## 10

## THE WORKLESSNESS LEGACY

DO WORKING MOTHERS MAKE A DIFFERENCE?

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### 10.1. INTRODUCTION

The analysis of intergenerational inequality and social mobility has attracted increasing attention in the past few decades. Several contributions have analyzed the influence of family background on educational and occupational attainments, highlighting either an intergenerational income inequality (Corak 2006; d'Addio 2007; Bjorklund and Jäntti 2009; Blanden 2013) or an intergenerational correlation of jobs and occupations between fathers and sons (Solon 1992; Black and Devereux 2011). A number of studies have focused on the intergenerational transmission of worklessness (see Section 10.2 for details). However, almost all of these contributions focus on a single country and on the influence of the occupational condition of either the father or the mother on their children's labor market outcomes. This chapter analyzes the intergenerational transmission of worklessness in a cross-country comparative perspective, investigating whether this transmission varies according to the gender of parents and the gender of their children and also across European country groups.

The contribution made by this chapter is threefold. First, this is the first comparative study at the European level on the influence of parents' employment status during their children's adolescence on the risk of worklessness among young people (aged 24-35 years). In fact, national-specific socioeconomic structures and labor market institutions are likely to affect the various channels of the intergenerational transmission of worklessness: economic, genetic, cultural/
familial, and social. As we argue in Section 10.2, the intergenerational correlation of worklessness should be higher in countries characterized by prolonged permanence of youth in the family of origin, low levels of borrowing among young people, social norms based on traditional gender roles within families, less developed and less efficient public employment and youth support services, low participation in active labor market policies (ALMPs), and less liberal labor markets. Thus, this chapter enhances the understanding of how labor market institutions and welfare systems affect labor market outcomes in a comparative perspective (Scruggs and Allan 2006; Gallie 2007; Halleröd, Ekbrand, and Bengtsson 2015).

Second, we consider the employment condition of both parents. When controlling for the employment status of a single parent, the estimated effect might also capture the spouse's effect due to assortative mating in marriage. Controlling for the employment condition of both parents limits this type of problem. Furthermore, it allows us to study the extent to which a young person's probability of being workless varies according to the family employment structure. For instance, we can compare the outcomes for children who grew up in a dualearner family, in a male-breadwinner family, or with a lone working mother.

Third, we consider the effect of the mother-in-law's employment condition. Indeed, there may be a positive correlation between the participation in employment of women and that of their mother-in-laws via their husbands'/sons' attitudes toward domestic work and female labor market participation (Del Boca, Locatelli, and Pasqua 2000; Fernández, Fogli, and Olivetti 2004; Kawaguchi and Miyazaki 2009; Farré and Vella 2013).

Our empirical findings show that having had a working mother during adolescence considerably reduces the likelihood of being workless for both sons and daughters in all country groups except the Nordic countries. In contrast, the effects of fathers' and mother-in-laws' working condition are less widespread across countries.

The chapter is structured as follows: Section 10.2 reviews the relevant literature, Section 10.3 presents the data and the estimation methodology, Section 10.4 discusses the main empirical findings, and Section 10.5 concludes the chapter.

### 10.2. LITERATURE REVIEW AND THEORETICAL BACKGROUND

A number of studies have dealt with the intergenerational correlation of worklessness. ${ }^{1}$ There is a robust consensus on the existence of a positive correlation between the worklessness of fathers and their sons (O'Neill and Sweetman 1998; Corak, Gustafsson, and Österberg 2004; Oreopoulos, Page, and Huff Stevens 2008; Macmillan 2010, 2013; Mader et al. 2015), between fathers and all their children (Johnson and Reed 1996; Bratberg, Nilsen, and Vaage 2008; Ekhaugen

2009; Gregg, Macmillan, and Nasim 2012; Zwysen 2015), and between mothers and their daughters' labor market participation (Del Boca et al. 2000; Fortin 2005; Fernández 2007; Farré and Vella 2013). However, almost all of these studies focus on the effect of the employment condition of only the father or only the mother on their children's worklessness. Only Ekhaugen (2009) considers the unemployment status of both parents, but she does not distinguish between fathers' and mothers' unemployment experiences. ${ }^{2}$

Several explanations for the existence of an intergenerational transmission of labor outcomes within households have been advanced in the literature. To begin with, parents' economic resources affect their offspring's labor market outcomes through higher investments in educational achievements (Becker and Tomes 1986). However, some authors have recently emphasized the direct impact of the family of origin on offspring employment and earnings, even when controlling for education (Mocetti 2007; Raitano 2011; Franzini, Raitano, and Vona 2013). Thus, other types of effects need to be considered. First, household income and wealth may affect children's employment status and their job search process by leading to different reservation wages or by making it easier to start an independent economic activity. Second, in addition to economic resources, there are other possible channels of influence that interact with each other: (1) genetic, (2) cultural/familial, and (3) social. The genetic channel operates through the inheritance of cognitive traits and soft skills that may influence career advancements (Bowles and Gintis 2002). The cultural/familial channel works through the parental effect on offspring's preferences, values, and attitudes. Specifically, parental work experience can modify young adults' aspirations and attitudes toward education and labor market participation-that is, their evaluation of paid work and their sense of stigma, their attitudes toward relying on welfare benefits and toward gender roles, and so on (Ekhaugen 2009; Macmillan 2010; Schoon et al. 2012; Zwysen 2015). Last, the social channel works through family networks. It is well known that family members' employment status can play a role through the social network on which young individuals are able to rely when they are searching for a job (Montgomery 1991; Granovetter 1995; Rees 1996; Petersen, Saporta, and Seidel 2000; Topa 2001). In particular, several studies find that children of nonworking parents are more disadvantaged in the labor market compared with young people whose parents are working and maintain a network of social contacts (O'Neill and Sweetman 1998; Corak and Piraino 2010). ${ }^{3}$

These three distinct channels might work differently across European countries, depending on national-specific socioeconomic structures and institutional contexts. To the best of our knowledge, there are no studies in the literature dealing with this issue. We now present some hypotheses about the influence of various institutions on the ways in which these channels might operate (they are summarized in Table A10.1 in the Appendix). ${ }^{4}$ Recall that we are interested in effects other than those on education.

First, the effect of household economic resources on an individual's reservation wage might be low or even null in countries in which attitudes toward independence are strong and young people leave the family of origin quite early. The economic channel should also be less important in those countries in which it is easier or "more normal" for young people to have debts-for example, housing debts or student loans. As a consequence, the intergenerational correlation of worklessness related to the economic channel should be lower in countries in which youth economic independence occurs earlier (e.g., Nordic, English-speaking, and Continental countries) and in which borrowing is more common among young people (e.g., Nordic and English-speaking countries, but also Eastern countries regarding student loans). ${ }^{5}$

Second, regarding the cultural channel, we expect that children's imitation of their parents' condition will be stronger in contexts in which values are shared by the majority of people. Thus, the intergenerational correlation of worklessness should be lower in countries in which social norms are in favor of female participation in the labor market (e.g., Nordic, Continental, and Eastern countries) and should be higher in countries in which women are expected to be the main family caregivers (e.g., Mediterranean countries). However, it may also be that the transmission of attitudes toward paid work within families prevails over the social norms. Parental views about the importance of paid work may have persistent effects on their children's choices (Mooi-Reci and Bakker 2015).

