A						Model B				
Type of contract = fixed term	ES	IT	NL	PL	UK	*Type of contract = fixed term*	ES	IT	NL	PL	UK
Region 15	0.479***					**Region 9**	-0.128				
s.e.	(0.129)					**s.e.**	(0.159)				
Region 16	0.180					**Region 10**	0.059				
s.e.	(0.162)					**s.e.**	(0.169)				
Region 17	0.181					**Region 11**	0.832***				
s.e.	(0.239)					**s.e.**	(0.177)				
Region 18	0.423					**Region 12**	-0.107				
s.e.	(0.393)					**s.e.**	(0.139)				
Region 19	0.091					**Region 13**	0.109				
s.e.	(0.153)					**s.e.**	(0.143)				
Constant	3.057***	0.697	1.189	4.545***	0.291	**Region 14**	-0.136				
s.e.	(0.650)	(0.686)	(1.278)	(0.618)	(1.534)	**s.e.**	(0.175)				
						Region 15	0.471***				
						s.e.	(0.137)				
						Region 16	0.231				
						s.e.	(0.173)				
						Region 17	-0.040				
						s.e.	(0.263)				
						Region 18	0.974				
						s.e.	(0.819)				
						Region 19	0.118				
						s.e.	(0.161)				
						Constant	-0.287	0.343	-3.013*	3.131***	0.061
						s.e.	(0.760)	(0.748)	(1.531)	(0.780)	(1.575)

Notes: (1) Coefficients for the 19 Spanish Regions over that of Region 6 are shown only if they are significant in either Model A or B. (2) The reference individual in Model A is observed in 2005, lives in Region 1 (a different region depending on the country), has a good health, is not an immigrant, his Family Background is in the middle quintile of the FB variable (Q3) in his country. In Model B, the reference individual also has a low level of education (primary school or no education).