



Working Paper Series

**Family background and youth labour
market outcomes across Europe**

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ECINEQ WP 2016 - 393

Family background and youth labour market outcomes across Europe*

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Abstract

The paper investigates the intergenerational transmission of worklessness in a cross-country comparative analysis. Using the 2011 EU-SILC ad-hoc module on intergenerational transmission of disadvantages, we study the extent to which family background affects youth labour market outcomes. We focus on young people aged 25-34. The empirical findings provide evidence of an intergenerational persistence of worklessness and the positive role of parents' employment in explaining youth labour market outcomes. Also gender differences with respect to the influence of the family of origin are relevant. Mothers' working condition during adolescence affects systematically, and to a large extent, their daughters' probability of being employed, while fathers' employment generally increases their sons' probability of being in employment. Empirical evidence suggests that policies should pay attention to both youth and parental worklessness.

Keywords: family background, worklessness, intergenerational mobility, NEET, inequalities.

JEL Classification: J16, J62, J64.

*This paper is based on research carried out within the STYLE project (EU-7FP, <http://www.styleresearch.eu/>). The research leading to these results has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no. 613256.

1. Introduction

The analysis of intergenerational inequality and social mobility has attracted increasing attention in the past few decades. Several contributions have analysed the influence of family background on educational and occupational attainments to highlight intergenerational income inequality (Corak 2006; d'Addio 2007; Bjorklund and Jäntti 2009; Blanden 2013; Raitano and Vona 2014). However, few contributions have focused on the intergenerational transmission of worklessness. The aim of this paper is to investigate the extent to which youth labour market outcomes are affected by parental worklessness during adolescence. Indeed, experiencing parental worklessness may impact on young adults' aspirations and attitudes towards the labour market (different evaluations of work and sense of stigma, different attitudes towards relying on welfare benefits, etc.), as well as the type of social network on which they can rely when searching for a job.

In the literature there is a robust consensus on the existence of a positive correlation between the worklessness of children and their parents (Corak et al. 2004; Bratberg et al. 2008; Oreopoulos et al. 2008; Ekhaugen 2009; Macmillan 2010, 2013; Gregg et al. 2012; Mader et al. 2014; Zwysen 2015), the intergenerational correlation in jobs and occupations between fathers and sons (Black and Devereux 2011; Solon 1992), and the intergenerational link between women's labour market participation and that of their mothers (Fernandez, Fogli and Olivetti 2004; Fortin 2005; Kawaguchi and Miyazaki 2009; Farré and Vella 2007). Some of these studies have tested whether there exists a causal effect, while others have sought to disentangle the different transmission mechanisms, e.g., transmission of preferences and attitudes towards gender roles, financial constraints on human capital investments, wellbeing and mental health, attitudes towards unemployment, etc. Almost all of these studies focus on a single country and on the influence of the occupational condition of either the father or the mother on their children's labour market outcomes.

This paper analyses the intergenerational transmission of worklessness in a cross-country comparative perspective. The aim is to investigate whether there exists a correlation between young people's labour market outcomes and the working status of their parents when the individual was around 14 for different groups of countries characterised by distinct labour market institutions and welfare regimes. Our study is based on EU-SILC data which encompass extensive comparable cross-sectional and longitudinal microdata both at the household and individual level for all EU-27 countries (plus Norway and Switzerland). We exploit the 2011 wave because it provides substantial information on parental educational and occupational backgrounds through the ad-hoc module on intergenerational transmission of disadvantages.

The contribution of this paper is threefold. First, to the best of our knowledge, this is the first

comparative study at the European level on the effect of parental background on the risk of worklessness among young people. A cross-country comparison is important not only to assess the degree of this specific type of inequality, but also to understand its link with different labour market institutions and welfare regimes.

Second, we consider the occupational condition of both parents. When controlling for the employment status of a single parent, it may happen that the estimated effect captures also the effect of the employment status of the spouse due to assortative mating in marriage. Controlling for the occupational condition of both parents avoids this problem. Further, controlling for the labour market experience of both parents enriches the analysis of how the intergenerational transmission of worklessness may operate. In addition, it makes it possible to study the extent to which the youth probability of being workless varies according to the family occupational structure. For instance, we may test whether children who have grown up in a work-poor family have a substantially higher probability of being workless compared with young people who have grown up in a work-rich family. Similarly, we can compare the youth probability of being workless for children who have grown up with two parents or only one.

Third, we consider also the effect of the mother-in-law's employment condition. Indeed, there may exist a positive correlation between the labour participation in employment of women and that of their mother-in-law via their sons/husbands' attitudes toward domestic work and female labour market participation (Fernandez, Fogli and Olivetti 2004; Farré and Vella 2007; Kawaguchi and Miyazaky 2009).

The rest of the paper is structured as follows. Section 2 reviews the relevant literature. Section 3 presents the data and estimation methodology. Section 4 discusses the main empirical findings, and Section 5 concludes.

2. Literature review

In the literature, many aspects of the intergenerational correlation of outcomes have been studied. They include IQ (Anger and Heineck 2009; Black, Devereux and Salvanes 2009; Bjorklund, Eriksson and Jantti 2010), participation in welfare programmes (Gottschalk 1992; Pacheco and Maloney 2003; Beaulieu et al. 2005), consumption behaviour and wealth (Charles and Hurst 2003; Waldkirch et al. 2004), education (Antonovics and Goldberger 2005; Bauer and Riphahn 2006; Carneiro et al. 2013), health (Akbulut and Kugler 2007; Coneus and Spieß 2008), personality traits, preferences, beliefs, attitudes and social behaviour (Altonji and Dunn 2000; Mayer et al. 2005; Wilhelm et al. 2008; Almond, Edlund, and Milligan 2009). Several studies focused on labour

market outcomes consider the intergenerational transmission of jobs and occupations (Carmichael 2000; Ermish and Francesconi 2002; Di Pietro and Urwin 2003; Corak and Piraino 2010); other studies consider the intergenerational correlation in incomes and earnings (Peters 1992; Corak 2006; Ermisch et al. 2006). However, only few studies have dealt with the intergenerational correlation in worklessness (Johnson and Reed 1996; O'Neill and Sweetman 1998; Corak et al. 2004; Bratberg et al. 2008; Oreopoulos et al. 2008; Ekhaugen 2009; Macmillan 2010; Gregg et al. 2012; Mader et al. 2014; Zwysen 2015).¹ The overall objective of these studies is to quantify the extent to which parent and child outcomes are correlated. Indeed, knowledge of the determinants and the dynamic of the intergenerational correlation in outcomes is important to understand social mobility and to design policies aimed at reducing societal inequalities.

When analysing the intergenerational transmission of worklessness, one has to consider that the link between parent and child unemployment may be explained by the correlation between their observable and unobservable characteristics. Observable characteristics include educational attainments, occupational choice and social networks. Unobservable characteristics - ability, motivation and other non-cognitive traits - may also be correlated across generations, impacting on individual labour market outcomes. The intergenerational transmission of worklessness may be the effect of the persistence of certain individual features at the family level or the effect of a causal link between parent unemployment and child unemployment. Indeed, experiencing parental unemployment may affect a child's attitude towards unemployment status by reducing the sense of stigma associated with worklessness. It may also be that parents who experienced unemployment reduced their investments in children's human capital because of their difficult financial conditions due to unemployment. Empirical evidence for Norway (Ekhaugen 2009), Sweden (Corak et al. 2004), the United Kingdom (Johnson and Reed 1996, O'Neill and Sweetman 1998, Macmillan 2010) and Germany (Mader et al. 2014) find a positive intergenerational correlation in unemployment but not a clear causal effect. Differently, Corak et al. (2004) and Oreopoulos et al. (2008) find evidence of a causal intergenerational effect in Canada.

It is a sociological fact that sons and daughters who have grown up in the same family often have different socioeconomic outcomes in their adulthood. Mobility in occupations between fathers and sons has been widely studied (Solon 1992; Black and Devereux 2011). There also exists evidence in the literature on the intergenerational link between mothers' and daughters' labour market participation. Daughters of working women are more likely to be in paid employment than daughters who have grown up with non-working mothers. Fortin (2005) argues that the remarkable

¹ See Black and Devereux (2011) for a survey.

change in female labour supply over time can be explained by changes in attitudes towards gender roles. However, to be stressed is the difficulty of disentangling the extent to which the link between mothers' and daughters' labour market participation is explained by the mother-to-daughter transmission of preferences and beliefs or by technological changes and increasing investments in human capital over time. Besides parental gender role attitudes, also husbands' attitudes can influence female participation in paid employment. There is evidence in the literature of a link between the labour market participation of women and that of their mother-in-law via their sons/husbands (Fernandez, Fogli and Olivetti 2004; Farré and Vella 2007; Kawaguchi and Miyazaki 2009). In other words, women married to men whose mother worked are also more likely to be employed. Fernandez et al. (2004) identify two possible channels: growing up with a working mother may either shape men's preferences for a working wife or provide men with a set of household skills and attitudes towards housework that make them better partners for working women.