Third, the extent of the effect related to the social channel (i.e., family networks) is likely to be affected by labor market institutions, such as the development and efficiency of public employment services (PES), the extent of ALMP, and so forth. The intergenerational correlation of worklessness should be lower in countries in which recourse to PES for finding a job is more widespread (e.g., Continental and Eastern countries) and in which participation in ALMP is high (e.g., Nordic and Continental countries). It should also be lower in countries in which hiring is more competitive and labor markets are more liberal (e.g., English-speaking countries), whereas it should be higher in countries in which family and informal networks matter more for finding a job (e.g., Mediterranean countries).

Finally, the genetic channel should become more relevant in countries with more competitive labor markets and education systems and with higher youth unemployment rates.

Based on the preceding discussion, our hypothesis is that the extent of the intergenerational correlation of worklessness is greater in countries characterized by prolonged permanence in the parental home, low levels of borrowing among young people, social norms based on traditional gender roles and a familialistic welfare system (in which women are expected to provide care to frail family members), less efficient and/or developed PES and education and training institutions, less efficient youth support services, low participation in ALMP, and a less liberal labor market. In particular, we expect the extent of the
intergenerational correlation of worklessness to be lower in Nordic, Englishspeaking, and Continental countries and to be greater in Mediterranean and Eastern countries.

This chapter contributes to the existing literature on the intergenerational correlation of worklessness by distinguishing between the effect of mothers' and fathers' worklessness on their sons' and daughters' employment status (considered separately). From previous studies, we expect that having had a working mother reduces female worklessness, whereas having had a working father reduces male worklessness. However, we have no prior hypotheses about the effect of fathers' working conditions on their daughters' employment or about the effect of mothers' working conditions on their sons' employment. Indeed, whereas the effect of the economic channel should be similar for both sons and daughters, the effects related to the cultural and social channels might be more differentiated across genders.

In addition to parental gender role attitudes, husbands' attitudes can also influence female participation in paid employment. There is evidence in the literature of a link between the labor market participation of women and that of their mother-in-laws via their husbands/sons (Fernández et al. 2004; Kawaguchi and Miyazaki 2009; Farré and Vella 2013). In other words, women married to men whose mothers worked are more likely to be employed themselves. Fernández 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 toward housework that make them better partners for working women. In this chapter, we examine whether the working condition of the mother-in-law plays a role in explaining female employment in all European countries or only in some of them.

### 10.3. DATA AND ESTIMATION METHODOLOGY

This study is based on European Union Statistics on Income and Living Conditions (EU-SILC) data, which encompass extensive and comparable crosssectional and longitudinal microdata at both the household and the individual level in 26 European countries. We use the 2011 wave because it provides substantial information on parental education and occupation through the ad hoc module on the intergenerational transmission of disadvantages. We select a sample of young people aged $25-34$ years. ${ }^{6}$ We then model their employment status (employed; not in employment, education, or training (NEET); ${ }^{7}$ or in education) as a function of individual characteristics at the time of the interview and of family educational and occupational background in the period when the individual was approximately 14 years old. In order to estimate the intergenerational correlation of worklessness, we consider as workless young adults who are

NEET at the time of the interview and parents who were not in paid work when their children were adolescents.

The descriptive and econometric analyses are carried out separately for five groups of countries that are representative of the great heterogeneity of European labor market institutions and welfare systems: ${ }^{8}$ Nordic (DK, FI, NO, and SE), Continental (AT, BE, CH, DE, FR, and NL), English-speaking (IE and UK), Mediterranean (CY, EL, ES, IT, MT, and PT), and Eastern European (BG, CZ, EE, HU, HR, PL, RO, and SK). We grouped countries according to our expectations about the effects of the various intergenerational transmission channels discussed in Section 10.2. These country groups also correspond to the classification adopted by Walther (2006), who defines different regimes of youth transitions. Eastern European countries are treated as a separate group because, according to Fenger (2007), half a century of communist rule has left institutional legacies that set Eastern European countries apart from other welfare systems.

We model the individual choice with respect to employment status as a multinomial logit model. Given that fathers' and mothers' employment conditions during their children's adolescence may impact differently on the labor market outcomes of their sons and daughters, we run separate analyses for young males and females. The set of control variables includes the following:

1. Individual characteristics: Age, educational attainment (at most lower secondary, at most upper secondary, and tertiary education), citizenship (individuals from non-EU countries), and motherhood status (young females with at least one child) ${ }^{9}$
2. Partner's educational attainment (at most lower secondary, at most upper secondary, and tertiary education)
3. Cohabitation with parents at the time of the interview
4. Presence of parents when the young person was 14 years old (both parents present, only one parent present, or no parents present)
5. Parents' characteristics when the young person was 14 years old: Employment status (employed), occupation (in a high-status occupation such as manager, professional, technician, or associate professional), and education level (tertiary education)
6. Mother-in-law's employment status (employed) when the husband/wife was aged approximately 14 years ${ }^{10}$
7. Country and quarter of the interview dummies

Table 10.1 shows some descriptive statistics regarding our sample of analysis. Cross-country differences in individual characteristics are in line with what is expected from official statistics. Nordic and Continental countries exhibit the highest shares of employed young people: More than $80 \%$ of males and more than $70 \%$ of females are in employment. They also show the lowest shares of NEETs. By contrast, Mediterranean and Eastern European countries record the

Table 10.1 Descriptive statistics of young people by country group and gender (individuals aged 25-34 years in 2011)

|  | Nordic countries |  | English-speaking countries |  | Continental countries |  | Mediterranean counties |  | 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 approximately age 14 years) |  |  |  |  |  |  |  |  |  |  |
| 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 approximately age 14 years)

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 nonworking mother | 0.12 | 0.14 | 0.23 | 0.27 | 0.20 | 0.20 | 0.23 | 0.25 | 0.08 | 0.10 |

[^0]highest shares of NEETs-approximately $20 \%$ of males and more than $30 \%$ of females-whereas the English-speaking countries are somewhere in between, with high shares of employed young men and high shares of young women as NEETs. ${ }^{11}$ 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 Mediterranean and Eastern countries have remarkably high shares of young individuals with low education levels. Generally, females are more educated than males. Mediterranean countries stand out for the lowest share of young people with at least one child and for a very high proportion of young adults living with their parents.

