DEMOGRAPHIC RESEARCH
A peer-reviewed, open-access journal of population sciences

DEMOGRAPHIC RESEARCH

VOLUME 53, ARTICLE 15, PAGES 419–464
PUBLISHED 9 SEPTEMBER 2025
https://www.demographic-research.org/Volumes/Vol53/15
DOI: 10.4054/DemRes.2025.53.15

Research Article

Gendered labor market adjustments around marital and cohabiting union transitions during Europe's early cohabitation diffusion

Alícia Adserà

Federica Querin

Contents

Demographic Research: Volume 53, Article 15
Research Article

Gendered labor market adjustments around marital and cohabiting union transitions during Europe's early cohabitation diffusion

Alícia Adserà[1]

Federica Querin[2]

Abstract

BACKGROUND
While cross-sectional differences in hours worked, household income, and individual income among single, cohabiting, and married individuals are well documented, less is known about labor market changes that occur around the time of union transitions.

OBJECTIVE
This paper examines labor market dynamics surrounding changes in union status during a time when cohabitation was rising across Europe but had not yet become as widespread as it is now. It distinguishes transitions between individuals who start cohabiting, marry directly, and marry after cohabitation.

METHODS
Using the European Community Household Panel for 14 European countries in 1994–2001, this study assesses (1) differences in the level of both work income and hours worked for men and women across union status and (2) changes in household income, individual income, and hours worked at the time of transition from singlehood into either marriage or a nonmarital cohabiting union, and from cohabitation into marriage.

RESULTS
Men increase their work hours when entering their first marriage directly from singlehood but not if they were previously cohabiting. Conversely, women reduce both hours and income when they enter marriage (even if they were cohabiting before) but not when entering cohabiting unions.

[1] Corresponding author. Princeton University, Princeton, New Jersey, USA, and IZA, Bonn, Germany. Email: adsera@princeton.edu.
[2] University of Bologna, Bologna, Italy.

CONCLUSIONS
Getting married is a critical junction for women's reductions in hours worked and individual income, regardless of whether they previously cohabited. Men who directly marry increase their hours worked, unlike those who cohabit first.

CONTRIBUTION
This paper analyzes the labor market dynamics among individuals entering different union statuses, with a focus on gender differences and a distinction between direct marriages and those following cohabitation.

1. Introduction

Entering a union typically enables all members of a household to access more resources and to benefit from pooled incomes and economies of scale (Lersch 2017; Light 2004). At the individual level, however, how comparable changes in labor market outcomes are across gender when entering a marriage or a cohabiting union may depend on multiple factors, including the meaning and expectations of different types of unions (Perelli-Harris et al. 2014) and whether cohabitation ultimately leads to marriage (Kuperberg 2019). For example, in cross-sectional studies, married men have higher income than unmarried men, whereas married women do not necessarily earn more than their single counterparts (Chun and Lee 2001; McDonald 2020; Stratton 2002). However, it is less clear to what extent labor market changes at the time of union formation contribute to these observed differences.

In this paper, we explore labor market outcomes of men and women at the time of entering a union, analyzing separately entry into a cohabiting nonmarital union or marriage from singlehood, as well as transitions from cohabitation to marriage with the same partner. We consider three labor market outcomes (adult equivalent adjusted household income, individual work income, and hours worked), first to document level differences across different union statuses and then to assess how these outcomes change at the time of each of these three distinct union transitions. We use data from 14 European countries from the 1994–2001 waves of the European Community Household Panel (ECHP). These data cover an early period in the expansion of cohabiting unions across Europe. While premarital cohabitation is currently fairly widespread across the continent, in the 1990s cohabiters were more perceived as front runners who defied social norms by not marrying, and those who married without previous cohabitation were more prevalent (Sassler and Lichter 2020). Studying different union transitions in this period of rising cohabitation rates in Europe is crucial because the differences in household and labor market specialization between married and cohabiting couples may have been starker and

more gendered then, especially when cohabitation was less widespread and had less legal recognition. Analyses of this period when partnership patterns were changing rapidly but premarital cohabitation was not yet widely prevalent can inform policy for countries in other parts of the world that are currently experiencing an uptick in cohabiting unions.

Our estimates confirm that cross-sectionally, married men earn more than cohabiting men; we find that most of the difference in work income is due to longer working hours rather than higher hourly wages. We move beyond these results, estimating changes around the time of union transitions, where we uncover relevant differences both by gender and the type of union transition. Men increase work hours when they are direct marriers (i.e., they do not cohabit before marriage) but not when they move into marriage from a cohabiting union. Conversely, women experience a reduction in both hours and income when they transition into marriage but not so when entering cohabiting unions. Interestingly, the decline in both hours worked and individual income also manifests at marriage among women who marry a partner with whom they previously cohabited, indicating a shift that goes beyond the formation of a new household and that is net of any changes in the number of children. For women entering marriage, the main driver of income loss is dropping out of the labor force. Married women who remain employed during this transition make minimal adjustments to their working hours but tend to move to jobs with a lower hourly wage, possibly in exchange for more flexibility. At the same time, AE household income increases upon entering a union for the first time (especially marriage) for all but not when transitioning from cohabitation into marriage.

2. Background

2.1 Household income benefits of entering a union

Entering a union provides financial benefits through economies of scale and income pooling. Combining resources with a partner facilitates covering indivisible costs such as housing and promotes wealth accumulation (Lersch 2017; Light 2004; Waite 1995). Assortative mating, through the greater benefits of joint consumption by partners with similar preferences, may also contribute to the financial well-being gap between married and single individuals (Light 2004).

Most individuals likely benefit from marrying or cohabiting, at least from the sharing of household expenses, but the type of union may influence the amount of these benefits and the consequences in case of separation (Avellar and Smock 2005; Booth et al. 1986). Indeed, while cohabiting couples enjoy economies of scale at levels similar to those experienced by married couples, income pooling among cohabiting unions has mixed support in developed countries (Blumstein and Schwartz 1983; Heimdal and

Houseknecht 2003; Oropesa, Landale, and Kenkre 2003). Although there is country heterogeneity, cohabiting couples are overall less likely to pool their income than are married couples (Evans and Gray 2021). If cohabiters do not have full access to their partner's income (or at least an amount comparable to that accessed by married individuals), there is a risk of overstating the financial gains from the union.

2.2 Gender differences in marriage premium

At the individual level, married men earn more than single men do, displaying a marriage premium in cross-sectional analyses (Chun and Lee 2001; Dougherty 2006; Gray 1997; Korenman and Neumark 1991, 1992; Loh 1996). This empirical finding can result from several factors operating at the same time, and the predictions for women's labor market patterns depend on the relative strengths of these factors. According to household specialization theory (Becker 1981), everyone forming a household with a partner devotes more time and energy to the skills and tasks in which they have a comparative advantage to increase the overall production and well-being of the household. Although theoretically specialization is gender-neutral, persistent gender wage gaps reinforce the empirical regularity by which men often invest in the labor market more than their female partners (Blau and Khan 2017; Goldin 2014; England 2000). However, already in the 1990s, dual-earner couples made up a large share of the population in Europe, signaling a shift away from the traditional breadwinner model. Indeed, both shifts in labor demand and the progressive increase in women's educational attainment (matching or even surpassing that of men) undermine the rationale behind the comparative advantage narrative. A more equitable division of labor within the household may also lead to more stable and happier unions (Carlson 2022).