Almost all of these studies on the intergenerational correlation of outcomes focus on a single country and on the influence of the occupational condition of either the father or the mother on their children's labour market outcomes. Our study takes a broader approach: it explores the intergenerational correlation in labour market outcomes from a cross-country perspective where the roles of both the mother and the father are considered for both sons and daughters. We expect to find that parents' employment conditions matter in explaining their children's labour market outcomes. Our core hypothesis is that the extent of the intergenerational correlation in worklessness is larger in countries characterized by a low degree of social mobility, social norms based on traditional gender roles and a familistic welfare system (where women are expected to provide care to frail family members), less efficient and/or developed public employment services, education and training institutions, and youth support services. In particular, we expect the extent of the intergenerational correlation in worklessness to be lower in Nordic countries and larger in Mediterranean countries. In line with previous studies, we expect that having had a working mother reduces female inactivity, and that the effect is larger in countries where female participation is low and the availability of affordable care services is scant, as in the Mediterranean countries. Indeed, in these countries the attitudes towards gender roles are shaped around the male breadwinner model, according to which the woman is mainly responsible for child and elderly care. In this social context, having had a working mother represents a stimulus for her daughter to be in paid employment. In addition, given the expectations about future difficulties in managing the trade-off between family and work responsibilities due to the low availability of care services, the fact of having grown up with a working mother, who herself experienced the same difficulties, may be an

inducement to enter the labour market. As for males, we expect that parents' work experience increases their sons' probability of being employed or reduces their probability of being NEET. Our hypothesis is that the family network plays a minor role in Nordic countries, where public employment services, education and training institutions, and youth support services are well developed and efficient.

3. Data and estimation methodology

This study is based on EU-SILC data which encompass extensive comparable cross-sectional and longitudinal microdata both at the household and individual level for all EU-27 countries. We exploit the 2011 wave because it provides substantial information on parental educational and occupational backgrounds through the ad-hoc module on intergenerational transmission of disadvantages. We select a sample of young people aged 25-34.² For all young individuals we model their employment status (employed, NEET³, in education) as a function of individual characteristics at the time of the interview and family educational and occupational background characteristics, that refer to the period when the individual was around 14 years old. Information about the individual employment condition is derived from the self-reported status and from variables capturing individuals' search behaviour. The descriptive and econometric analyses are carried out separately for five groups of countries representative of the great heterogeneity of European labour market institutions and welfare regimes: Nordic (DK, FI, NO and SE), Continental (AT, BE, FR, DE, CH and NL), English-speaking (IE and UK), Mediterranean (CY, EL, IT, MT, ES and PT) and Eastern European (BG, CZ, EE, HU, HR, PL, RO and SK) countries. The five groups of countries are representative of the great heterogeneity of labour market institutions and welfare regimes.

We model the individual choice with respect to employment status as a multinomial logit model. The definition of employment status is based on the individual's self-declared current economic status and on variables capturing his/her search behaviour at the time of the interview.⁴ We thus distinguish four possible employment statuses: employed (employee or self-employed, either on a full-time or part-time basis), NEET and in education. Given that fathers' and mothers' employment conditions may impact differently on the labour market outcomes of their sons and daughters, we

² Our sample does not include individuals younger than 25 because all variables about family characteristics, that refer to the period when the individual was around 14 years old, are collected only for individuals aged between 25 and 60 at the time of the interview.

³ NEET is the acronym for "not in employed, education or training", i.e. young people who are unemployed or inactive.

⁴ By variables capturing individuals' search behaviour at the time of the interview we mean variables that detect whether the individual was actively looking for a job during the last four weeks preceding the reference week, i.e., the week of the interview, and whether s/he was available for employment (either self-employment or paid employment) before the end of the two weeks following the reference week.

run separate analysis for young males and females. The set of control variables includes:

- i) individual characteristics: age, educational attainment (at most lower secondary, at most upper secondary and tertiary education), citizenship (individuals from non-EU countries) and motherhood status⁵ (young females with at least one child);
- ii) partner's educational attainment (at most lower secondary, at most upper secondary and tertiary education);
- iii) cohabitation with parents at the time of the interview;
- iv) presence of parents when the young individual was 14 (both parents present, only one parent present or no parents present);
- v) parents' characteristics when the young individual was 14: economic status (employed), occupation (in a high status occupation, i.e., manager, professional, technician or associate professional) and educational level (tertiary education);
- vi) mother in-law's economic status (employed) when the husband/wife was around 14;⁶
- vii) country and quarter of the interview dummies.⁷

Table 1 shows some descriptive statistics of our sample of analysis. Mediterranean and Eastern European countries display the highest shares of NEETs. Mediterranean countries are also distinguished by the lowest share of employed young people. In all country groups, females are less likely than males to be employed and more likely to be NEETs. Gender differences in employment outcomes are larger in English-speaking and Continental countries.

The five groups of countries are quite different in terms of youth educational attainments: Nordic and English-speaking countries record the highest shares of highly educated young people, whereas the Mediterranean and Eastern countries show a remarkably high share of young individuals with low educations. Generally, females are more educated than males.

More than half of young women are mothers (at least one child) in all country groups, except for the Mediterranean group where the share of mothers is 40%. The share of fathers is lower than that of mothers in all country groups, ranging from 40% in English-speaking countries to 22% in Mediterranean countries. This latter group of countries, together with the Eastern countries, are

⁵ We do not control for fatherhood status because of the low percentage of fathers in education and NEET.

⁶ The information is not available for Nordic countries because only the respondent reports parental background information.

⁷ We control for the quarter of the interview because how people self-declare their economic status, especially in the summer, differs slightly across country groups. In Mediterranean countries undergraduate students tend to report themselves as in education also during the summer, though some may take seasonal jobs. In Nordic and Continental countries, young people enrolled in education are much more likely to declare themselves employed during the summer.

distinguished by the highest share of young individuals living with their parents. Indeed, in these two country groups more than half of males still cohabit with at least one parent, against roughly 40% of females. In the other groups of countries, young people are more likely to emancipate from the family of origin, especially in Nordic countries.

Table 1. Descriptive statistics by country group and gender (young people aged 25-34 in 2011)

	Nordic Countries		English-speaking countries		Continental countries		Mediterranean countries		Eastern countries		
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	
Employment status											
Employed	0.84	0.73	0.81	0.66	0.85	0.72	0.75	0.63	0.80	0.65	
NEET	0.10	0.18	0.16	0.31	0.09	0.23	0.21	0.32	0.17	0.33	
In education	0.07	0.09	0.07	0.03	0.05	0.04	0.05	0.05	0.02	0.02	
Education											
Low	0.12	0.07	0.09	0.09	0.10	0.10	0.33	0.25	0.14	0.25	
Medium	0.51	0.37	0.39	0.40	0.52	0.47	0.40	0.37	0.62	0.37	
High	0.37	0.56	0.52	0.52	0.38	0.43	0.27	0.38	0.24	0.38	
Parenthood status											
Parent	0.37	0.56	0.40	0.63	0.33	0.51	0.22	0.42	0.35	0.60	
Cohabiting with parents (at the time of the interview)											
Yes	0.05	0.02	0.14	0.08	0.18	0.09	0.56	0.40	0.59	0.42	
Presence of parents (when the young person was around 14)											
Two parents	0.81	0.79	0.82	0.78	0.82	0.81	0.90	0.89	0.85	0.84	
One parent	0.18	0.19	0.16	0.19	0.16	0.17	0.07	0.08	0.13	0.14	
No parents	0.02	0.01	0.02	0.03	0.02	0.02	0.02	0.02	0.01	0.02	
Household occupational structure (when the young person was around 14)											
- two-parent households (%)											
Both parents working	0.80	0.80	0.58	0.56	0.59	0.62	0.43	0.45	0.82	0.81	
Only father working	0.12	0.13	0.35	0.36	0.36	0.33	0.53	0.51	0.14	0.14	
Only mother working	0.04	0.05	0.02	0.02	0.02	0.02	0.01	0.01	0.02	0.02	
Neither parent working	0.03	0.03	0.05	0.05	0.03	0.03	0.02	0.03	0.03	0.03	
-one-parent households (%)											
Lone working mother	0.71	0.70	0.43	0.42	0.64	0.70	0.58	0.55	0.77	0.77	
Lone non-working mother	0.12	0.14	0.23	0.27	0.20	0.20	0.23	0.25	0.08	0.10	

There are noticeable differences across country groups in the presence of parents when the individual was around 14; in particular, lone-parent families are more common in Nordic, English-speaking and Continental countries than in the other country groups. The household occupational structure (at age 14) distinguishes between two-parent and one-parent households. For one-parent families, we consider (due to sample size) only lone-mother households⁸ and we distinguish between those with working mothers and those with non-working ones.