Our main interest is in examining the way in which young people's employment outcomes vary according to their parents' working condition when the young people were aged approximately 14 years. First, we consider both one- and two-parent families because this is a policy-relevant distinction and also because the share of young people who grew up with only one parent is not negligible. Indeed, as shown in Table 10.1, in Nordic, English-speaking, and Continental countries, for almost one out of five individuals in our sample, only one parent was present when the individual was aged approximately 14 years. However, for this group we consider only lone mother households, distinguishing between working and nonworking mothers, because the share of lone father families is very low and generally the lone father is employed.

Second, for two-parent households, we distinguish between dual-earner (or work-rich) families (in which both parents were working), male-breadwinner families (in which only the father was working), female-breadwinner families (in which only the mother was working), and workless (or work-poor) families (in which neither parent was working). ${ }^{12}$ Table 10.1 confirms the findings of Anxo et al. (2007) and Van Dongen (2009), showing that the dual-earner model predominates in Nordic and Eastern countries, whereas the male-breadwinner model predominates in the Mediterranean countries.

Table 10.2 reports the key descriptive statistics for our subsequent empirical analysis: It shows the shares of young people (aged 25-34 years in 2011) by employment status (employed, NEET, and in education), household employment structure during adolescence, and group of countries. As expected, the share of NEETs increases for both males and females, moving from work-rich to workpoor households (in both one- and two-parent households). Three other, not so well known stylized facts appear in Table 10.2. First, no systematic differences emerge in the shares of students (in this age group) across household employment structures. Second, within workless families, the youth employment condition is more problematic in two-parent than in one-parent families (with the sole exception of males in Nordic countries). Third, in all country groups, daughters of lone working mothers display better employment outcomes than those who grew up in a male-breadwinner family. For sons, this is not always the case: Sons of lone working mothers are better off in English-speaking countries, whereas

Table $\mathbf{1 0 . 2}$ Youth employment status by household employment structure, country group, and gender (individuals aged 25-34 years 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 |
|  |  |  |  |  |  |  |  |  |  | (continued) |

## Table 10.2 Continued

|  | Nordic countries |  | English-speaking countries |  | Continental countries |  | Mediterranean countries |  | Eastern countries |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Males | Females | Males | Females | Males | Females | Males | Females | Males | Females |
| 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 nonworking 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 |

Notes: For country groups, see notes to Table 10.1. Household employment structure refers to when young people were aged approximately 14 years.
Source: Authors' calculation based on EU-SILC 2011 cross-sectional data.
no relevant differences emerge in the other country groups. In Section 10.4, we verify whether these differences remain after controlling for individual and country characteristics.

### 10.4. RESULTS

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

### 10.4.1. Marginal effects

The estimated marginal effects of the multinomial logit models for the five country groups are shown in Tables S10.1-S10.5 (see Supplementary Material). Selected results regarding the effect of parents' working status on youth employment outcomes are reported in Table A10.2 in the Appendix. Regarding individual characteristics, age increases females' employment probability in all country groups and reduces their probability of being NEET, whereas it has only weak effects on male employment outcomes. Educational attainments have, as expected, very large and significant effects in all country groups for both men and women: The higher the education level, the higher is the employment probability and the lower is the probability of being NEET. It is worth noting that the marginal effects are greater for females than for males, suggesting that education plays a more important role for women in avoiding poor labor market outcomes and accessing employment. ${ }^{13}$ For young women, both living in a couple and having children generally reduce the probability of being employed and increase that of being NEET. However, although the effects of motherhood are significant in all country groups, those associated with living in a couple are significant only in Mediterranean and Eastern countries. ${ }^{14}$ For young men, living in a couple either has no effect on their employment outcomes or the effects go in the opposite direction than for women. English-speaking countries are the only exception: Here, young males living with a partner have a higher probability of being NEET. Young individuals who still live with their family of origin are less likely to be employed and more likely to be NEET in all country groups, although the magnitude of the effect is smaller for men than for women. ${ }^{15}$

The cultural and social capital of parents, captured by their education level and type of occupation when their children were aged approximately 14 years, does not appear to have systematic effects on the employment status of young adults. ${ }^{16}$ The working conditions of parents during their children's adolescence, instead, seem to play a more decisive role, with noticeable differences between young women and young men across Europe. For young women, having had a working mother increases the probability of being employed and reduces that of being NEET in all country groups but the 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. For young men, having had a working father during adolescence matters only in Nordic, Mediterranean, and Eastern countries, where it increases the probability of being employed and decreases that of being NEET. These effects are reinforced in Mediterranean and Eastern countries if the individual also had a working mother. Interestingly, having had a working mother positively affects male labor market outcomes also in English-speaking and Continental countries, where the working status of the father has no significant effects.

In other words, having had a working mother during adolescence reduces the likelihood of being workless for both sons and daughters in all country groups except the Nordic countries. The effects of fathers' working conditions, by contrast, are less widespread. Fathers' employment is important for both sons and daughters in the Mediterranean and Eastern countries, only for daughters in the English-speaking countries, and only for sons in the Nordic countries.

Interestingly, we find evidence of a significant "mother-in-law effect" for women in Continental, Mediterranean, and Eastern countries. Being married to a partner whose mother was working during his adolescence is associated with a higher probability for women of being employed and a lower probability of being NEET, with larger effects in the 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 his spouse's adolescence increases male employment probability and decreases the probability of being NEET.

### 10.4.2. Predicted outcome probabilities

Considering only marginal effects does not allow us to fully capture the differences between young people with respect to their parents' working condition during adolescence. Thus, in this section, we compare, ceteris paribus, the overall effect of having lived in a specific household type-for example, in a two-parent work-rich household, in a two-parent work-poor household, or with a nonworking lone mother. To do this, we first 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 education level and the presence and work experience of parents. ${ }^{17}$ Second, we test whether the probability associated with a particular household type is larger or smaller than the others, and we compute the odds of being NEET for young adults who grew up in two different household types. ${ }^{18}$ Table 10.3 shows some selected odds ratios for young adults with a high school diploma and a university degree, who represent the majority of our sample.