An alternative source of gender disparities in labor outcomes is that the wage premium for married men may, at least in part, stem from potentially higher-income men being more attractive in the marriage market and therefore more likely to marry (Ginther and Zavodny 2001; Ong and Wang 2015; McDonald 2020). Additionally, married men tend to be on steeper income growth curves (Killewald and Lundberg 2017; Ludwig and Brüdel 2018). In the presence of assortative mating, married women would also display a marriage premium, as they would similarly be on an upwardly mobile income trajectory. However, the empirical support around the existence of a marriage penalty for women is mixed, with some studies finding a marriage premium for women as well (Budig and England 2001; Glauber 2007; Killewald and Gough 2013; Taniguchi 1999; Waldfogel 1997).[3]

[3] Although it is beyond the scope of this paper, it is worth mentioning that the presence of children may accentuate gender differences in the labor market. Indeed, there is more consensus on the existence of a

2.3 Labor market participation: Dropping out versus working shorter hours

In addition to individual income, labor market adjustments in terms of hours worked following entry into a union may vary by gender and type of union. Men remain attached to the labor market for most of their working lives and tend to increase their working hours when entering a union (Barg and Beblo 2012; Stratton 2002). However, we expect this increase to differ by union type. Cohabiters are often younger and may view cohabitation as a steppingstone toward marriage (Sassler and Lichter 2020). Therefore men who start to cohabit may also be entering the labor force for the first time, unlike married men, who tend to be more established in their career paths (Light 2004).

For women, reductions in hours worked, moves to a lower-paying job that grants more flexibility, and dropping out of the labor force completely are often-cited explanations for marriage penalties (Budig and England 2001; Glauber 2007; Killewald and Gough 2013). Women who marry and select into this more institutionalized union face conditions more conducive to specializing in household tasks and may be more willing to specialize in them. Therefore they are more likely to drop out of the labor force entirely (Barg and Beblo 2012). Conversely, women who enter cohabiting unions could have incentives not to drop out of the labor force completely, especially in rigid labor markets where reentry may be particularly hard (Avellar and Smock 2005). Thus they might continue working, albeit for a lower number of weekly hours. We next discuss potential reasons for expecting different outcomes for married and cohabiting men and women.

2.4 Differences in labor market outcomes between cohabitation and marriage

There are several reasons why we could expect cohabiters, premarital cohabiters, and direct marriers to engage in the labor market differently at key union transitions (Brown 2000; Kuperberg 2012). First, an extensive literature notes the greater instability of cohabiting unions versus marriages, linked to "the promise of permanence" of marriage (Gallagher and Waite 2000) deriving from the public commitment present in marriage

motherhood penalty, suggesting that specialization might become more salient with parenthood rather than at union formation (Cukrowska-Torzewska and Matysiak 2020; Glauber 2007; Killewald and Gough 2013; Gough 2017; Kleven et al. 2019). For example, having children is associated with a decrease in hours worked by women across all types of union (Killewald and Gough 2013; Waldfogel 1997), and a motherhood wage penalty has been broadly documented (Cukrowska-Torzewska and Matysiak 2020; Killewald and Gough 2013, Doren 2019; Kleven et al. 2019). As married couples have more children than cohabiting couples, the motherhood penalty disproportionally hits married women compared to cohabiting women. Men do not experience the same drop when becoming fathers, and there is some evidence of a fatherhood premium, especially for married fathers (Killewald 2013; Kleven et al. 2019).

but not cohabitation (Cherlin 2004; Kuperberg 2012; Lundberg and Pollak 2007; Waite 1995). If cohabiters expect more unstable or shorter commitments, they may be deterred from specializing. This in turn may reduce gender differences in labor force attachment within cohabiting unions (Barg and Beblo 2012; Bumpass and Sweet 1989; Willis and Michael 1994), particularly in cases where reentry into the labor market is harder.

Second, there are legal protections in marriage that are not extended to cohabiting partners, and these come with greater legal barriers to leaving a marriage. By the 1990s, all European countries except for Malta and Ireland (where divorce was introduced in 1997) legally allowed divorce (Kalmijn 2007). However, the expanded rights of those in cohabiting unions and the institutional recognition of such unions were not as extensive as they are now, creating disparities between married and cohabiting couples, especially regarding the legal and economic consequences of union dissolution (Avellar and Smock 2005; Cherlin 2004). The combination of public and legal commitments of marriage contributes to a higher enforceable trust in marriages than in cohabiting unions (Cherlin 2004; Kuperberg 2012), which facilitates long-term decisions, such as having children or dropping out of the labor force.

Third, cohabiters tend to pursue a more equal distribution of housework, which diminishes the degree of gender specialization in non–labor market tasks. Some studies report a smaller male–female difference in hours of housework among cohabiters than among married couples (South and Spitze 1994) and less intrahousehold specialization (Daniel 1995; Stratton 2002) during the period covered in this study. Yet other studies show similar amounts of time spent with children by married and cohabiting parents (Kalenkoski, Ribar, and Stratton 2005).

Fourth, marriage is more institutionalized than cohabitation and carries not only legal consequences but also symbolic value, especially in the years considered in this study (Cherlin 2004). Therefore we could expect differences in specialization at the time of marriage also in couples who had been cohabiting at the time of their wedding. For example, men may increase their labor market effort once they take the role of a spouse to conform to expectations of that role (Kuperberg 2012). The commitment taken in front of family and friends can also change the external perception of the spouses, with married men being seen as more responsible by the community (Korenman and Neumark 1991).

Lastly, selection into either marriage or cohabitation may play a role in subsequent labor market outcomes for individuals who choose one or the other. Especially in years when cohabitation was not as prevalent in Europe as it is today, those who opted to cohabit prior to marriage or instead of marrying were defying social norms. Those who cohabit rather than marry may hold more gender-egalitarian views than those who directly marry (Kaufman 2000), may use cohabitation as a "probatory marriage" (Cherlin 2004, 2020), and may postpone household specialization to the time of a potential future marriage. This highlights the importance of studying not only the cross-sectional

outcomes for married and cohabiting individuals but also the different trajectories into marriage either from cohabitation or directly from singlehood (Brown 2000; Kuperberg 2012). Over time, the share of marriages without premarital cohabitation shrunk while heterogeneity among cohabiters increased as cohabitation became more widespread (Perelli-Harris et al. 2014). Kuperberg (2019) discusses several factors that may be driving the differential selection into either cohabitation or direct marriages, such as age, religion, education, and class. Focusing on the 1990s, this study captures an early period in the expansion of cohabitation, when individuals marrying without premarital cohabitation still represented a larger share of the population and were less selected as a group than they are today.

2.5 Current study and research questions

Taken together, the above-mentioned theoretical arguments suggest more specialization in married couples (because of more unequal housework distribution and possible selection in income potential) and an increased specialization at the time of marriage also for previously cohabiting couples (due to less instability, more enforceable trust, and the symbolic value of marriage). Existing empirical work offers some preliminary support for weaker specialization among cohabiting couples, showing that among men in the United States (Light 2004; Stratton 2002) and Europe (Adserà and Chiswick 2007), marriage is associated with higher wages compared to cohabitation. However, most studies focus on cross-sectional (level) differences across union statuses rather than taking a longitudinal approach to transitions between them.