For two-parent households, we distinguish between households with both parents working (work-rich households or dual-earner families), households with only the father working (male breadwinner families), households with only the mother working, and households with neither

⁸ The share of lone-father families is low and generally the lone-father is in employment.

parent working (work-poor households).⁹ The dual-earner model predominates in Nordic and Eastern countries, while the male breadwinner model predominates in Mediterranean countries. These patterns are in line with the findings of Anxo et al. (2007). In their analysis of the patterns of labour market integration over the life course of men and women in some European countries, Anxo et al. (2007) identify distinct national models, which are associated with different regimes in regard to ‘time policy’. The Nordic *universal breadwinner* model is characterized by a high employment rate and employment continuity for both sexes over the life course; the norm is two-parent households with both parents working throughout their working lives. The Mediterranean *exit or full-time* model shows the highest share of two-parent households with only the father working. Mothers are less likely to participate in paid employment, although highly educated women may manage to keep a full-time job and to have a continuous career path. Different models of *maternal part-time work* are found in English-speaking and Continental countries, where motherhood is associated with a reduction in participation (though less than that found in Mediterranean countries) partly because of the high availability of part-time jobs and the norm for mothers to work part-time, even when children are older. In these two groups of countries the shares of two-parent households with both parents working or with only the father working are almost comparable. In Eastern European countries the *dual-earner family model* is widespread, as an inheritance of the communism when the state largely supported childcare and families (Van Dongen 2009).

Table 2 shows the shares of young people employed, NEET, and in education, by household employment structure and group of countries. In two-parent households, the share of NEETs increase, for both males and females, as one moves from work-rich to work-poor households, with particularly large differences in English-speaking countries, while there are no systematic differences in the shares of students across households by employment structure. Similar considerations apply to lone-mother families. When comparing one- and two-parent workless families, the youth employment condition appears more problematic in the two-parent workless

⁹ Two main methods to classify households according to the employment status of household members are adopted in the literature: the first is to distinguish between workless and non-workless households (as in our approach); the second is to classify households according to a work-intensity indicator. The work-intensity indicator is defined as the ratio between the total number of months in employment for all working-age members during the income reference year, and the total number of months that the same members could theoretically have worked in the same period (Cantillon and Vandembroucke, 2014). As a result, the indicator allows compensations between months worked by different members. We cannot use the work intensity indicator in our analysis because we know only whether or not the parent was working when the young individual was 14. In other words, retrospective information on hours and months worked is not available. However, also from a theoretical perspective we believe that the first way of classifying households according to the occupational status of family members is more appropriate. Indeed, the type of compensation allowed by the work-intensity indicator is not appropriate from our perspective because the labour market experience of each parent is relevant in terms of influencing children’s attitudes towards unemployment and the availability of family networks to be used in their job searches. For this reason we use a classification based on the employment condition (irrespectively of hours/months of work) and gender of parents.

households (with the sole exception of Nordic countries).

Table 2. Youth employment status by household employment structure (at age 14), country group and gender (shares in 2011)

	Nordic countries		English-speaking Countries		Continental countries		Mediterranean countries		Eastern countries	
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
Two-parent household with both parents working										
Employed	0.85	0.77	0.88	0.72	0.88	0.77	0.76	0.68	0.83	0.68
NEET	0.08	0.14	0.09	0.25	0.09	0.18	0.19	0.26	0.14	0.29
In education	0.07	0.09	0.03	0.03	0.03	0.04	0.06	0.06	0.02	0.02
Two-parent household with only father working										
Employed	0.87	0.63	0.76	0.64	0.85	0.67	0.76	0.61	0.75	0.55
NEET	0.09	0.27	0.21	0.34	0.10	0.29	0.21	0.36	0.23	0.44
In education	0.04	0.10	0.03	0.02	0.05	0.04	0.03	0.03	0.02	0.01
Two-parent household with only mother working										
Employed	0.75	0.66	0.87	0.55	0.84	0.67	0.59	0.55	0.74	0.61
NEET	0.18	0.20	0.13	0.45	0.11	0.27	0.33	0.35	0.24	0.38
In education	0.07	0.14	0.00	0.00	0.05	0.06	0.09	0.09	0.02	0.01
Two-parent household with neither parent working										
Employed	0.77	0.61	0.57	0.42	0.68	0.59	0.58	0.52	0.66	0.45
NEET	0.18	0.31	0.40	0.50	0.23	0.37	0.38	0.43	0.32	0.51
In education	0.05	0.08	0.03	0.08	0.09	0.04	0.04	0.04	0.02	0.04
One-parent household with working mother										
Employed	0.83	0.70	0.84	0.75	0.82	0.72	0.75	0.64	0.76	0.63
NEET	0.11	0.20	0.14	0.25	0.12	0.23	0.19	0.32	0.22	0.34
In education	0.06	0.10	0.02	0.10	0.06	0.05	0.05	0.04	0.03	0.03
One-parent household with no working mother										
Employed	0.72	0.57	0.66	0.54	0.80	0.64	0.70	0.57	0.65	0.56
NEET	0.16	0.36	0.31	0.43	0.17	0.33	0.28	0.40	0.33	0.44
In education	0.13	0.07	0.03	0.03	0.03	0.03	0.02	0.03	0.02	0.00

4. Results

This section presents the estimated marginal effects of the multinomial logit models and predicted outcome probabilities.

4.1 Marginal effects

The estimated marginal effects of the multinomial logit models for the five country groups are shown in tables A1-A5 (see Appendix). In all country groups, the female probability of being employed increases with age, while the probability of being NEET diminishes with age. In contrast, age has only small effects on male employment outcomes.

Educational attainments have very large and significant effects in all country groups for both men and women. The results are consistent across country groups and gender: the higher the education level, the higher is the employment probability and the lower is the probability of being NEET. The magnitude of the marginal effects of education on the employment and NEET probabilities is larger for females than for males, suggesting that education plays a more crucial role for women in

avoiding poor labour market outcomes and accessing employment. For women, we find an additional positive effect on the probability of being still in education in Mediterranean and Eastern countries, probably linked to the longer duration of tertiary education in these countries. This effect is observed also for men in all country groups, except for English-speaking countries.

In Mediterranean and Eastern countries, young women living in a couple have a significantly lower probability of being employed compared with women not cohabiting with a partner, as well as a higher probability of being NEET and a reduced probability of being in education. These last two effects are also significant in Continental countries. The effect associated with living in a couple is reinforced in the case of motherhood. Indeed, being a mother further reduces the probability of being employed and increases that of being NEET in all country groups, with very large effects in English-speaking countries. In Continental, Mediterranean and Eastern countries, motherhood also reduces the probability of being in education. For young men, living in a couple has no effects on their employment outcomes or it increases the employment probability, while it decreases the other two probabilities (NEET, in education). English-speaking countries are the only exception: here young males have a higher probability of being NEET when they are living with a partner.

The family of origin seems to play a protective role in all country groups and for both young males and females. Indeed, young individuals who still live with their family of origin are less likely to be employed and more likely to be NEETs, although the magnitude of the effect is smaller for men than for women. Generally, young people still living with their parents are also more likely to be in education.

Some interesting patterns emerge across Europe when we focus on the effect of the working conditions of parents during adolescence, with noticeable differences between young women and young men.

For women, having had a working mother increases the probability of being employed and reduces that of being NEET in all country groups, except Nordic countries. In English-speaking, Mediterranean and Eastern countries, the father's employment condition reinforces the effect of the mother's working condition by further increasing the employment probability and reducing the probability of being NEET. Interestingly, we find evidence of a significant "mother in-law effect" in Continental, Mediterranean and Eastern countries. Being married to a partner whose mother was working during his adolescence is associated with a higher probability of being employed and a decreased probability of being NEET, with larger effects in Mediterranean countries. As expected, the effect associated with the working condition of the mother in-law is generally not significant for men, with the exception of Eastern countries, where having a mother in-law who was working

during adolescence increases male employment probability and decreases the probability of being NEET.

For men, empirical findings suggest that fathers' working condition during adolescence matters for their sons' employment outcomes in Nordic, Mediterranean and Eastern countries. In these country groups, having had a working father increases the probability of being employed and decreases that of being NEET. In the Mediterranean and Eastern group of countries we find an additional effect for sons associated with the working condition of the mother: having had a working mother raises the employment probability and reduces the risk of being NEET. Interestingly, having had a working mother positively affects male labour market outcomes also in English-speaking and Continental countries, where the working status of the father has no significant effects.