Table 10.3 NEET odds ratios of young people by household employment structure, gender, and country groups (individuals aged 25-34 years in 2011)

| 2P-0W | $\mathrm{P}(\mathrm{N} \mid 2 \mathrm{P}-\mathrm{FW})$ | $\mathrm{P}(\mathrm{N} \mid 2 \mathrm{P}-0 \mathrm{~W})$ | $\mathrm{P}(\mathrm{N} \mid 1 \mathrm{P}-0 \mathrm{~W})$ | $\mathrm{P}(\mathrm{N} \mid 1 \mathrm{P}-0 \mathrm{~W})$ | $\mathrm{P}(\mathrm{N} \mid 1 \mathrm{P}-1 \mathrm{~W})$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2P-2W | P(N\|2P-2W) | P(N\|2P-FW) | P(N\|1P-1W) | P(N\|2P-0W) | $\mathrm{P}(\mathrm{N} \mid 2 \mathrm{P}-\mathrm{FW})$ |


| Young individuals with a high school diploma (medium-educated individuals) |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Females |  |  |  |  |  |  |
| Nordic countries | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| English-speaking countries | 1.52 | 1.21 | 1.26 | 1.00 | 1.00 | 1.00 |
| Continental countries | 1.60 | 1.33 | 1.00 | 1.00 | 1.00 | 1.00 |
| Mediterranean countries | 1.41 | 1.20 | 1.17 | 1.00 | 1.00 | 1.00 |
| Eastern countries | 1.59 | 1.38 | 1.16 | 1.00 | 0.83 | 0.82 |
| Males |  |  |  |  |  |  |
| Nordic countries | 1.92 | 1.00 | 1.81 | 1.00 | 1.00 | 1.00 |
| English-speaking countries | 1.68 | 1.55 | 1.00 | 1.96 | 1.00 | 1.00 |
| Continental countries | 1.51 | 1.33 | 1.00 | 1.00 | 1.00 | 1.00 |
| Mediterranean countries | 2.35 | 1.17 | 2.01 | 1.00 | 1.00 | 1.38 |
| Eastern countries | 2.06 | 1.42 | 1.45 | 1.39 | 1.00 | 1.00 |
| Young individuals with a university degree (highly educated individuals) |  |  |  |  |  |  |
| Females |  |  |  |  |  |  |
| Nordic countries | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| English-speaking countries | 1.77 | 1.28 | 1.39 | 1.00 | 1.00 | 1.00 |
| Continental countries | 1.67 | 1.36 | 1.00 | 1.00 | 1.00 | 1.00 |
| Mediterranean countries | 1.50 | 1.23 | 1.22 | 1.00 | 1.00 | 1.00 |
| Eastern countries | 1.70 | 1.44 | 1.19 | 1.00 | 0.80 | 0.80 |
|  |  |  |  |  |  | (cont |

Table 10.3 Continued

|  | $\begin{aligned} & \text { 2P-0W } \\ & \text { 2P-2W } \end{aligned}$ | $\begin{aligned} & \mathrm{P}(\mathrm{~N} \mid 2 \mathrm{P}-\mathrm{FW}) \\ & \mathrm{P}(\mathrm{~N} \mid 2 \mathrm{P}-2 \mathrm{~W}) \end{aligned}$ | $\begin{aligned} & \mathrm{P}(\mathrm{~N} \mid 2 \mathrm{P}-0 \mathrm{~W}) \\ & \mathrm{P}(\mathrm{~N} \mid 2 \mathrm{P}-\mathrm{FW}) \end{aligned}$ | $\begin{aligned} & \mathrm{P}(\mathrm{~N} \mid 1 \mathrm{P}-0 \mathrm{~W}) \\ & \mathrm{P}(\mathrm{~N} \mid 1 \mathrm{P}-1 \mathrm{~W}) \end{aligned}$ | $\begin{aligned} & \mathrm{P}(\mathrm{~N} \mid 1 \mathrm{P}-0 \mathrm{~W}) \\ & \mathrm{P}(\mathrm{~N} \mid 2 \mathrm{P}-0 \mathrm{~W}) \end{aligned}$ | $\begin{aligned} & \mathrm{P}(\mathrm{~N} \mid 1 \mathrm{P}-1 \mathrm{~W}) \\ & \mathrm{P}(\mathrm{~N} \mid 2 \mathrm{P}-\mathrm{FW}) \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Males |  |  |  |  |  |  |
| Nordic countries | 1.94 | 1.00 | 1.83 | 1.00 | 1.00 | 1.00 |
| English-speaking countries | 1.71 | 1.57 | 1.00 | 2.06 | 1.00 | 1.00 |
| Continental countries | 1.53 | 1.34 | 1.00 | 1.00 | 1.00 | 1.00 |
| Mediterranean countries | 2.43 | 1.18 | 2.07 | 1.00 | 1.00 | 1.40 |
| Eastern countries | 2.20 | 1.46 | 1.51 | 1.45 | 1.00 | 1.00 |

Notes: For country groups, see notes to Table 10.1. Household employment structure refers to when young people were aged approximately 14 years. Numbers in bold are significantly different from 1 at $5 \%$ significance level.
2P-2W, two-parent households with both parents working; 2P-FW, two-parent households with only the father working; 2P-MW, two-parent households with only the mother working; 2P-oW, two-parent households with neither parent working; $1 \mathrm{P}-\mathrm{MW}$, lone mother households with working mother; $1 \mathrm{P}-\mathrm{oW}$, lone mother households with nonworking mother.
Source: Authors' calculation based on EU-SILC 2011 cross-sectional data.

Inspection of Table 10.3 shows that, ceteris paribus, the probability of being NEET is substantially higher for young people who grew up in two-parent workpoor households as opposed to work-rich families. Females with a high school diploma and whose parents were workless during their adolescence have an approximately $40 \%-60 \%$ higher probability of being NEET than those whose parents were working (except in the Nordic countries). For medium-educated males, the difference is much larger: It ranges from $50 \%$ to more than $100 \%$ (and is very large even in the Nordic countries). These percentages are even larger for highly educated young people.

The odds between work-poor and male-breadwinner families, and between the latter and dual-earner households, reveal the significant and widespread effect of the mother's working condition and the less generalized (but relevant where it occurs) effect of fathers' employment. Young people who grew up in malebreadwinner families have, independently of their gender, a $20 \%-60 \%$ higher probability of being NEET than those who grew up in dual-earner households in all country groups except the Nordic countries. In other words, having had a working mother reduces the NEET probability by $15 \%-38 \%$ for both males and females, whatever their education level.

Fathers' employment has more differentiated effects both by gender and across countries. In English-speaking, Mediterranean, and Eastern countries, females who grew up in work-poor households have a $15 \%-40 \%$ higher probability of being workless compared to those who grew up in male-breadwinner families. In other words, having had a working father reduces females' NEET probability by $13 \%-29 \%$ in these countries, whereas it has no significant effects in Nordic and Continental countries. For males, fathers' worklessness during their adolescence has very large effects in Nordic and Mediterranean countries, moderate effects in Eastern countries, and no effects in English-speaking and Continental countries. In the Nordic and Mediterranean countries, males' probability of being NEET is $80 \%-100 \%$ higher if they grew up in a work-poor household, compared to those who grew up in a male-breadwinner family, whatever the education level. In Eastern countries, medium-educated (highly educated) males coming from work-poor households have a $45 \%$ ( $51 \%$ ) higher likelihood of being NEET compared to young men who grew up in male-breadwinner families.

Among children of lone mothers, in all country groups, no significant differences emerge in females' risk of being NEET according to the lone mother's working condition. Sons of workless lone mothers, by contrast, have a much higher risk of being workless than sons of working lone mothers in Englishspeaking and Eastern countries (approximately $100 \%$ and $40 \%$, respectively).