This study provides a comprehensive empirical test of the relationship between labor market outcomes and family formation for single, cohabiting, and married individuals and households, paying particular attention to gender differences. Along the family formation dimension, it covers three union statuses (single, cohabiting, married) as well as three transitions between them: singlehood to marriage, singlehood to cohabitation, and cohabitation to marriage. Combining both static and dynamic measures of union formation, this study contributes to the understanding of how the more common cross-sectional findings emerge at the time of union transition. For example, this approach allows us to identify differences in outcomes between couples who marry directly and those who cohabit first. Pointedly, doing these analyses for the 1994–2001 period in Europe is especially relevant because it coincides with the early diffusion of cohabitation (Perelli-Harris et al. 2014). The early adopters' characteristics differentiate them from the current understanding of cohabitation in a way that has not yet been fully mapped into labor market outcomes but has long-term consequences (e.g., gender differentials in old-age pensions) persisting today.

The current study takes an expansive definition of labor market outcomes, including AE household income, individual work income, and hours worked. In addition to providing an updated static picture of fourteen countries, three union statuses, and three labor market outcomes, this study also contributes to novel results distinguishing which changes in labor market outcomes come from a reduction of income and/or work hours for working individuals and which come from dropping out of (or entering into) the labor market altogether. This distinction has profound consequences for policy vis-à-vis the gendered dimension adopted throughout this study.

We present all results separately for gender and provide estimates of both levels and changes at the time of union transition, adjusting for labor market participation where relevant. We organize the main results and research questions by the three labor market outcomes as follows. The first research question pertains to household-level income and asks whether (1) in the period studied, there are differences between single, cohabiting, and married households and (2) how these differences manifest at the time of union transitions. We expect our level analysis to show that married couples have higher AE household income than cohabiting couples, who in turn have higher average household income than singles, who do not have a partner to pool income with. We hypothesize that women who marry directly, without first cohabiting, will experience the largest increase in AE household income. This is because we anticipate that the higher income of their husbands, compared to that of cohabiting men, will more than offset the higher income of cohabiting women relative to married women.

Our second research question assesses how differences in hours worked by men and women who are single, cohabiting, or married emerge at the time of union formation. It distinguishes between those who adjust their working hours while remaining employed before and after the transition and those who exit the labor market upon entering a union. In levels, we expect married women to work the least and married men the most, resulting in the largest gender gap within marriage. For women, we expect the largest relative decline in hours worked when transitioning from singlehood to marriage but also an additional decline for women marrying a partner they had been cohabiting with. If this expectation is confirmed, this would suggest that marriage in this period still functions as both an economic and a social signal. However, we expect the drop in hours to be different in nature across transitions: Dropping out of the labor force would be more prevalent in singlehood-to-marriage transitions while a reduction in hours would be more typical for transitions from singlehood to cohabitation and from cohabitation to marriage. We expect men to increase their working hours in each union transition.

Our third research question examines how the combination of hours worked and individual income shapes total individual work income. We discuss this separately for men and women, as well as by the extent of labor market participation. We expect that differences in changes in hours worked across groups will be further amplified in

examinations of variations in changes in individual work income. For women this may be partly driven by sorting into more flexible jobs that may offer lower wages, especially when entering marriage.

3. Data and methods

3.1 Data and outcome variables

This study employs the 1994–2001 waves of the European Community Household Panel (ECHP), which presents comparable longitudinal micro-level data for individuals within households across 14 European countries.[4] The ECHP includes either interviews conducted simultaneously across all countries by Eurostat or data from national household panels structured to mimic the rest of the ECHP data to facilitate comparative analysis across major European countries.

We restrict our sample to men and women of 20 to 50 years of age. We do not include respondents beyond the age of 50 because adjustments in the labor market after this age are possibly related to pre-retirement plans or to difficulties in changing jobs at a later career stage. We also restrict the sample to individuals who are either single or in their first recorded marriage or cohabiting union to avoid capturing income changes relating to previous partners or adjustments post-separation. Consequently we do not include individuals in the sample once they become widowed, divorced, or separated.

Our main variables of interest are net AE household income, work income, and work hours by gender and union status. We express all income measures in purchasing power parity (PPP) terms for cross-country comparability. As detailed below, we study differences in both levels and changes in those outcomes across different marital statuses and marital transitions.

Total net household income includes all the income sources of the members of the household. Since one of the gains from entering a union is the ability to obtain economies of scale for some expenditures, we account for household composition. Researchers regularly transform household income into a weighted measure when using family income as a measure of individual well-being. Of course, this entails making assumptions about within-family allocation of income. For the main analysis, we use AE household income, which assumes that couples share their needs-adjusted family income equally and attributes lower weights to additional adults and to children under the age of 14 (per OECD scale; 0.7 and 0.5, respectively). However, since income pooling may be a

[4] The countries are Germany, Denmark, the Netherlands, Belgium, Luxemburg, France, the United Kingdom, Ireland, Italy, Greece, Spain, Portugal, Austria, and Finland. We exclude Sweden, because Swedish ECHP data do not have a full panel structure and do not allow the type of analyses we do in the paper.

controversial assumption, we checked that results were robust to the use of both a modified AE household income and per capita measures, which assume neither economies of scale nor age-specific differences in consumption.

Work income includes both wage and salary income as well as self-employment income but excludes additional transfers. The number of hours worked is measured using weekly hours during the survey year.

All models include a vector of individual characteristics comprising the number of children in the household, a polynomial of current age, country of residence, categorical educational attainment, foreign origin, and years since migration. The completed schooling level or enrollment status of the individual at the time of each interview is available. The educational categories in the models are less than upper secondary, upper secondary (reference category), and at least some tertiary education. Among migrants, we distinguish only between those born within or outside the European Union, because for Germany, the Netherlands, Greece, Finland, and Luxembourg, this is the only information available on the foreign country of birth.

3.2 Empirical specification

We start by analyzing differences in the level of our three outcomes of interest by union status after controlling for a set of demographic characteristics. We estimate the following OLS model:

$$Y_{it} = \alpha + \beta_c C_{it} + \beta_m M_{it} + \beta_x X_{it} + \varepsilon_{it}\,, \qquad (1)$$

where Y_{it} is one of the three outcomes of interest (log of AE household income; log of individual work income; number of weekly hours worked), C_{it} is a dummy indicating that an individual is in a cohabiting union, and M_{it} is a dummy indicator for being married. X_{it} are individual-level controls, while ε_{it} is the error term. Individuals who are single and not cohabiting constitute the reference category. To account for the presence of multiple observations per person, we cluster errors by individual. To account for price changes and other time-specific influences, we include time fixed effects for the year when individuals were interviewed (2000 is the reference).

Next, the main specification of interest estimates the change in the log AE household income, log individual work income, or work hours at the time of changes in marital status from singlehood to either cohabitation or marriage and from cohabitation to marriage in the year when the union transition occurs. We estimate the following change model:

$$\Delta Y_{it} = \beta_1 \Delta SM_{it} + \beta_2 \Delta SC_{it} + \beta_3 \Delta CM_{it} + \beta_4 \Delta X_{it} + \varepsilon_{it}, \quad (2)$$

where the dependent variable ΔY_{it} is either the difference in log income or the difference in hours. To indicate marital transitions, ΔSM_{it} equals 1 if the individual moved from singlehood to marriage, ΔSC_{it} equals 1 if the individual moved from singlehood into a cohabiting union, and ΔCM_{it} equals 1 if the individual moved from a cohabiting union into marriage. We differentiate all the controls from the previous specification. As a result, estimates include only time-varying individual characteristics.

Since ECHP includes only annual data for household composition, a shortcoming of the analysis is that we may miss very short (under one year) cohabitation/marriage spells. Further, we do not have information on the month of entry into union or marriage, just the year. In the robustness analysis, available upon request, we also use one- and two-year lags in marital status to partially address this concern.