The cultural and social capital of parents, captured by their educational level and type of occupation, does not appear to have systematic effects on the employment status of individuals. When results are significant, they generally increase the probability that the young person is still in education.

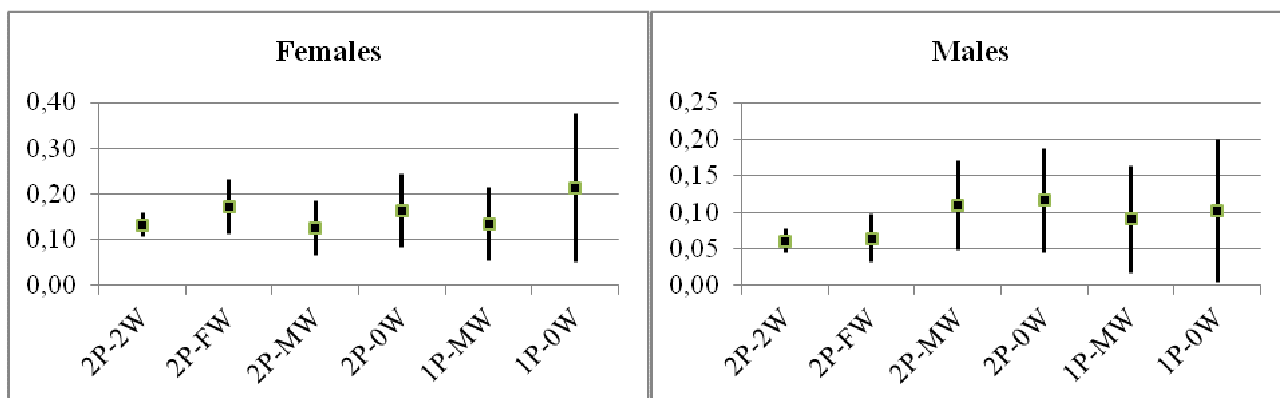
4.2 Predicted outcome probabilities

Considering only marginal effects does not allow us fully to capture the differences between young people with respect to their parents' work experience when they were 14. In order to proceed in the analysis, we need to compare, *ceteris paribus*, the overall effect of having lived in a specific household type, let us say in a two-parent work-rich household, or in a two-parent work-poor household or with a non-working lone mother. To do this, we predict the probability of being NEET for "fictitious" individuals who have all the individual characteristics equal to the sample mean of their country group, except for the presence and work experience of parents. For these variables, we set the relevant dummies equal to either one or zero according to the type of family that we want to consider.¹⁰ The objective is to provide further information about the impact of the household employment structure during adolescence on youth labour market outcomes in 2011. We use the estimated coefficients of the multinomial logit models, independently of their significance level, to compute these probabilities. Table A6 (in the Appendix) reports the predicted probabilities of employment, NEET and in education by household occupational structure and figure 1 reports NEET probability and the associated Confidence Interval (CI).

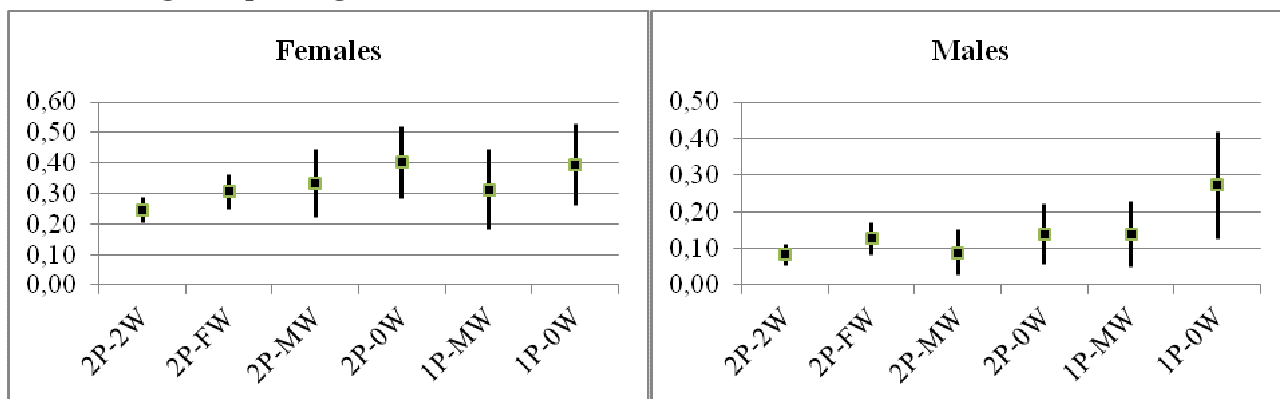
¹⁰ For instance, we compute the unemployment probability for a young individual living in a two-parent work-rich household by setting the dummies "Working father" and "Working mother" equal to one, while the dummies "Working lone mother", "Only one parent present" and "No parents present" are set equal to zero.

Figure 1. Probability of being NEET and CI by household occupational structure (at age 14), gender and country group