Finally, we can compare the situation of children who grew up in one- and two-parent households. Two comparisons deserve attention: (1) between workpoor families with one and two parents and (2) between lone working mothers and male-breadwinner families. Ceteris paribus, children who grew up in workpoor families have the same probability of being NEET, independently of whether

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both parents or only one parent was present. The only exception regards young women in Eastern countries, for whom the presence of only the mother actually reduces their probability of being workless. Interestingly, children who grew up with a lone working mother are not disadvantaged compared to those who grew up in a male-breadwinner two-parent household, except for young men in Mediterranean countries. In Eastern countries, daughters whose lone mother was working are even less likely to be workless compared to those who grew up in male-breadwinner families. These results suggest that the relative advantage of children of lone working mothers (compared to young people coming from male-breadwinner families) that emerged from the descriptive analysis is generally explained by different individual characteristics. Indeed, when controlling for individual attributes, no significant differences in the NEET risk are found between young people who grew up in these two household types, with very few exceptions.

In summary, some unexpected qualitative results emerge from our analysis. First, male worklessness is affected only by mothers' employment in Englishspeaking and Continental countries and only by fathers' employment in Nordic countries. Both parents play a role in Eastern and Mediterranean countries. They have similar effects in Eastern countries, whereas fathers' employment is much more relevant in Mediterranean countries. Second, young females' worklessness depends on the working condition of both parents in English-speaking, Mediterranean, and Eastern countries, whereas only mothers' employment seems to matter in Continental countries. Third, the presence of only one parent does not lead to a systematic disadvantage. In particular, no differences emerge in children's worklessness risk between one- and two-parent work-poor households or between lone working mothers and male-breadwinner families (with very few exceptions).

In order to compare the magnitude of these effects, we consider the percentage increase in the NEET risk associated with the worklessness status of parents (ceteris paribus). We use this percentage increase as our measure of the extent of the intergenerational transmission of worklessness in the various countries. In Section 10.2, we expected to find a larger intergenerational correlation of worklessness in Mediterranean and Eastern countries and a smaller correlation in Nordic, English-speaking, and Continental countries. Our empirical results are partly in line with these expectations, and partly they contradict them.

As expected, the intergenerational transmission of worklessness is small, actually null, in Nordic countries, but only for daughters. Surprisingly, the transmission of worklessness from fathers to sons is particularly large in this country group (males' NEET risk increases by $80 \%$ if the father was workless during their adolescence compared to the case in which he was working). As expected, the intergenerational transmission of worklessness is larger in Mediterranean countries, but only for sons, and only with respect to fathers' employment. For
daughters, the effect of mothers' worklessness (and of both parents) is actually lower in Mediterranean countries than in other country groups.

Considering the two types of relationship that received more attention in the literature (that between mothers and daughters and that between fathers and sons), our results show that, unexpectedly, the transmission of worklessness between mothers and daughters is similar in all country groups (except the Nordic countries), although it is slightly larger in Eastern and Continental countries. The transmission between fathers and sons, by contrast, is more differentiated: It is higher in Mediterranean and Nordic countries and null in English-speaking and Continental countries.

Given that in our analysis we control for variables that possibly capture the influence of intergenerational transmission channels (i.e., parental employment status, education level, and type of occupation), unexpected findings may be the result of the effect of unobserved cultural factors or attitudes (i.e., unobservable family traits for which we cannot control) that are transmitted within the family and that induce individuals to adopt a labor market behavior that deviates from social norms. Or, their behavior may result from the role of informal social networks. In other words, social networks, which are supposed to play a role mainly in Mediterranean countries, matter in helping people find a job also in the other country groups.

Finally, our analysis reveals some important innovative evidence of the effects of these relationships, which has not to date been acknowledged in the literature on intergenerational transmission of inequalities and access to employment. Interestingly, the transmission of worklessness between mothers and sons is present in all country groups (except the Nordic countries); it is highest in English-speaking countries and lowest in Mediterranean countries. The transmission of worklessness between fathers and daughters is less widespread: null in Continental and Nordic countries, highest in English-speaking countries, and somewhat lower in Mediterranean and Eastern countries.

### 10.5. CONCLUSIONS

This chapter has examined how the intergenerational transmission of worklessness varies across different groups of European countries-characterized by distinct labor market institutions and welfare systems-and according to the gender of parents and the gender of their children. To this end, we have used a sample of young males and females aged 25-34 years from the EU-SILC cross-sectional data (2011), as well as information about the working conditions of their parents when the young people were aged approximately 14 years (from the ad hoc module on the intergenerational transmission of disadvantages).

Our empirical analysis has revealed that, ceteris paribus, having had a workless mother during adolescence increases the likelihood of being workless at

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approximately 30 years of age for both sons and daughters in all country groups but the Nordic countries. The magnitude of the effect is quite similar across all country groups: The NEET risk for both males and females increases by approximately $20 \%-35 \%$ if the mother was workless, with somewhat larger effects in Eastern countries (by 40\%) and between mothers and sons in English-speaking countries (by 55\%).

Conversely, the effects of fathers' working conditions are less widespread. Fathers' employment is important for both sons and daughters in Mediterranean and Eastern countries, only for daughters in English-speaking countries, and only for sons in Nordic countries. The magnitude of the effect is also more differentiated: Males' NEET risk increases by $80 \%-100 \%$ if their father was workless in Mediterranean and Nordic countries and only by $48 \%$ if he was workless in Eastern countries. The transmission between fathers and daughters is much smaller: Approximately $15 \%-20 \%$ in Mediterranean and Eastern countries and 30\% in English-speaking countries.

Unexpectedly, the percentage increase in the NEET risk associated with fathers' worklessness (ceteris paribus) is very large in Nordic countries and quite similar to that in Mediterranean countries. Again unexpectedly, the effect of mothers' worklessness is quite similar in all country groups (except in Nordic countries) and actually lower in Mediterranean countries. These results suggest that the consequences of different labor market institutions, family models, and welfare systems for the intergenerational transmission of worklessness are not very clear-cut. In particular, more research is needed to understand the link between fathers' and sons' employment experiences in Nordic and Mediterranean countries.

Another interesting result of our analysis is that the presence of only one parent does not lead to a systematic disadvantage. In particular, no differences emerge in the probability of being workless for young people growing up in oneand two-parent work-poor households or between those who grew up with lone working mothers or in male-breadwinner families (with very few exceptions). These results suggest that a key challenge for policymakers is that policies should not be limited to enhancing the employment probability of disadvantaged youth; rather, they should consider in parallel the difficulties faced by parents of teenagers. In fact, the adolescents who grew up in the years of the Great Recession with workless parents, particularly workless mothers, might suffer in the future when they start their working life. Perhaps the strongest policy implication that can be drawn from our analysis is that policymakers should pay attention to mothers' employment not only when their children are in their early years of life but also during the children's adolescence. Helping mothers to remain in or re-enter the labor market might have important consequences for their children's future employment prospects. Last, our results also suggest a need for policy initiatives aimed at fostering equality of opportunities by reducing the effects of parental background characteristics on individuals' own life chances.