When interpreting the results of changes in marital status in this model, the reference group consists of all those who remained in the same marital status. Thus the coefficients show whether the estimated changes in outcomes of those who changed their marital status in a given period were larger or smaller than changes among those who did not. Hence this paper focuses on immediate changes that occur at the time of marital transition. We ran separate models dividing the reference group into those who stay single, those who stay married, and those who continue in the same cohabiting union to compare the observed changes in each subgroup. Even though we do not present those models in the paper, we refer to them in the discussion below where relevant.

4. Results

4.1 Descriptive analysis

Table 1 presents descriptive statistics for key variables by union status and gender. As expected, AE household income for men in cohabiting unions and marriages is similar to that of women, as this measure pools together incomes from all family members and adjusts for the presence of children and other family members. Within each union status, men have a higher work income than women. The ordering of income for men by marital status, starting from the lowest, is those who are single, followed by cohabiters and then married men, while for women the highest income category is those who are cohabiting. Married and cohabiting men work close to a full-time schedule on average, while women work fewer hours. The starkest gender difference is among married individuals, where on average men work double the number of weekly hours women do. Cohabiting women work more hours than other women. Single individuals work on average part-time hours,

possibly since they are younger and still not settled in their careers, but here they already display a gender difference.[5] Cohabiting individuals display the highest shares of tertiary education, and within union status, cohabiting women are more educated than men while this gender difference reverses among those who are married. Regarding age, married respondents are the oldest group and single respondents are the youngest group. Finally, as expected, single people tend not to have children while married couples have on average more children than cohabiting couples.

Table 1: Summary statistics of income variables, hours worked, and selected controls by gender and union status

	Single		Cohabiting		Married	
	Women	Men	Women	Men	Women	Men
Log total AE household income	9.00	9.07	9.41	9.41	9.10	9.11
	(0.78)	(0.77)	(0.61)	(0.59)	(0.68)	(0.67)
Log work net income	5.46	6.27	7.58	8.93	5.48	9.11
	(4.34)	(4.19)	(3.48)	(2.31)	(4.43)	(2.28)
Weekly hours worked	21.26	27.47	26.96	37.09	20.11	41.83
	(20.22)	(22.04)	(18.30)	(17.73)	(19.40)	(15.92)
Less than secondary education	0.28	0.37	0.29	0.30	0.45	0.41
	(0.45)	(0.48)	(0.45)	(0.46)	(0.50)	(0.49)
Tertiary education	0.16	0.16	0.28	0.25	0.20	0.23
	(0.37)	(0.37)	(0.45)	(0.43)	(0.40)	(0.42)
Number of children	0.09	0.003	0.52	0.47	1.67	1.65
	(0.38)	(0.07)	(0.87)	(0.80)	(1.13)	(1.11)
Age	27.01	27.45	28.82	30.64	37.82	39.02
	(7.13)	(6.91)	(6.27)	(6.48)	(7.48)	(6.96)
Sample size	57,798	76,932	15,456	14,932	159,978	138,025

Notes: Means with standard deviations in parentheses. Some income measures are available for the current time period and some for the year prior to data collection. Therefore marital status reflects the same time period as the income variables. Log work income includes wages, salary, and income for self-employment. Table A-1 reports descriptive statistics for additional controls. Sample size refers to total adult household income, which is the most restrictive. Full sample sizes by outcome are in Table A-2). Figure A-1 reports the distribution of hours worked by gender.

4.2 Changes in adult equivalent household income

It is reasonable to expect that individuals' available household income would increase upon entering a union because of the pooling of individual incomes into a common household. Table 2 shows the level differences across union status and the changes in household income at union transition, weighted by the composition of the household, to consider likely economies of scale within a household and/or differential consumption

[5] The full distribution of hours worked by gender is in Figure A-1. Many individuals, especially men, work more than 40 hours a week. To capture variation of hours among full-time workers, the analyses use a continuous measure of hours instead of a categorical variable (not working, working part-time, working full-time). Transitions across categorical groupings of hours are available upon request.

needs by age. The level models (Panel A, Equation 1) show that log AE household income is higher for individuals who live in either form of union compared to those who are single and that the difference for those in a union compared to those who are single is larger for women than for men. AE household income for women in either marriage or cohabitation is around 23.4% higher than that of single women. For men, this difference is around 10.5% for cohabiting men and close to 14% for married men. Consistent with the expectations of our first research question, estimates of the change model (Panel B, Equation 2) show that, compared to those who do not experience a change in marital status, log AE total household income increases upon entering a union for the first time but not when transitioning from cohabitation into marriage. Even though it increases for both men and women, the increase is slightly larger for women compared to men, in line with previous studies that show how women benefit financially more than men upon entering a union (Light 2004). The increase in AE household income for direct marriers (around 33% for women and 30% for men) is higher than for those entering cohabitation (16% for women and 8% for men) relative to those who do not change their marital status, in line with our expectations. None of the gender-specific estimates for union transitions (Panel B) have overlapping confidence intervals.

Table 2: Level and change in log adult equivalent household income by marital status and by transitions into types of union

	(1) Women	(2) Men
Panel A: Levels (ref. single)		
Married	0.21	0.13
	(0.196; 0.224)	(0.112; 0.140)
Cohabiting	0.21	0.10
	(0.195; 0.227)	(0.087; 0.117)
Observations	214,706	213,397
Panel B: Change (ref. no change)		
Single to married	0.29	0.26
	(0.250; 0.334)	(0.224; 0.304)
Single to cohabiting	0.15	0.08
	(0.111; 0.188)	(0.042; 0.112)
Cohabiting to married	0.02	0.01
	(–0.003; 0.034)	(–0.013; 0.025)
Observations	167,239	165,385

Notes: Data from ECHP 1994–2001. Controls are for country, age (square, third power, and fourth power), number of children, education, student status, foreign birth, non-European country of birth, years since migration (and its square), and year of interview. In parenthesis, 95% confidence intervals are clustered by id. OLS level estimates show the difference in AE household income between those either currently married or in a cohabiting union and those who are single. Change models compare those who change union status (single to married, single to cohabiting, cohabiting to married) to those who do not. Full models are in Table A-3.

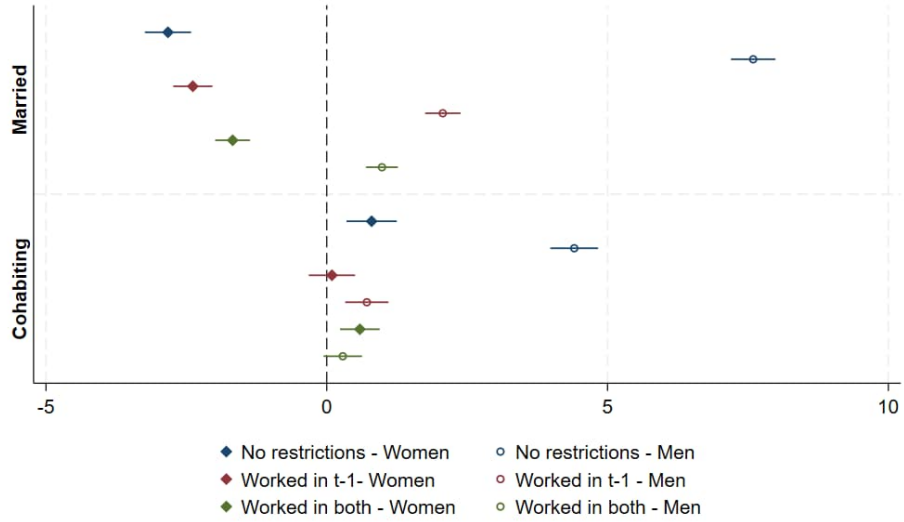
4.3 Hours worked

Next we study whether these gains in total household income arise from increases in individual labor market participation around the time of union transition for both men and women or rather whether individual labor market outcomes move in opposite directions by gender. Individuals who do not change their union status (who either remain single or remain in their current union) are the reference group in the change models. To get a better picture of the meaning of the observed changes, it is important to highlight that the levels of hours are different across union statuses. Figure 1 shows the results of level models for weekly hours worked. It includes three different estimates for both women and men depending on whether we include everyone regardless of labor market participation (in blue) or restrict the sample to either those who worked in both periods (in green) or those who worked at least in the previous period (in red).