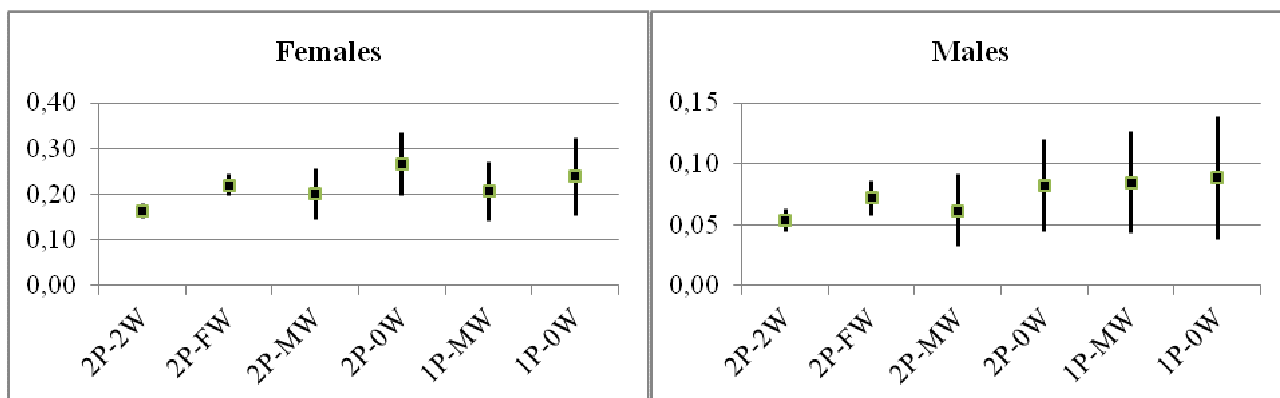
Panel A. Nordic countries



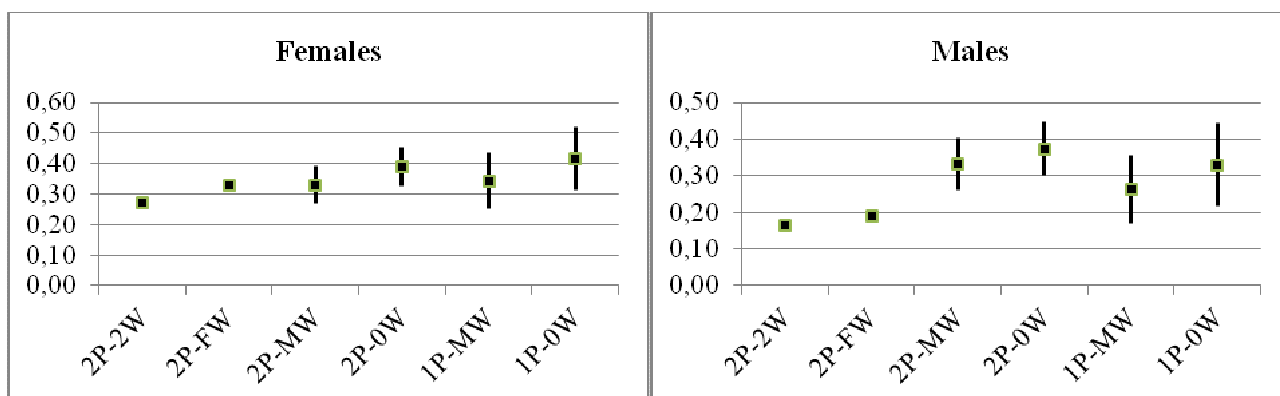
Panel B. English-speaking countries



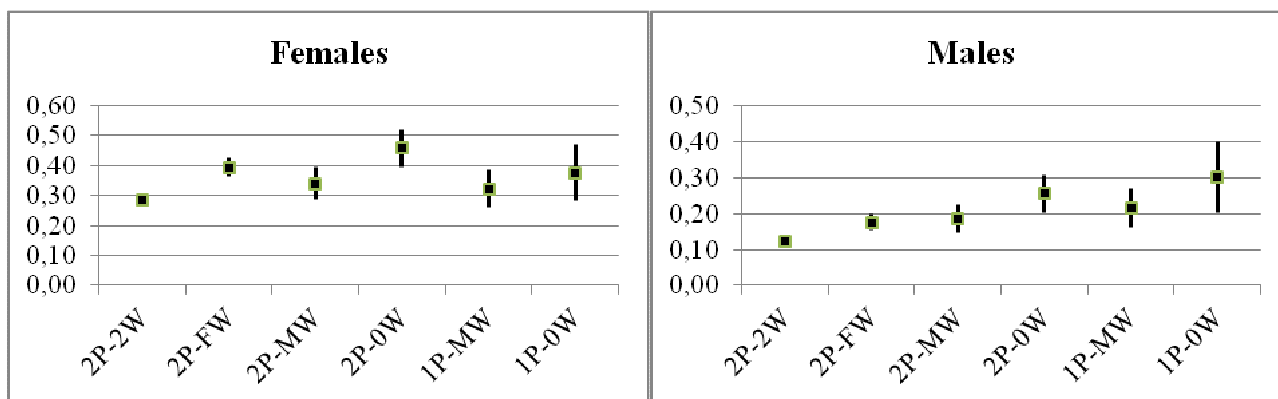
Panel C. Continental countries



Panel D. Mediterranean countries



Panel E. Eastern countries



Legend: 2P-2W means two-parent households with both parents working; 2P-FW means two-parent households with only the father working; 2P-MW means two-parent households with only the mother working; 2P-0W means two-parent households with neither parent working; 1P-MW means lone-mother households with working mother; 1P-0W means lone-mother households with non-working mother.

For children who have grown up in two-parent households, the probability of being NEET is higher in work-poor than in the work-rich families, for both males and females, whatever the country group. A similar consideration applies to children who have grown up with a lone mother. However, as regards males who have grown up in a lone-mother family, no major differences are found in Nordic and Continental country groups. Table 3 reports the odds for the probability of being NEET according to the household occupational structure. The objective here is to measure the extent to which the probability of being NEET differs according to the household occupational structure. As expected, the parents' employment conditions during adolescence play a crucial role in explaining children's labour market outcomes in all country groups, but especially in Mediterranean countries. This country group has a lower degree of social mobility and is characterized by less efficient and developed public employment services, education and training institutions, and youth support services compared to the other country groups. The last two columns of the table measure the extent to which the presence of a working father or a working mother in two-parent households helps reduce the children's risk of being NEET. In computing the odds, we first test whether the NEET probability associated with the two household types involved in the odds calculation are equal to each other (our null hypothesis). If we do not reject the null hypothesis, the odds take value 1. When the odds are greater (lower) than 1, it means that the probability of being NEET is statistically higher in the household type at the nominator (denominator) of the odds.

Table 3. Odds for NEET probability P(N) by household occupational structure (at age 14), gender and country groups

	<u>P(N 2P-0W)</u>	<u>P(N 1P-0W)</u>	<u>P(N 1P-0W)</u>	<u>P(N 1P-1W)</u>	<u>P(N 2P-0W)</u>	<u>P(N 2P-FW)</u>
	P(N 2P-2W)	P(N 1P-1W)	P(N 2P-0W)	P(N 2P-FW)	P(N 2P-FW)	P(N 2P-2W)
Females						
Nordic countries	1.00	1.00	1.00	1.00	1.00	1.00
English-speaking countries	1.63	1.00	1.00	1.00	1.00	1.24
Continental countries	1.62	1.00	1.00	1.00	1.00	1.34
Mediterranean countries	1.43	1.00	1.00	1.00	1.19	1.20
Eastern countries	1.60	1.00	1.00	0.82	1.10	1.38
Males						
Nordic countries	1.00	1.00	1.00	1.00	1.00	1.00
English-speaking countries	1.00	1.00	1.00	1.00	1.00	1.55
Continental countries	1.00	1.00	1.00	1.00	1.00	1.33
Mediterranean countries	2.29	1.00	1.00	1.00	1.97	1.17
Eastern countries	2.06	1.00	1.00	1.00	1.45	1.42

Legend: see figure 1.

Inspection of Table 3 show that the female probability of being NEET is substantially higher in work-poor households than in work-rich ones, except for Nordic countries (column 1). Specifically, compared to a young female who has grown up in a two-parent household with both parents working, a young female who has grown up in a two-parent household with neither parent working has a roughly 60% higher probability of being NEET in English-speaking, Continental and Eastern countries and an around 40% higher probability in Mediterranean countries. For the same country groups, a young female who has grown up in a two-parent family where only the father was working has a significantly higher probability of being NEET than a female who has grown up with both parents working (column 6). This probability is about 20% higher in English-speaking and Mediterranean countries, 34% higher in Continental countries, and 38% higher in the Eastern group. Unexpectedly, the role of the mother is more limited in Mediterranean countries, where female participation in paid employment is low. To be noted is that in Eastern and Mediterranean countries, women who have grown up in a two-parent work-poor family have a probability of being NEET that is 10% and 20% higher, respectively, than that of women who have grown up in a two-parent household where the father was not working (column 5). In Mediterranean countries, the mother's and father's working conditions similarly matter in reducing their daughters' risk of being NEET. In Eastern countries, the working condition of the mother plays a more important role than father's employment status.

For males, no differences in the NEET probability are found between those who have grown up in

two-parent work-rich and work-poor families in Nordic, English-speaking and Eastern countries. Differently, males who have grown up with neither parent working are particularly disadvantaged in the labour market in Mediterranean and Eastern countries. Indeed, they have a twice higher probability of being NEET. In Mediterranean countries, having a working father is particularly important in avoiding worklessness. The empirical results suggest that young people who have grown up in a two-parent work-poor family have a roughly 100% higher probability of being NEET than young people who have grown up with a working father. In all country groups, except for Nordic countries, having had a working mother reduces the risk of being NEET. The role of the mother seems particularly important in English-speaking and Eastern European countries and less important in the Mediterranean group.

For both males and females who have grown up with a lone mother, in all country groups there are no differences in the NEET risk according to the mother's working condition. Moreover, young people who have grown up in work-poor families have the same probability of being workless independently from the number of parents present. No significant differences in the NEET probability are found for young people who have grown up with a lone working mother and those who have grown up in a male bread-winner family, except in Eastern countries, where the former group has a lower risk of being NEET.

5. Conclusions

A sample of young males and females aged 25-34 has been selected in order to examine the consequences on labour market outcomes for young individuals of different patterns of parental working conditions during their adolescence. Our sample shows differences in their employment statuses at the time of the interview (in 2011): the largest shares of NEETs are found in Mediterranean and Eastern European countries, while the probability of being NEET (i.e. unemployed or inactive) is higher for young women than for young men in all country groups.

Parental working conditions during adolescence play a role. Within two-parent households, in all country groups the shares of NEET individuals increase as one moves from work-rich to work-poor households (with particularly large differences in English-speaking countries), whereas no systematic differences emerge as regards the shares of students. In one-parent families, the shares of young people in employment are lower for those who have grown up with non-working mothers. The situation of individuals who have grown up in workless households appears quite similar in one- and two-parent families.

The econometric analysis has highlighted that gender differences with respect to the influence of the family of origin are significant in all country groups. Having had a working mother increases both the male and female probability of being employed, while it reduces the probability of being NEET in all country groups except for Nordic countries. Having had a working father increases sons' employment probability in Nordic, Mediterranean and Eastern European countries. In the same country groups, it also reduces NEET probability. The same effects are found on daughters in English-speaking, Mediterranean and Eastern country groups. Except for Nordic countries, the youth risk of being NEET is higher for children from two-parent work-poor households than for those who have grown up in two-parent work-rich families. In all country groups, no significant differences are found between the children of one-parent households with working and non-working mothers and between children of one-parent and two-parent work-poor families. In line with our expectations, our results suggest that the extent of the intergenerational correlation in worklessness is larger in Mediterranean and Eastern countries, in the sense that both the mother's and the father's working condition matters in explaining youth labour market outcomes. Instead, in the other countries only the working condition of the mother matters significantly in reducing the risk of being workless. Contrary to our expectation, the effect associated with having a working mother on the female probability of worklessness is more limited in Mediterranean countries.