## NOTES

1 For the purpose of this research, people are defined as "workless" if they are unemployed or inactive. We do not distinguish between these latter two states because of the difficulties involved in differentiating between them. In particular, discouraged worker effects or entitlement rules for welfare benefits may bias the responses of individuals. Moreover, discouraged workers (i.e., available to work but not searching for a job), usually classified as inactive, are more similar in terms of behavior to the unemployed than to other inactive individuals (Centeno and Fernandes 2004).
2 Some of these studies are interested in determining whether there is a causal link between fathers' and children's worklessness. Empirical findings for Norway (Ekhaugen 2009), Sweden (Corak, Gustafsson, and Österberg 2004), the United Kingdom (Johnson and Reed 1996; O'Neill and Sweetman 1998; Macmillan 2010), and Germany (Mader et al. 2015) indicate a positive intergenerational correlation of unemployment but not a clear causal effect. Differently, Corak, Gustafsson, and Österberg (2004) and Oreopoulos et al. (2008) find evidence of a causal intergenerational effect in Canada.
3 Reliance on friends and relatives when searching for a job has increased over time. The effectiveness of networks depends on the characteristics of the jobseeker, his or her social ties, and the labor market institutions. For instance, unemployed women are less likely than unemployed men to rely on informal networks, and more educated jobseekers are more likely to count on friends and relatives when searching for a job (Ioannides and Datcher Loury 2004).
4 These hypotheses have been formulated on the basis of the review of the literature on the various channels through which parents' employment status during young people's adolescence might affect their children's employment outcomes when adults. See Berloffa, Matteazzi, and Villa (2017) for a review of the literature highlighting the channels through which the intergenerational transmission of worklessness might operate.
5 According to Eurostat statistics, the mean age of leaving the parental home is 21 years in Nordic countries, 24.5 years in English-speaking and Continental countries, and approximately 29 years in Mediterranean and Eastern countries. According to statistics from the Organization for Economic Co-operation and Development (OECD), the household debt is approximately $203 \%$ of net disposable income in Nordic countries, $180 \%$ in English-speaking countries, $135 \%$ in Continental countries, $118 \%$ in Mediterranean countries, and 65\% in Eastern countries. Approximately $89 \%$ of British students enrolled in tertiary education have a student loan, compared to $70 \%$ in Norway; $43 \%$ in Sweden; $30 \%$ in Denmark, Finland, and the Netherlands; and slightly less than 20\% in Hungary and Estonia.

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6 We cannot include individuals younger than age 25 years because all the variables concerning family characteristics in the period when the individual was approximately 14 years old can be collected only for individuals aged between 25 and 60 years at the time of the interview.
7 Individual employment status is defined on the basis of the self-reported economic status at the time of the interview.
8 We cannot perform single-country analyses because of limited sample size at the country level. However, in order to account for cross-country heterogeneity within country groups, we control for country-fixed effects in our econometric models.
9 We do not control for fatherhood status because of the very low percentage of young fathers in education or NEET.
10 This information is not available for Nordic countries because only the respondent reports parental background information.
11 The share of NEETs is higher in Finland than in the other Nordic countries, and it is similar to what is observed in English-speaking countries. Within the Continental group, the Netherlands stands out for the lowest share of NEETs, which is close to that of the Nordic countries.
12 In the literature, two main methods are adopted to classify households according to the employment status of household members. The first distinguishes between workless and non-workless households (as in our approach); the second classifies households according to a work-intensity indicator (Cantillon and Vandenbroucke 2014). We cannot use this indicator because retrospective information on hours and months worked is not available in our data set.
13 For young women, we find an additional positive effect on the probability of still being 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 young men in all country groups, except for the English-speaking countries.
14 In Continental, Mediterranean, and Eastern countries, motherhood also reduces the probability of being in education.
15 Generally, young people still living with their parents are also more likely to be in education.

16 When the results are significant, they generally increase the probability that the young person will still be in education (see also Filandri, Nazio, and O'Reilly, this volume).
17 For these variables, we set the relevant dummies equal to either 1 or 0 according to the type of family that we want to consider. To compute the probabilities, we use the estimated coefficients of the multinomial logit models, independently of their significance level.
18 We perform a series of one-sided tests because the direction of the difference between two probabilities is relevant for the analysis. For those pairs
of household types whose probabilities were not statistically different, we report an odds ratio equal to 1 .

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## APPENDIX

Table A10.1 Hypotheses about the intergenerational correlation (IC) of worklessness in different country groups by various channels of influence and related institutions

|  | Economic channel |  | Cultural channel | Social channel |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Leaving the parental home (average age on leaving the parental home) ${ }^{\text {a }}$ | Levels of borrowing (housing debts and student loans) ${ }^{\text {b }}$ | Social normsfemale activity rate ${ }^{\text {c }}$ | PES (\% of jobseekers using PES) ${ }^{\text {d }}$ | Activation support (ALMP participants per 100 persons wanting to work) ${ }^{e}$ | Genetic channel | Expected IC of worklessness |
| Nordic countries | Low IC (early economic independence) | Low IC (high levels of borrowing) | Low IC (high female activity rate) | High IC (low \%) Exception: SE (quite high \%) | Low IC (high \%) | Low IC | Low IC |
| Englishspeaking countries | Medium IC (quite early economic independence) | Low IC (high levels of borrowing) | Medium-low IC (quite high female activity rate) <br> Exception: IE (moderate activity rate) | High IC (low \%) | n.a. | High IC | Medium IC |
| Continental countries | Medium IC (quite early economic independence) | Medium IC (medium levels of borrowing) Exception: low IC in NL (high levels of borrowing) | Medium-low IC (quite high female activity rate) <br> Exceptions: BE and LU (quite low activity rate) | Medium IC (quite high \%) Exception: NL (low \%) | Low IC (high \%) | Medium IC | Medium-Low IC |
| Mediterranean countries | High IC (late economic independence) | Medium IC (medium levels of borrowing) | High IC (low female activity rate) <br> Exception: PT (quite high activity rate) | High IC (low \%) <br> Exceptions: EL and MT (moderate \%) | Medium IC (moderate \%) <br> Exception: ES (high \%) | High IC | High IC |

Table A10.1 Continued

|  | Economic channel |  | Cultural channel <br> Social norms- <br> female activity rate ${ }^{\text {c }}$ | Social channel |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Leaving the parental home (average age on leaving the parental home) ${ }^{\text {a }}$ | Levels of borrowing (housing debts and student loans) ${ }^{\text {b }}$ |  | PES (\% of jobseekers using PES) ${ }^{\text {d }}$ | Activation support (ALMP participants per 100 persons wanting to work) ${ }^{e}$ | Genetic channel | Expected IC of worklessness |
| Eastern European countries | High IC (late economic independence) | High IC (low levels of borrowing) <br> Exceptions: HU and EE (quite high use of student loans) | Medium-high IC (medium female activity rate) <br> Exceptions: HU and RO (low activity rate) | Low IC (high \%) <br> Exceptions: RO, EE, and BG (moderate to low \%) | High IC (low \%) | High IC | Medium-High IC |