Level estimates of weekly hours worked show that, as expected, compared to their never-married peers, men work more hours if they are in a union (married or cohabiting), while hours worked by married women are lower than those of single or, especially, cohabiting women. For men, level differences are largest when we do not impose any conditions on labor market participation (7.6 hours more for married men and 4.4 hours more among those in cohabiting unions). However, among continuously attached men, differences by marital status are smaller and are only somewhat different between single and married men (about one hour). This is consistent with most men working full-time and with fewer men dropping from the labor force (or becoming unemployed) while in any type of union compared to single men.

Married women work less than others (around 2.8 hours less in the unrestricted sample and 1.7 hours less among those continuously attached), independently of whether we impose labor market participation restrictions. Cohabiting women work more hours than single women except when we include only those who were working in the previous period. Thus, among continuously attached women, cohabiting women are the ones who spend most hours in the labor market (around 0.6 hours more). The combination of married men working the most hours among men and married women working the least hours among women confirms our initial hypothesis that the largest gender gap in labor market participation is within marriage.

Figure 1: Level models for weekly hours worked by union type, labor market participation, and gender



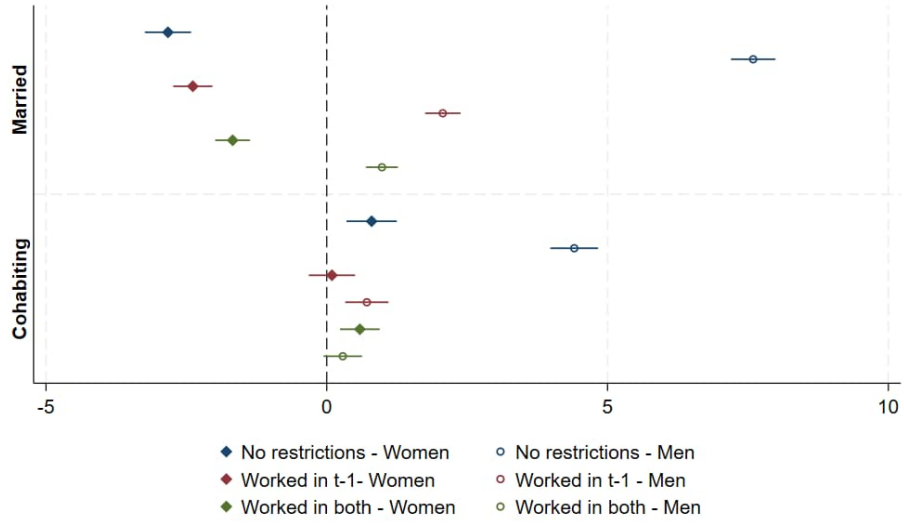
Notes: Data from ECHP 1994–2001. Controls are for country, age (square, third power, and fourth power), number of children, education, student status, foreign birth, non-European country of birth, years since migration (and its square), year of interview, and hours worked (in models of log work income). Standard errors are clustered by id. Estimates are shown in Table A-4. Lines represent 95% confidence intervals. The reference group is single individuals.

Given that changes in marital status may also entail changes in labor force participation, and to see to what extent a differential degree of specialization within couples drives them, we estimate the models of changes in work hours (Figure 2) by different degrees of attachment to the labor market. Figure 2 shows models of work hours for everyone in the sample (in blue) and then restricting the sample, first to all who worked at least in the previous year (in red) and second to those who were in the labor force in both periods (in green). In line with expectations from our second research question, the results indicate that part of the reduction in average work hours among women entering marriage is attributable to some women dropping from the labor force. Indeed, Figure 2 shows that women who marry without first cohabiting with the same partner reduce their average weekly work by about 1.7 hours, but when looking at the sample of those who worked in the year preceding marriage, the reduction in working hours is somewhat larger, about 2.16 hours. However, those who remain attached to the labor market before and after the union transition reduce their average hours worked by only 0.6 hours. We observe no differences in changes in worked hours by labor force

participation for those entering a cohabiting union. The fact that fewer women drop out of the labor force upon entering a cohabiting union compared to those who drop out when they get married likely explains this finding. Also, in level models (see Table A-4), cohabiting women work more if they are continuously attached to the labor market, whereas married women work fewer weekly hours (a little under 30 hours on average) regardless of whether they are continuously attached to the market or not. Interestingly, as expected by our second research question, the reduction in hours experienced by women moving from a cohabiting relationship into a marriage mimics the pattern seen among those who enter marriage directly from singlehood – albeit in a more muted way – even though cohabiting women have the highest average work hours. On average, women transitioning from cohabitation to marriage reduce their work hours by 1.4, relative to women whose marital status does not change; however, within this group, the reduction among those continuously attached to the labor market is negligible, at about 0.3 hours. This suggests that different selection processes might be at work for those who move directly from singlehood into marriage and those who choose to cohabit first.

Among men, hours increase among those entering a marriage (1.35 more hours) or cohabitation (1.76 more hours) from singlehood but not among those moving from cohabitation into marriage. This is not surprising, as men in any form of union already tend to be fully employed and very few men drop from the market at the time of marital transition. Among those continuously attached to the labor market, only the hours of men entering marriage directly from singlehood increase more than the rest, but just by a modest 0.5 hours.

Figure 2: Estimated association of union status change and change in weekly hours worked by labor market participation and gender

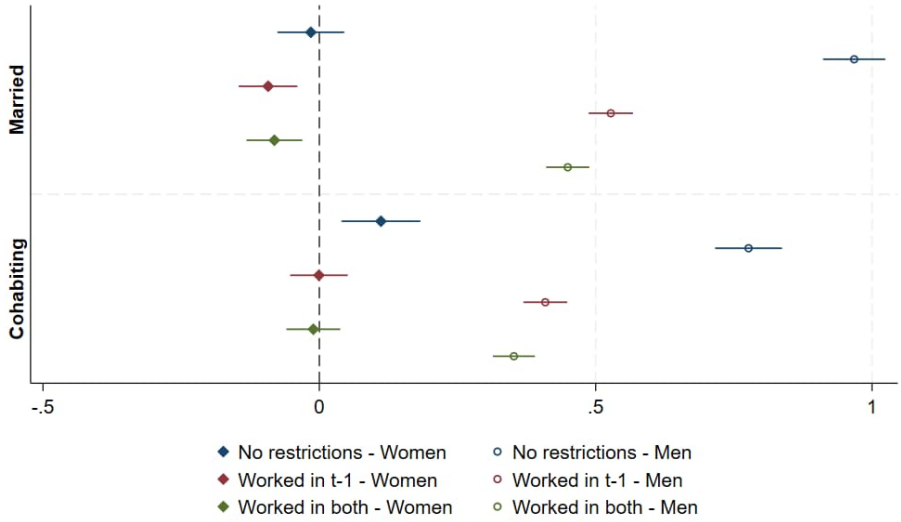


Notes: Data from ECHP 1994–2001. Controls are for changes in age (square, third power, and fourth power), number of children, education, student status, and years since migration (and its square). Standard errors are clustered by id. Estimates are shown in Table A-5. The reference group is those with no change in union status.