To conclude, our main empirical findings provide evidence of an intergenerational correlation between worklessness and the positive role of parents' employment in explaining youth labour market outcomes. This evidence calls for policy interventions that address both youth and parental unemployment and difficulties in accessing employment. As suggested also by d'Addio (2007: 70), policies aimed at improving youth labour market outcomes are desirable. And one of the main objectives of policy interventions should be to break the intergenerational transmission of disadvantages. By helping young parents to be in paid work, this would contribute not only to the economic wellbeing of their children when they are small; it also might positively affect their attitudes and behaviours towards the labour market.

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Appendix

Table A1. Predicted outcome probability (Pr) and marginal effects (Mfx) in Nordic countries by gender

	Females						Males											
	Employed			In education			Employed			In education								
	Pr	St. Err.	P	St. Err.	P	St. Err.	Pr	St. Err.	P	St. Err.	P	St. Err.						
<i>Predicted outcome probability</i>	0.798	***	0.139	***	0.011	0.063	***	0.008	0.907	***	0.009	***	0.066	***	0.007	0.028	***	0.005
<i>Mfx</i>																		
<i>Individual characteristics at the time of the interview:</i>																		
Age	0.027	***	0.004	***	0.003	-0.016	***	0.002	0.009	***	0.003	0.000	0.002	-0.010	***	0.001		
Own education: medium	0.158	***	0.041	***	0.035	-0.012	0.023	0.060	***	0.021	0.088	***	0.015	0.028	**	0.014		
Own education: high	0.217	***	0.043	***	0.036	-0.037	0.024	0.072	***	0.022	-0.106	***	0.016	0.034	**	0.015		
Partner's education: medium	0.059		0.041	*	0.033	-0.005	0.026	0.021		0.036	-0.050	**	0.023	0.029		0.028		
Partner's education: high	0.036		0.042		0.034	-0.002	0.027	0.021		0.037	-0.048	**	0.024	0.028		0.029		
Citizenship	-0.298	***	0.067	***	0.054	0.109	***	0.030	-0.052	0.051	0.081	**	0.040	-0.029		0.028		
Living with parents	-0.167	***	0.057	***	0.047	0.005	0.032	-0.017		0.024	0.039	**	0.020	-0.022		0.014		
Living in couple	-0.024		0.044		0.037	-0.033	0.026	0.075	**	0.035	-0.026		0.021	-0.049	*	0.028		
Motherhood	-0.129	***	0.024	***	0.021	-0.010	0.013	-		-	-		-	-				
<i>Presence of parents when the young was 14:</i>																		
Lone parent family	-0.005		0.069		0.049	-0.034	0.046	-0.035		0.037	-0.003		0.030	0.039	*	0.021		
Parentless	0.050		0.066		0.050	-0.027	0.043	0.028		0.037	-0.004		0.031	-0.023		0.019		
<i>Family background information:</i>																		
Working father	0.023		0.042		0.035	-0.029	0.025	0.059	**	0.023	-0.040	**	0.020	-0.019	*	0.011		
Working mother	0.027		0.033		0.026	0.009	0.020	-0.003		0.022	-0.004		0.018	0.006		0.012		
Working lone mother	0.022		0.070		0.051	0.009	0.046	0.049		0.041	-0.009		0.035	-0.040	**	0.020		
Working mother in-law	-		-		-	-	-	-		-	-		-	-		-		
Father's occupation	-0.036		0.032		0.028	-0.002	0.017	0.006		0.021	-0.022		0.019	0.016	*	0.008		
Mother's occupation	0.058	*	0.031	*	0.027	-0.005	0.015	-0.019		0.021	0.012		0.019	0.008		0.009		
Father's education	-0.016		0.029		0.026	0.015	0.016	-0.005		0.019	0.006		0.018	-0.001		0.008		
Mother's education	-0.071	***	0.027	***	0.024	0.033	**	0.014	-0.003	0.019	-0.010		0.017	0.013		0.008		

Notes: Dummies for country, quarter of interview and missing information about parents' working status and educational level are introduced. (-) means not controlled for. Marginal effects are computed at the sample mean of the variables. *** means statistically significant at 10 percent level; ** means statistically significant at 5 percent level; * means statistically significant at 1 percent level.

Table A2. Predicted outcome probability (Pr) and marginal effects (Mfx) in English-speaking countries by gender

	Females						Males											
	Employed			In education			Employed			In education								
	Pr	St. Err.	P	St. Err.	P	Mfx	St. Err.	P	St. Err.	P	Mfx	St. Err.	P	St. Err.	P			
<i>Predicted outcome probability</i>	0.710	***	0.015	0.160	***	0.015	0.022	***	0.004	0.886	***	0.012	0.110	***	0.012	0.005	***	0.002
Mfx																		
<i>Individual characteristics at the time of the interview:</i>																		
Age	0.016	***	0.006	-0.013	**	0.006	-0.003	**	0.001	0.001	0.001	0.004	0.000		0.004	-0.001	*	0.001
Own education: medium	0.187	***	0.055	-0.189	***	0.053	0.002		0.008	0.120	***	0.035	-0.123	***	0.034	0.003		0.006
Own education: high	0.386	**	0.058	-0.384	***	0.056	-0.001		0.009	0.156	***	0.034	-0.157	***	0.033	0.001		0.005
Partner's education: medium	0.104	**	0.052	-0.080		0.051	-0.024	***	0.009	0.110	*	0.065	-0.160	***	0.058	0.051	*	0.030
Partner's education: high	0.065		0.054	-0.050		0.053	-0.015		0.010	0.188	***	0.067	-0.241	***	0.060	0.053	*	0.029
Citizenship	-0.206	***	0.065	0.186	***	0.064	0.020	**	0.009	-0.110	**	0.055	0.097	*	0.054	0.014	**	0.007
Living with parents	-0.049		0.064	0.056		0.063	-0.007		0.007	-0.049	*	0.029	0.048	*	0.029	0.001		0.002
Living in couple	-0.035		0.053	0.039		0.052	-0.004		0.008	-0.083		0.065	0.144	**	0.057	-0.061	*	0.032
Motherhood	-0.320	***	0.037	0.314	***	0.037	0.006		0.005	-	-		-	-		-	-	-
<i>Presence of parents when the young was 14:</i>																		
Lone parent family	0.003		0.054	-0.006		0.053	0.003		0.008	-0.086	**	0.040	0.083	**	0.039	0.002		0.005
Parentless	0.565		0.404	-0.411		0.389	-0.155	***	0.052	-0.240	**	0.101	0.299	***	0.095	-0.058	*	0.032
<i>Family background information:</i>																		
Working father	0.090	*	0.052	-0.086	*	0.052	-0.003		0.007	0.010		0.032	-0.009		0.032	0.000		0.004
Working mother	0.061	*	0.035	-0.059	*	0.035	-0.002		0.006	0.047	*	0.027	-0.048	*	0.027	0.001		0.003
Working lone mother	0.024		0.073	-0.014		0.072	-0.010		0.011	0.041		0.053	-0.036		0.052	-0.005		0.006
Working mother in-law	0.039		0.036	-0.033		0.036	-0.006		0.007	0.045		0.030	-0.036		0.030	-0.008	*	0.005
Father's occupation	-0.017		0.035	0.013		0.034	0.004		0.006	0.075	***	0.029	-0.076	***	0.028	0.001		0.002
Mother's occupation	0.008		0.045	-0.015		0.045	0.007		0.007	-0.001		0.033	-0.002		0.032	0.002		0.003
Father's education	-0.025		0.045	0.022		0.045	0.003		0.008	-0.035		0.033	0.037		0.032	-0.003		0.003
Mother's education	-0.017		0.049	0.028		0.049	-0.011		0.009	-0.069	**	0.030	0.064	**	0.029	0.005		0.003

Notes: Dummies for country, quarter of interview and missing information about parents' working status and educational level are introduced. (-) means not controlled for. Marginal effects are computed at the sample mean of the variables. *** means statistically significant at 10 percent level; ** means statistically significant at 5 percent level; * means statistically significant at 1 percent level.