Notes: Country groups: Nordic (DK, FI, NO, and SE); Continental (AT, BE, CH, DE, FR, and NL); English-speaking (IE and UK); Mediterranean (CY, EL, ES, IT, MT, and PT); and Eastern European (BG, CZ, EE, HU, HR, PL, RO, and SK). See Section 10.3 for more details.
${ }^{\text {a }}$ Eurostat's estimated average age of young people leaving the parental household by sex (2011).
bOECD's data on household debt as a percentage of net disposable income (2014) and on public loans to students in tertiary type A education (2011).
'Eurostat's activity rate for women aged 15-64 years (2011).
${ }^{\text {d Public employment services (European Commission, Directorate-General for Employment, Social Affairs and Inclusion). }}$
EEurostat's database on labor market policies.
ALMPs, active labor market policies; n.a. = not available; PES, public employment services.

Table A10.2 Predicted outcome probabilities (Pr) and marginal effects (M) for selected variables from the estimation of multinomial logit models

| Country group | Estimate (E) | Females |  |  |  |  |  | Males |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Employed |  | NEET |  | In education |  | Employed |  | NEET |  | In education |  |
|  |  | E | St. <br> Err. | E | St. <br> Err. | E | St. <br> Err. | E | St. <br> Err. | E | St. <br> Err. | E | St. Err. |
| Nordic | Pr | 0.798 *** | 0.013 | $0.139 * * *$ | 0.011 | 0.063 *** | 0.008 | 0.907 *** | 0.009 | 0.066*** | 0.007 | 0.028*** | 0.005 |
|  | M: Working father | 0.023 | 0.042 | 0.006 | 0.035 | -0.029 | 0.025 | $0.059 * *$ | 0.023 | -0.040** | 0.020 | -0.019* | 0.011 |
|  | M : Working mother | 0.027 | 0.033 | -0.036 | 0.026 | 0.009 | 0.020 | -0.003 | 0.022 | -0.004 | 0.018 | 0.006 | 0.012 |
|  | M: Working lone mother | 0.022 | 0.070 | -0.031 | 0.051 | 0.009 | 0.046 | 0.049 | 0.041 | -0.009 | 0.035 | -0.040** | 0.020 |
|  | M: Working mother-in-law | - |  | - |  | - |  | - |  | - |  | - |  |
| Englishspeaking | Pr | $0.710 * * *$ | 0.015 | 0.160 *** | 0.015 | 0.022 *** | 0.004 | $0.886 * * *$ | 0.012 | 0.110 **** | 0.012 | 0.005*** | 0.002 |
|  | M: 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 |
|  | M : 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 |
|  | M: 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 |
|  | M: 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 |
|  |  |  |  |  |  |  |  |  |  |  |  |  | (continu |

Table A10.2 Continued

| Country group | Estimate (E) | Females |  |  |  |  |  | Males |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Employed |  | NEET |  | In education |  | Employed |  | NEET |  | In education |  |
|  |  | E | St. <br> Err. | E | St. <br> Err. | E | St. <br> Err. | E | St. <br> Err. | E | St. <br> Err. | E | St. <br> Err. |
| Continental | Pr | $0.759 * * *$ | 0.006 | 0.187 *** | 0.006 | 0.018 *** | 0.002 | 0.921 *** | 0.005 | 0.063*** | 0.004 | 0.016 *** | 0.002 |
|  | M: 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 |
|  | M : 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 |
|  | M: 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 |
|  | M: 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 |
| Mediterranean | Pr | 0.682*** | 0.006 | 0.306*** | 0.006 | 0.012 *** | 0.002 | $0.808 \times \cdots \cdots$ | 0.006 | 0.184 *** | 0.006 | 0.009**** | 0.002 |
|  | M: 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 |
|  | M : Working mother | $0.056 * * *$ | 0.014 | -0.056*** | 0.014 | 0.000 | 0.002 | $0.031 \times *$ | 0.012 | -0.028** | 0.012 | -0.003* | 0.002 |
|  | M: 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 |
|  | M: 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 |


| Eastern | Pr | 0.691 *** | 0.005 | 0.307 *** | 0.005 | $0.002 * * *$ | 0.000 | 0.859 *** | 0.004 | $0.139 * * *$ | 0.004 | 0.002**** | 0.000 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | M 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 |
|  | M : 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 |
|  | M: 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 |
|  | M: Working mother-in-law | $0.033 * *$ | 0.015 | -0.033 ** | 0.015 | 0.000 | 0.001 | 0.036 *** | 0.012 | $-0.035 \cdots \cdots *$ | 0.012 | -0.001 | 0.001 |

 sample mean of the variables.
Source: EU-SILC 2011 data for young people aged 25-34 years; see text for details.

* $p<.10$.
** $p<.05$.
***p<.01.


## SUPPLEMENTARY MATERIAL

Table S10.1 Predicted outcome probability (Pr) and marginal effects ( $M f x$ ) in Nordic countries by gender

|  | 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. |
| Predicted outcome | $0.798 * * *$ | 0.013 | 0.139 *** | 0.011 | 0.063 \% ${ }^{\text {\% }}$ | 0.008 | $0.907 * * *$ | 0.009 | 0.066 *** | 0.007 | 0.028*** | 0.005 |
|  | Mfx | St. Err. | Mfx | St. Err. | Mfx | St. Err. | Mfx | St. Err. | Mfx | St. Err. | Mfx | St. Err. |
| Individual characteristics at the time of the interview |  |  |  |  |  |  |  |  |  |  |  |  |
| Age | $0.027 \times \cdots \cdots$ | 0.004 | $-0.011 \times * *$ | 0.003 | -0.016 $\ldots$ ** | 0.002 | 0.009 $* * *$ | 0.003 | 0.000 | 0.002 | $-0.010 * * *$ | 0.001 |
| Own education: medium | 0.158 *** | 0.041 | $-0.147 * * *$ | 0.035 | -0.012 | 0.023 | $0.060 \cdots * *$ | 0.021 | $-0.088 * * *$ | 0.015 | 0.028** | 0.014 |
| Own education: high | $0.217 * * * *$ | 0.043 | -0.180 *** | 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 | -0.055 * | 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 | $-0.034$ | 0.034 | -0.002 | 0.027 | 0.021 | 0.037 | -0.048** | 0.024 | 0.028 | 0.029 |
| Citizenship | -0.298*** | 0.067 | 0.189 *** | 0.054 | 0.109 *** | 0.030 | -0.052 | 0.051 | 0.081 ** | 0.040 | -0.029 | 0.028 |
| Living with parents | $-0.167 \times *$ | 0.057 | 0.162 **** | 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 | 0.056 | 0.037 | -0.033 | 0.026 | 0.075** | 0.035 | -0.026 | 0.021 | -0.049* | 0.028 |
| Motherhood | $-0.129 * * *$ | 0.024 | 0.140 **** | 0.021 | -0.010 | 0.013 | - | - |  | - |  |  |