4.4 Individual work income

Lastly we show how (log) work income is different across union statuses (level models) and how it changes at the time of union transitions (change models). In the discussion below, we focus on individual work income even though results for total net individual income (including work income, private and public transfers, capital income, and unemployment benefits) are very similar (see Table A-6).

Figure 3: Level models for log work individual income by union type, labor market participation, and gender



Note: Data are from ECHP 1994–2001. Controls are for country, age (square, third power, and fourth power), number of children, education, student status, foreign birth, non-European country of birth, years since migration (and its square), year of interview, and hours worked (in models of log work income). Standard errors are clustered by id. Estimates are shown in Table A-7. Lines represent 95% confidence intervals. The reference group is single individuals.

Gender differences in the level of work income (which includes wages, salary, and income from self-employment) across those in a union compared to single individuals are strikingly large. Married women earn less than single women while men in any form of union (particularly marriage) earn substantially more than never-married men. Like Figure 1, Figure 3 shows three different estimates for both women and men depending on their labor market participation before and after entering a union. The direction and magnitude of these estimates are similar across the three labor market participation subsamples. For men, the income gap between those in a union and single men is larger when we do not impose any sample restrictions. This is expected because men in a union are the least likely to drop from the labor force over time while some single men may still be entering the market or may display more unstable labor market attachment and relatively lower hourly wages. These same two forces explain why cohabiting women earn more than single women when everyone is included in the sample, whereas there is no difference between single and cohabiting women in the other two cases.

In Table 3 we estimate the extent to which adjustments in work hours, rather than changes in hourly income, explain differences in work income across marital statuses. To do so, we estimate both levels (Panel A) and change models (Panel B) of work income – with and without controlling for hours worked. Among men, work income is higher for those in either type of union compared to singles (see Figure 3), and the difference in levels is slightly larger in models that do not control for hours worked, which is consistent with the higher number of hours worked by these men (Panel A). However, when looking at immediate changes in work income at the time of marital transitions, we find no differences for men moving out of singlehood, irrespective of whether we control for hours worked, compared to changes experienced by those who do not change marital status (Panel B). Yet the change in income experienced by those moving from a cohabiting union into marriage is negative compared to the reference group. The reference group comprises all individuals who do not change their union status – namely those who remain married, cohabiting, or single. When we re-estimate these models – distinguishing between those who remain single, those who remain married, and those who remain in a cohabiting union – the results suggest that this negative estimate is largely driven by the fact that those who remain single are on a steeper positive wage trajectory than those who remain in a union (who already have a higher income, as Figure 3 shows). Further, those who move from a cohabiting union to marriage do not increase hours in a meaningful way, as shown in Figure 2.

As shown in Table 3, the level of work income is the highest among women in cohabiting unions (27% more than single women) and the lowest among married women (around 32% less than single women) if not controlling for hours worked. However, after controlling for worked hours, we find no difference between single and married women, but cohabiting women still earn around 11% more than single women. Thus women who cohabit earn higher hourly wages on average. In contrast to men, changes in work income of women entering any new form of union are negative compared to the change experienced by the reference group, which does not change marital status, and the relative drop is largest for those entering marriage (around 35%), independent of their previous marital status, either single or cohabiting. This finding might imply that among women, marriage and cohabitation are not equivalent when deciding how many hours to put in the labor market. Once models control for hours, a reduction in hours worked (consistent with Figure 2) seems to account only partially for the decrease in work income. The relative drop in income experienced by women entering marriage is indeed still substantial (close to 29%) when controlling for changes in hours in the last column of Table 3. This finding is consistent with the expectation of our third research question: Besides the changes in hours discussed in section 2.3, adjustments in job characteristics may amplify the relative decrease (or slowdown) in individual income for women entering marriage.

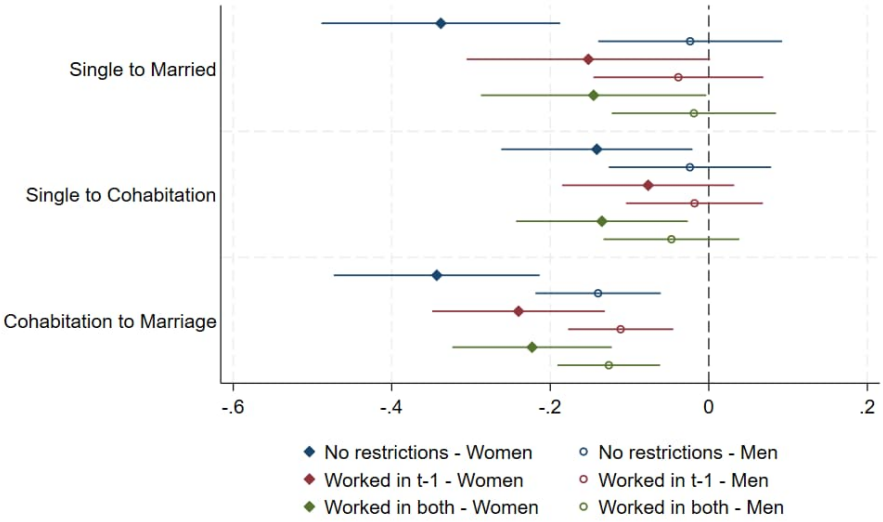
Table 3: Level and change in work income with and without weekly hours worked by marital status and transitions into types of unions

	Without hours		With hours	
	(1)	(2)	(3)	(4)
	Women	Men	Women	Men
Panel A: Levels (ref. single)				
Married	–0.39	1.59	–0.02	0.97
	(–0.481; –0.291)	(1.519; 1.666)	(–0.076; 0.045)	(0.911; 1.024)
Cohabiting	0.24	1.16	0.11	0.78
	(0.134; 0.343)	(1.082; 1.235)	(0.040; 0.183)	(0.716; 0.837)
Hours worked	No	No	0.14	0.08
			(0.138; 0.141)	(0.078; 0.082)
Observations	214,837	213,493	212,473	210,623
Panel B: Change (ref. no change)				
Single to married	–0.43	0.02	–0.34	–0.02
	(–0.585; –0.276)	(–0.101; 0.133)	(–0.489; –0.187)	(–0.139; 0.092)
Single to cohabiting	–0.15	0.01	–0.14	–0.02
	(–0.278; –0.029)	(–0.087; 0.116)	(–0.262; –0.021)	(–0.126; 0.079)
Cohabiting to married	–0.41	–0.14	–0.34	–0.14
	(–0.547; –0.278)	(–0.224; –0.066)	(–0.473; –0.213)	(–0.219; –0.061)
Hours worked	No	No	0.04	0.03
			(0.042; 0.046)	(0.027; 0.029)
Observations	167,368	165,483	164,104	161,536

Notes: Data from ECHP 1994–2001. Controls are for country, age (square, third power, and fourth power), number of children, hours worked, education, student status, foreign birth, non-European country of birth, years since migration (and its square), and year of interview. In parenthesis, 95% confidence intervals are clustered by id. The dependent variable is work net income, which includes wages, salary, and income from self-employment. OLS level estimates show the difference between those either currently married or in a cohabiting union and those who are single. Change models compare those who change union status (single to married, single to cohabiting, cohabiting to married) to those who do not. Full models are in Tables A-8 and A-9.