Table A3. Predicted outcome probability (Pr) and marginal effects (Mfx) in Continental countries by gender

	Females						Males											
	Employed			In education			Employed			NEET								
	Pr	St. Err.	P	St. Err.	Mfx	P	St. Err.	Mfx	P	St. Err.	Mfx	P	St. Err.	Mfx				
<i>Predicted outcome probability</i>	0.759	***	0.006	0.187	***	0.006	0.018	***	0.002	0.921	***	0.005	0.063	***	0.004	0.016	***	0.002
<i>Individual characteristics at the time of the interview:</i>																		
Age	0.011	***	0.002	-0.006	**	0.002	-0.005	***	0.001	0.004	***	0.001	0.001	0.001	0.001	-0.005	***	0.001
Own education: medium	0.119	***	0.020	-0.136	***	0.019	0.017	**	0.008	0.035	***	0.011	-0.060	***	0.009	0.026	***	0.007
Own education: high	0.192	***	0.022	-0.203	***	0.021	0.011		0.008	0.061	***	0.013	-0.081	***	0.010	0.020	***	0.008
Partner's education: medium	0.063	***	0.022	-0.057	***	0.020	-0.007		0.008	0.037	**	0.017	-0.048	***	0.013	0.011		0.012
Partner's education: high	0.020		0.023	-0.027		0.022	0.007		0.008	0.043	**	0.018	-0.060	***	0.015	0.017		0.011
Citizenship	-0.189	***	0.026	0.170	***	0.025	0.020	***	0.006	-0.076	***	0.014	0.048	***	0.013	0.028	***	0.006
Living with parents	-0.063	***	0.024	0.054	**	0.024	0.010	***	0.004	-0.031	***	0.009	0.025	***	0.008	0.007	***	0.003
Living in couple	-0.036		0.025	0.052	*	0.024	-0.016	*	0.008	0.055	***	0.016	-0.023	*	0.013	-0.032	***	0.011
Motherhood	-0.254	***	0.014	0.263	***	0.013	-0.009	**	0.004	-	-							
<i>Presence of parents when the young was 14:</i>																		
Lone parent family	0.023		0.029	-0.022		0.028	-0.002		0.008	0.006		0.016	0.005		0.014	-0.011	*	0.007
Parentless	-0.096	*	0.050	0.084	*	0.048	0.012		0.013	-0.024		0.031	0.006		0.028	0.018	*	0.010
<i>Family background information:</i>																		
Working father	0.031		0.029	-0.037		0.028	0.006		0.008	0.011		0.016	-0.008		0.015	-0.003		0.006
Working mother	0.059	***	0.013	-0.055	***	0.013	-0.004		0.003	0.024	***	0.008	-0.018	**	0.008	-0.005	*	0.003
Working lone mother	-0.033		0.033	0.026		0.032	0.007		0.009	-0.028		0.018	0.015		0.017	0.013	*	0.007
Working mother in-law	0.032	**	0.013	-0.034	***	0.013	0.002		0.004	0.007		0.011	-0.008		0.011	0.001		0.004
Father's occupation	0.003		0.014	-0.007		0.014	0.004		0.003	0.001		0.009	-0.007		0.008	0.006	**	0.003
Mother's occupation	-0.002		0.018	-0.001		0.018	0.003		0.003	-0.006		0.010	0.005		0.010	0.002		0.003
Father's education	-0.021		0.017	0.012		0.017	0.009	***	0.004	-0.010		0.010	0.002		0.010	0.008	**	0.003
Mother's education	0.017		0.020	-0.022		0.020	0.005		0.003	-0.004		0.011	-0.004		0.010	0.008	***	0.003

Notes: Dummies for country, quarter of interview and missing information about parents' working status and educational level are introduced. (-) means not controlled for. Marginal effects are computed at the sample mean of the variables. *** means statistically significant at 10 percent level; ** means statistically significant at 5 percent level; * means statistically significant at 1 percent level.

Table A4. Predicted outcome probability (Pr) and marginal effects (Mfx) in Mediterranean countries by gender

	Females						Males											
	Employed			In education			Employed			In education								
	Pr	St. Err.	P	St. Err.	P	Mfx	St. Err.	P	St. Err.	P	Mfx	St. Err.	P	St. Err.	P			
<i>Predicted outcome probability</i>	0.682	***	0.006	0.306	***	0.006	0.012	***	0.002	0.808	***	0.006	0.184	***	0.006	0.009	***	0.002
	Mfx	St. Err.	Mfx	St. Err.	Mfx	St. Err.	Mfx	St. Err.	Mfx	St. Err.	Mfx	St. Err.	Mfx	St. Err.	Mfx	St. Err.	Mfx	St. Err.
<i>Individual characteristics at the time of the interview:</i>																		
Age	0.014	***	0.002	-0.011	***	0.002	-0.003	***	0.001	0.010	***	0.002	-0.007	***	0.002	-0.003	***	0.001
Own education: medium	0.088	***	0.016	-0.106	***	0.016	0.018	***	0.004	0.076	***	0.012	-0.089	***	0.012	0.014	***	0.003
Own education: high	0.181	***	0.018	-0.190	***	0.017	0.009	***	0.003	0.104	***	0.015	-0.116	***	0.014	0.012	***	0.003
Partner's education: medium	0.049	***	0.019	-0.053	***	0.018	0.004	***	0.006	0.074	***	0.023	-0.074	***	0.022	-0.001	***	0.010
Partner's education: high	0.062	***	0.024	-0.071	***	0.024	0.009	***	0.007	0.149	***	0.030	-0.147	***	0.029	-0.001	***	0.010
Citizenship	-0.095	***	0.022	0.104	***	0.022	-0.009	*	0.005	-0.044	**	0.023	0.061	***	0.022	-0.017	*	0.009
Living with parents	-0.141	***	0.018	0.128	***	0.018	0.013	***	0.004	-0.097	***	0.014	0.088	***	0.014	0.009	***	0.003
Living in couple	-0.110	***	0.022	0.119	***	0.022	-0.009	*	0.005	0.034	***	0.021	-0.018	***	0.020	-0.016	*	0.009
Motherhood	-0.175	***	0.016	0.187	***	0.016	-0.012	***	0.003									
<i>Presence of parents when the young was 14:</i>																		
Lone parent family	-0.012		0.038	0.021		0.037	-0.009		0.006	0.028		0.032	-0.029		0.032	0.001		0.003
Parentless	0.047		0.048	-0.053		0.047	0.006		0.006	0.098	***	0.037	-0.095	***	0.037	-0.003		0.005
<i>Family background information:</i>																		
Working father	0.069	**	0.030	-0.060	**	0.030	-0.010	***	0.004	0.144	***	0.025	-0.140	***	0.024	-0.004		0.003
Working mother	0.056	***	0.014	-0.056	***	0.014	0.000		0.002	0.031	***	0.012	-0.028	**	0.012	-0.003	*	0.002
Working lone mother	0.008		0.045	-0.010		0.045	0.002		0.006	0.023		0.041	-0.022		0.041	-0.001		0.004
Working mother in-law	0.099	***	0.018	-0.089	***	0.017	-0.011	*	0.006	0.000		0.022	0.000		0.021	0.000		0.008
Father's occupation	0.022		0.018	-0.028		0.018	0.006	***	0.002	-0.029	**	0.014	0.026	**	0.013	0.003	*	0.002
Mother's occupation	-0.009		0.026	0.002		0.026	0.008	***	0.003	-0.009		0.020	0.003		0.020	0.006	**	0.002
Father's education	-0.034		0.028	0.028		0.028	0.006	**	0.003	-0.028		0.020	0.020		0.020	0.008	***	0.002
Mother's education	-0.039		0.031	0.041		0.031	-0.001		0.003	0.000		0.024	-0.001		0.024	0.001		0.002

Notes: Dummies for country, quarter of interview and missing information about parents' working status and educational level are introduced. (-) means not controlled for. Marginal effects are computed at the sample mean of the variables. *** means statistically significant at 10 percent level; ** means statistically significant at 5 percent level; * means statistically significant at 1 percent level.