## Presence of parents when the young person was aged 14 years

| Lone parent family | -0.005 | 0.069 | 0.039 | 0.049 | -0.034 | 0.046 | -0.035 | 0.037 | -0.003 | 0.030 | 0.039* | 0.021 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Parentless | 0.050 | 0.066 | -0.023 | 0.050 | -0.027 | 0.043 | 0.028 | 0.037 | -0.004 | 0.031 | -0.023 | 0.019 |
| Family background information |  |  |  |  |  |  |  |  |  |  |  |  |
| Working father | 0.023 | 0.042 | 0.006 | 0.035 | -0.029 | 0.025 | 0.059** | 0.023 | -0.040 ** | 0.020 | -0.019 * | 0.011 |
| Working mother | 0.027 | 0.033 | -0.036 | 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 | -0.031 | 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 | 0.038 | 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 | -0.053 * | 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 | 0.001 | 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 | 0.038 | 0.024 | 0.033 ** | 0.014 | -0.003 | 0.019 | -0.010 | 0.017 | 0.013 | 0.008 |
| Observations | 1,119 |  | 281 |  | 140 |  | 1,282 |  | 146 |  | 102 |  |

Notes: Dummies for country, quarter of interview, and missing information about parents' working status and education level are introduced. -, not controlled for. Marginal effects are computed at the sample mean of the variables.

* $p<.10$.
* ${ }^{2} p<.05$.
*** $p<.01$.

Table S10.2 Predicted outcome probability (Pr) and marginal effects (Mfx) in English-speaking countries by gender

|  | 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. |
| Predicted outcome probability | 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 | St. Err. | Mfx | St. Err. | Mfx | St. Err. | Mfx | St. Err. | Mfx | St. Err. | Mfx | St. <br> Err. |
| Individual characteristics at the time of the interview |  |  |  |  |  |  |  |  |  |  |  |  |
| Age | 0.016 \% ${ }^{\text {\% }}$ | 0.006 | -0.013 ** | 0.006 | -0.003 ** | 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 | - |  | - |  | - |  |

## Presence of parents when the young person was aged 14 years

| 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 |
| Family background information |  |  |  |  |  |  |  |  |  |  |  |  |
| 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 |
| Observations | 849 |  | 406 |  | 37 |  | 740 |  | 149 |  | 30 |  |

 sample mean of the variables.
$* p<.10$.
$* * p<.05$.
*** $p<01$.

Table S10.3 Predicted outcome probability (Pr) and marginal effects (Mfx) in Continental countries by gender

|  | 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. |
| Predicted outcome probability | 0.759 *** | 0.006 | 0.187 *** | 0.006 | 0.018 *** | 0.002 | 0.921 *** | 0.005 | 0.063*** | 0.004 | $0.016 * * *$ | 0.002 |
|  | Mfx | St. Err. | Mfx | St. Err. | Mfx | St. Err. | Mfx | St. Err. | Mfx | St. Err. | Mfx | St. Err. |
| Individual characteristics at the time of the interview |  |  |  |  |  |  |  |  |  |  |  |  |
| Age | 0.011 \%** | 0.002 | -0.006*** | 0.002 | -0.005**** | 0.001 | 0.004*** | 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 * ${ }^{\text {\% }}$ | 0.024 | 0.054** | 0.024 | 0.010*** | 0.004 | -0.031*** | 0.009 | $0.025 \cdots$ ** | 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 | - |  | - |  | - |  |

## Presence of parents when the young person was aged 14 years

| 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 |
| Family background information |  |  |  |  |  |  |  |  |  |  |  |  |
| 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 |
| Observations | 4,111 |  | 1,327 |  | 248 |  | 4,333 |  | 480 |  | 257 |  |

[^1]Table S10.4 Predicted outcome probability (Pr) and marginal effects ( $\mathrm{M} f \mathrm{fx}$ ) in Mediterranean countries by gender

|  | 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. |
| Predicted outcome probability | 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. |
| Individual characteristics at the time of the interview |  |  |  |  |  |  |  |  |  |  |  |  |
| 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 | $0.061 \times * *$ | 0.022 | -0.017 * | 0.009 |
| Living with parents | $-0.141 * * *$ | 0.018 | $0.128 \times * *$ | 0.018 | $0.013 \% * *$ | 0.004 | -0.097 | 0.014 | $0.088 \times * *$ | 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 | $0.187 \times * *$ | 0.016 | $-0.012 * * *$ | 0.003 |  |  |  |  |  |  |
| Presence of parents when the young person was aged 14 years |  |  |  |  |  |  |  |  |  |  |  |  |
| 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 |

## Family background information

| 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 <br> 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 |

Notes: Dummies for country, quarter of interview, and missing information about parents' working status and education level are introduced. Marginal effects are computed at the sample mean of the variables.

* $p<.10$.
** $p<.05$.
*** $p<.01$.

Table S10.5 Predicted outcome probability (Pr) and marginal effects (Mfx) in Eastern countries by gender

|  | 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. |
| Predicted outcome probability | 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. |
| Individual characteristics at the time of the interview |  |  |  |  |  |  |  |  |  |  |  |  |
| Age | $0.019 \times * *$ | 0.002 | -0.018 *** | 0.002 | -0.001 **** | 0.000 | 0.002 | 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 | $-0.127 \times$ ** | 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 |
| 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 |  |  |  |  |  |  |

## Presence of parents when the young person was aged 14 years

| 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 |
| Family background information |  |  |  |  |  |  |  |  |  |  |  |  |
| 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 |
| Observations | 6,406 |  | 3,239 |  | 226 |  | 7,939 |  | 1,710 |  | 231 |  |

[^2]
[^0]:    Notes: Nordic countries: DK, FI, NO, and SE; Continental countries: AT, BE, CH, DE, FR, and NL; English-speaking countries: IE and UK; Mediterranean countries: CY, EL, ES, IT, MT, and PT; Eastern European countries: BG, CZ, EE, HU, HR, PL, RO, and SK.
    Source: Authors' calculation based on EU-SILC 2011 cross-sectional data.

[^1]:    Notes: Dummies for country, quarter of interview, and missing information about parents' working status and education level are introduced. -, not controlled for. Marginal effects are computed at the sample mean of the variables.

    * $p<10$.
    $* * p<.05$.
    *** $p<.01$.

[^2]:    Notes: Dummies for country, quarter of interview, and missing information about parents' working status and education level are introduced. Marginal effects are computed at the sample mean of the variables

    * $p<.10$.
    ** $p<.05$.
    ***p < . O1.