Figure 4 provides results for changes in individual work income, controlling for labor force participation in addition to hours to further disentangle them. Not surprisingly, the estimated (relative) decrease in women's work income upon entering a marriage is much smaller among those who remain attached to the labor market (around 14% from singlehood and 20% from cohabitation) compared to the whole sample (around 29%). Still the drop is substantial. Despite their increase in relative hours, as shown in Figure 2, women moving from singlehood to a cohabiting union experience a small relative decrease in work income, as those who remain single are on a steeper wage profile.

Figure 4: Estimated association of union status change and change in (log) work income by labor market participation and gender



Notes: Controls are for changes in age (square, third power, and fourth power), number of children, hours worked, education, student status, and years since migration (and its square). Standard errors are clustered by id. Estimates are shown in Table A-10. The reference group is those with no change in union status.

Figure 4 shows that controlling for labor market participation does not affect estimates for men as their marital status changes. As noted above, the decline in relative work income observed only among men who move from a cohabiting union into marriage is the result of a combination of unchanged (relative) hours worked and slower growth in hourly wages compared to men who do not change marital status, particularly those who remain single. In contrast, men transitioning from singlehood to marriage experience relative increases in hours (compared to all other men) and appear to follow a steeper path in hourly wages than those in cohabiting unions.

5. Discussion

In this paper, we set out to examine disparities by gender in the changes in adult equivalent household income, individual work income, and hours worked in the labor market at the transition into different types of union, namely from singlehood to marriage, from singlehood to a nonmarital cohabiting union, and from cohabitation into marriage

compared to the experiences of individuals remaining in the same marital status. Our data cover a period in which premarital cohabitation was not yet the norm and direct marriers constituted a larger share of new unions across Europe than they do today. Individuals entering cohabitation were an evolving heterogeneous group, while specialization at the time of marriage was more generally expected, even among previously cohabiting couples (due to less instability, more enforceable trust, and the symbolic value of marriage).

Consistent with our first research question, we find support for an increase in household income for both men and women transitioning into unions after adjusting for the adult equivalent composition of the household. Not only are the levels of AE household income higher among individuals in unions, but they also experience an increase in AE household income upon transitioning into a new union. Although financial well-being is higher for individuals in couples than for singles, married individuals reap greater overall household-level benefits from forming a union than do cohabiting individuals, especially women who marry before cohabiting.

Our results point to differential individual labor market outcomes between marriages and cohabitations. In terms of hours, married individuals exhibit more specialization, with women reducing their worked hours and men increasing theirs upon marrying – more so than when entering a cohabiting union, in line with our second research question. In terms of individual income, transitioning into marriage, even from a premarital cohabitation, is associated with a reduction in work income for women. This signals a peculiarity in the institution of marriage that goes beyond the economies of scale of living in the same household and points to different processes of selection into union types. It is also likely driven by women entering marriage, who not only decrease their relative attachment to the labor market but also sort into less demanding and lower-paid jobs, as posited by our third research question.

There are several possible reasons behind these differences between cohabiting and married individuals (Sassler and Lichter 2020). First, there is differential selection of who was cohabiting in each country in the mid- to late 1990s, when prevalence was very heterogeneous across Europe (Perelli-Harris et al. 2010). For example, the finding that men increase their hours when they are direct marriers more than when they enter cohabitation could be in part driven by the fact that they are more likely to have traditional values, which translate into a more gendered division of labor. If cohabiting rather than marrying is negatively associated with socioeconomic status, cohabiting women may need to stay more attached to the labor market out of necessity to contribute a larger share of household income. Our results using change models and robustness checks using fixed effects models address selection on time-invariant characteristics, but it's possible that time-variant unobserved factors may drive differential selection into types of union.

Second, the meaning of cohabitation and reasons to enter cohabitation may explain differences in the degree of specialization of marriages compared to cohabiting unions (Cherlin 2020; Light 2004; Sassler and Lichter 2020). While the meaning of cohabitation is evolving with time, it preserves its distinctiveness from the long-term commitment of marriage (Perelli-Harris et al. 2014). Cohabiting unions are often characterized by a more gender-egalitarian division of household labor than are marriages (Daniel 1995; South and Spitze 1994; Stratton 2002). A more gender-equal distribution of hours worked within the household may reduce intrahousehold specialization and free up time for paid labor for women. This, combined with more union instability and the need for outside options in the labor market (Avellar and Smock 2005), can concur with less specialization in cohabitation. Higher enforceable trust and legal protections in marriage are especially salient for women, and our results indeed show that they display different labor market outcomes depending on the union transition.

Third, couples who anticipate a higher intrahousehold specialization also tend to select into marriage rather than cohabitation (Barg and Balbo 2012). Our results reflect this pattern for women transitioning from cohabitation to marriage. Even though these women are already in a union, their hours worked drop when they marry. This finding likely relates to the fact that childbearing occurred primarily within marriage during the period we study. However, all our models control for the number of children and/or changes in child count. As specialization becomes more salient in the transition to parenthood (Killewald and Gough 2013), considering childbearing may contribute to explaining the marriage–cohabitation differentials.

6. Limitations and future work

In this paper we have focused on both level differences as well as on changes around the period of marital transition. Even though the longitudinal nature of the ECHP dataset allows us to follow up on individuals for several periods and observe marital changes, the short number of years covered by the data reduces our ability to model differential trajectories by union status and to conduct a richer dynamic analysis. With this data, we can reconstruct union transitions only when we observe them in the data, but we lack complete marital and union history. Thus if an individual is in a cohabiting union when we first observe them, we have no information about the number of years they have been in this union. Since our data are annual, we may also miss very short-lived unions and marriages. We believe this to be a minor occurrence.

Even if our results are net of either the number of children or the changes in the number of children within the household, the study of motherhood and fatherhood premiums is beyond the scope of this work. Previous research shows that specialization

becomes more salient in the transition to parenthood, and this may attenuate the differences between cohabiting and married couples as childbearing outside of marriage increases over the years. This avenue of research is worth pursuing further, and this work lays the basis for future analyses centered on fertility given that transitions to – and types of – unions are key elements in childbearing decisions.

The hypothesis of specialization includes changes in work both outside and inside the home, so we would have liked to look at changes in hours of housework as well and whether they were different by union status. Unfortunately, we don't have enough detailed information on time and tasks performed within the household to compare housework around the time of transition into a (different) union.

Further, a more detailed analysis of the people individuals are living with before transiting to a different marital status should help us better understand the conditions from which they depart and their diversity across countries in Europe. Finally, additional work on country heterogeneities accounting for different cultural meanings of cohabitation, changes in the prevalence of cohabitation over time, and the degree of rigidity in the labor market would contribute to understanding the labor market choices individuals make when entering new marital statuses.

We find that in the period examined in this paper, when cohabitation was relatively uncommon, direct marriers displayed more gendered labor market patterns while women entering cohabiting unions still increased their work hours. In more recent periods, as overall female employment rates rise, cohabitation becomes more prevalent, and direct marriers constitute the more selected group (Cherlin 2020), these dynamics may shift. Greater heterogeneity among cohabitors could lead to convergence in labor market outcomes with married individuals. Moreover, as cohabiting unions gain stability (Kuperberg 2019; Vitali and Fraboni 2022), women may adjust their labor supply downward upon entering cohabitation, producing patterns closer to those of direct marriers. Ultimately, as the boundaries between marriage and cohabitation continue to blur, their capacity to generate distinct gendered labor market outcomes may fade.

7. Acknowledgments

This paper is based on data from Eurostat and the European Community Household Panel. The responsibility for all conclusions drawn from the data lies entirely with the authors.