Table A5. Predicted outcome probability (Pr) and marginal effects (Mfx) in Eastern countries by gender

	Employed			In education			NEET			Employed			In education			NEET		
	Males			Females			Males			Females			Males			Females		
	Pr	St. Err.	P	Pr	St. Err.	P	Pr	St. Err.	P	Pr	St. Err.	P	Pr	St. Err.	P	Pr	St. Err.	P
<i>Predicted outcome probability</i>	0.691	***	0.005	0.307	***	0.005	0.002	***	0.000	0.859	***	0.004	0.139	***	0.004	0.002	***	0.000
	Mfx	St. Err.	Mfx	St. Err.	Mfx	St. Err.	Mfx	St. Err.	Mfx	St. Err.	Mfx	St. Err.	Mfx	St. Err.	Mfx	St. Err.	Mfx	St. Err.
<i>Individual characteristics at the time of the interview:</i>																		
Age	0.019	***	0.002	-0.018	**	0.002	-0.001	***	0.000	0.002	0.000	0.002	-0.001	0.001	0.001	-0.001	0.001	0.000
Own education: medium	0.219	***	0.018	-0.222	***	0.018	0.003	***	0.001	0.125	***	0.009	-0.127	***	0.009	0.002	***	0.001
Own education: high	0.310	***	0.020	-0.313	***	0.020	0.002	*	0.001	0.198	***	0.013	-0.200	***	0.013	0.002	**	0.001
Partner's education: medium	0.008		0.021	-0.037	*	0.020	0.029	***	0.005	0.053	***	0.015	-0.070	***	0.015	0.017	***	0.004
Partner's education: high	0.002		0.025	-0.033		0.025	0.030	***	0.005	0.098	***	0.020	-0.118	***	0.019	0.020	***	0.004
Citizenship	-0.076	*	0.045	0.078	*	0.045	-0.002		0.002	-0.063	***	0.021	0.062	***	0.021	0.001	0.001	0.001
Living with parents	-0.056	***	0.012	0.055	***	0.012	0.001	**	0.000	-0.039	***	0.010	0.038	***	0.009	0.001	***	0.000
Living in couple	-0.053	**	0.025	0.084	***	0.025	-0.031	***	0.005	0.026	*	0.015	-0.005		0.015	-0.020	***	0.005
Motherhood	-0.265	***	0.014	0.267	***	0.014	-0.001	**	0.000									
<i>Presence of parents when the young was 14:</i>																		
Lone parent family	0.073	**	0.034	-0.070	**	0.034	-0.004	***	0.001	-0.027		0.023	0.027		0.023	0.000		0.001
Parentless	0.002		0.035	-0.007		0.035	0.004	***	0.002	0.054	**	0.022	-0.054	**	0.022	0.000		0.001
<i>Family background information:</i>																		
Working father	0.053	*	0.027	-0.055	**	0.027	0.002		0.002	0.057	***	0.017	-0.057	***	0.017	-0.001		0.001
Working mother	0.104	***	0.015	-0.104	***	0.015	0.000		0.001	0.050	***	0.010	-0.049	***	0.010	0.000		0.000
Working lone mother	-0.056		0.038	0.053		0.038	0.003	*	0.001	0.002		0.024	-0.003		0.024	0.001		0.001
Working mother in-law	0.033	**	0.015	-0.033	**	0.015	0.000		0.001	0.036	***	0.012	-0.035	***	0.012	-0.001		0.001
Father's occupation	-0.008		0.017	0.007		0.017	0.001		0.001	0.012		0.012	-0.013		0.012	0.001	***	0.000
Mother's occupation	0.005		0.015	-0.006		0.015	0.000		0.000	0.009		0.011	-0.009		0.011	0.001	*	0.000
Father's education	-0.008		0.021	0.007		0.021	0.001		0.001	0.010		0.015	-0.011		0.015	0.000		0.000
Mother's education	0.005		0.021	-0.006		0.021	0.001	*	0.000	-0.026	*	0.014	0.025	*	0.014	0.001	*	0.000

Notes: Dummies for country, quarter of interview and missing information about parents' working status and educational level are introduced. (-) means not controlled for. Marginal effects are computed at the sample mean of the variables. *** means statistically significant at 10 percent level; ** means statistically significant at 5 percent level; * means statistically significant at 1 percent level.

Table A6. Predicted outcome probabilities by household employment structure, gender and country group

	Females						Males											
	Employed			NEET			In education			Employed			NEET			In education		
	Pr	St.Err.	Pr	St.Err.	Pr	St.Err.	Pr	St.Err.	Pr	St.Err.	Pr	St.Err.	Pr	St.Err.	Pr	St.Err.	Pr	St.Err.
Nordic countries																		
2P-2W	0.801	***	0.016	0.132	***	0.013	0.066	***	0.010	0.914	***	0.010	0.060	***	0.008	0.026	***	0.005
2P-FW	0.772	***	0.035	0.171	***	0.030	0.057	***	0.019	0.915	***	0.019	0.064	***	0.017	0.020	**	0.009
2P-MW	0.770	***	0.046	0.126	***	0.031	0.105	***	0.037	0.841	***	0.035	0.109	***	0.031	0.050	***	0.019
2P-0W	0.745	***	0.052	0.163	***	0.041	0.091	**	0.037	0.844	***	0.040	0.116	***	0.036	0.040	**	0.019
1P-MW	0.795	***	0.052	0.135	***	0.041	0.071	**	0.034	0.861	***	0.043	0.091	**	0.037	0.048	**	0.024
1P-0W	0.734	***	0.093	0.213	***	0.082	0.053		0.042	0.750	***	0.099	0.102	**	0.050	0.149		0.096
English-speaking countries																		
2P-2W	0.742	***	0.021	0.246	***	0.021	0.012	**	0.005	0.913	***	0.015	0.082	***	0.014	0.005	*	0.003
2P-FW	0.682	***	0.029	0.305	***	0.028	0.014	**	0.006	0.868	***	0.023	0.127	***	0.022	0.004		0.003
2P-MW	0.651	***	0.058	0.333	***	0.057	0.016		0.010	0.905	***	0.032	0.089	***	0.031	0.006		0.005
2P-0W	0.581	***	0.060	0.401	***	0.060	0.018		0.012	0.857	***	0.043	0.138	***	0.042	0.005		0.005
1P-MW	0.680	***	0.067	0.312	***	0.067	0.009		0.005	0.859	***	0.046	0.137	***	0.046	0.003		0.003
1P-0W	0.584	***	0.069	0.394	***	0.068	0.022		0.016	0.719	***	0.075	0.273	***	0.075	0.008		0.010
Continental countries																		
2P-2W	0.819	***	0.008	0.164	***	0.008	0.017	***	0.003	0.932	***	0.005	0.054	***	0.005	0.014	***	0.002
2P-FW	0.759	***	0.012	0.220	***	0.012	0.021	***	0.004	0.909	***	0.008	0.072	***	0.007	0.019	***	0.004
2P-MW	0.788	***	0.029	0.200	***	0.028	0.012	***	0.005	0.922	***	0.016	0.061	***	0.015	0.016	***	0.006
2P-0W	0.720	***	0.035	0.265	***	0.035	0.014	***	0.006	0.895	***	0.021	0.082	***	0.019	0.023	***	0.008
1P-MW	0.778	***	0.033	0.206	***	0.032	0.016	***	0.007	0.897	***	0.022	0.084	***	0.021	0.018	***	0.007
1P-0W	0.749	***	0.044	0.238	***	0.044	0.013	***	0.007	0.900	***	0.026	0.089	***	0.026	0.011	**	0.005
Mediterranean countries																		
2P-2W	0.715	***	0.010	0.272	***	0.010	0.012	***	0.002	0.830	***	0.008	0.163	***	0.008	0.007	***	0.001
2P-FW	0.661	***	0.010	0.327	***	0.010	0.012	***	0.002	0.800	***	0.008	0.190	***	0.008	0.009	***	0.002
2P-MW	0.645	***	0.031	0.330	***	0.031	0.026	***	0.008	0.658	***	0.036	0.332	***	0.036	0.010	**	0.004
2P-0W	0.585	***	0.032	0.390	***	0.032	0.025	***	0.007	0.612	***	0.037	0.374	***	0.037	0.013	**	0.006
1P-MW	0.643	***	0.047	0.343	***	0.047	0.014	**	0.007	0.727	***	0.048	0.262	***	0.048	0.011	*	0.006

1P-0W	0.572	***	0.053	0.416	***	0.053	0.012	*	0.007	0.654	***	0.080	0.330	***	0.058	0.016	*	0.009
Eastern countries																		
2P-2W	0.713	***	0.006	0.285	***	0.006	0.002	***	0.000	0.875	***	0.005	0.124	***	0.005	0.001	***	0.000
2P-FW	0.604	***	0.016	0.394	***	0.026	0.002	***	0.001	0.823	***	0.011	0.176	***	0.011	0.002	***	0.000
2P-MW	0.659	***	0.027	0.340	***	0.027	0.001		0.001	0.813	***	0.020	0.185	***	0.020	0.002	**	0.001
2P-0W	0.543	***	0.032	0.457	***	0.032	0.001		0.001	0.743	***	0.027	0.255	***	0.027	0.002	**	0.001
1P-MW	0.676	***	0.031	0.323	***	0.031	0.001		0.000	0.780	***	0.028	0.217	***	0.028	0.003	**	0.001
1P-0W	0.624	***	0.047	0.376	***	0.047	0.000		0.000	0.698	***	0.050	0.301	***	0.050	0.002		0.002

Legend: 2P-2W means two-parent households with both working parents; 2P-FW means two-parent households with only working father; 2P-MW means two-parent households with only working mother; 2P-0W means two-parent households with none working parent; 1P-MW means lone-mother households with working mother; 1P-0W means lone-mother households with non-working mother.