Federica Querin received support from the Max Weber Postdoctoral Fellowship at the European University Institute and from the GENPOP Project. GENPOP received funding from the European Research Council (ERC) under the European Union's Horizon 2020 research and innovation program (grant agreement 865356). Views and

opinions expressed are those of the authors only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

References

Adserà, A. and Chiswick, B. R. (2007). Are there gender and country of origin differences in immigrant labor market outcomes across European destinations? *Journal of Population Economics* 20(3): 495–526. doi:10.1007/s00148-006-0082-y.

Avellar, S. and Smock, P.J. (2005). The economic consequences of the dissolution of cohabiting unions. *Journal of Marriage and Family* 67(2): 315–327. doi:10.1111/j.0022-2445.2005.00118.x.

Barg, K. and Beblo, M. (2012). Does 'sorting into specialization' explain the differences in time use between married and cohabiting couples? An empirical application for Germany. *Annals of Economics and Statistics* 105/106: 127–152. doi:10.2307/23646459.

Becker, G.S. (1981). *A treatise on the family*. Cambridge, MA: Harvard University Press.

Blau, F.D. and Kahn, L.M. (2017). The gender wage gap: Extent, trends, and explanations. *Journal of Economic Literature* 55(3): 789–865. doi:10.1257/jel.20160995.

Blumstein, P. and Schwartz, P. (1983). *American couples: Money, work, sex*. New York, NY: Morrow.

Brown, S.L. (2000). Union transitions among cohabitors: The significance of relationship assessments and expectations. *Journal of Marriage and Family* 62(3): 833–846. doi:10.1111/j.1741-3737.2000.00833.x.

Booth, A., Johnson, D.R., White, L.K., and Edwards, J.N. (1986). Divorce and marital instability over the life course. *Journal of Family Issues* 7(4): 421–442. doi:10.1177/019251386007004006.

Budig, M.J. and England, P. (2001). The wage penalty for motherhood. *American Sociological Review* 66(2): 204–225. doi:10.1177/000312240106600203.

Bumpass, L.L. and Sweet, J.A. (1989). National estimates of cohabitation. *Demography* 26(4): 615–625. doi:10.2307/2061261.

Carlson, D.L. (2022). Reconceptualizing the gendered division of housework: Number of shared tasks and partners' relationship quality. *Sex Roles* 86(9): 528–543. doi:10.1007/s11199-022-01282-5.

Cherlin, A.J. (2004). The deinstitutionalization of American marriage. *Journal of Marriage and Family* 66(4): 848–861. doi:10.1111/j.0022-2445.2004.00058.x.

Cherlin, A.J. (2020). Degrees of change: An assessment of the deinstitutionalization of marriage thesis. *Journal of Marriage and Family* 82(1): 62–80. doi:10.1111/jomf.12605.

Chun, H. and Lee, I. (2001). Why do married men earn more: Productivity or marriage selection? *Economic Inquiry* 39(2): 307–319. doi:10.1111/j.1465-7295.2001.tb00068.x.

Cukrowska-Torzewska, E. and Matysiak, A. (2020). The motherhood wage penalty: A meta-analysis. *Social Science Research* 88–89: 102416. doi:10.1016/j.ssresearch.2020.102416.

Daniel, K. (1995). Does marriage raise the productivity of workers? (The Wharton School working paper). Philadelphia: University of Pennsylvania.

Doren, C. (2019). Which mothers pay a higher price? Education differences in motherhood wage penalties by parity and fertility timing. *Sociological Science* 6: 684–709. doi:10.15195/v6.a26.

Dougherty, C. (2006). The marriage earnings premium as a distributed fixed effect. *The Journal of Human Resources* 41(2): 433–443. doi:10.3368/jhr.XLI.2.433.

England, P. (2000). Marriage, the costs of children, and gender inequality. In Waite, L., Bachrach, C., Hindin, M., Thomson, E., and Thornton, A. (eds.). *The ties that bind: Perspectives on marriage and cohabitation*. Hawthorne, NY: Aldine De Gruyter: 320–342.

Evans, A. and Gray, E. (2021). Cross-national differences in income pooling among married and cohabiting couples. *Journal of Marriage and Family* 83(2). doi:10.1111/jomf.12721.

Gallagher, M. and Waite, L. (2000). *The case for marriage: Why married people are happier, healthier and better off financially*. New York: Doubleday.

Ginther, D.K. and Zavodny, M. (2001). Is the male marriage premium due to selection? The effect of shotgun weddings on the return to marriage. *Journal of Population Economics* 14(2): 313–328. doi:10.1007/s001480000058.

Glauber, R. (2007). Marriage and the motherhood wage penalty among African Americans, Hispanics, and Whites. *Journal of Marriage and Family* 69(4): 951–961. doi:10.1111/j.1741-3737.2007.00423.x.

Goldin, C. (2014). A grand gender convergence: Its last chapter. *American Economic Review* 104(4): 1091–1119. doi:10.1257/aer.104.4.1091.

Gough, M. (2017). Birth spacing, human capital, and the motherhood penalty at midlife in the United States. *Demographic Research* 37(13): 363–416. doi:10.4054/DemRes.2017.37.13.

Gray, J.S. (1997). The fall in men's return to marriage: Declining productivity effects or changing selection? *The Journal of Human Resources* 32(3): 481. doi:10.2307/146180.

Heimdal, K.R. and Houseknecht, S.K. (2003). Cohabiting and married couples' income organization: Approaches in Sweden and the United States. *Journal of Marriage and Family* 65(3): 525–538. doi:10.1111/j.1741-3737.2003.00525.x.

Kalenkoski, C.M., Ribar, D.C., and Stratton, L.S. (2005). Parental child care in single-parent, cohabiting, and married-couple families: Time-diary evidence from the United Kingdom. *American Economic Review* 95(2): 194–198. doi:10.1257/000282805774670176.

Kalmijn, M. (2007). Explaining cross-national differences in marriage, cohabitation, and divorce in Europe, 1990–2000. *Population Studies* 61(3): 243–263. doi:10.1080/00324720701571806.

Kaufman, G. (2000). Do gender role attitudes matter? Family formation and dissolution among traditional and egalitarian men and women. *Journal of Family Issues* 21: 128–144. doi:10.1177/019251300021001006.

Killewald, A. (2013). A reconsideration of the fatherhood premium: Marriage, coresidence, biology, and fathers' wages. *American Sociological Review* 78(1): 96–116. doi:10.1177/0003122412469204.

Killewald, A. and Gough, M. (2013). Does specialization explain marriage penalties and premiums? *American Sociological Review* 78(3): 477–502. doi:10.1177/0003122413484151.

Killewald, A. and Lundberg, I. (2017). New evidence against a causal marriage wage premium. *Demography* 54(3): 1007–1028. doi:10.1007/s13524-017-0566-2.

Kleven, H., Landais, C., Posch, J., Steinhauer, A., and Zweimüller, J. (2019). Child penalties across countries: Evidence and explanations, *AEA Papers and Proceedings* 109: 122–126. doi:10.1257/pandp.20191078.

Korenman, S. and Neumark, D. (1991). Does marriage really make men more productive? *The Journal of Human Resources* 26(2): 282–307. doi:10.2307/145924.

Korenman, S. and Neumark, D. (1992). Marriage, motherhood, and wages. *The Journal of Human Resources* 27(2): 233–255. doi:10.2307/145734.

Kuperberg, A. (2012). Reassessing differences in work and income in cohabitation and marriage. *Journal of Marriage and Family* 74(4): 688–707. doi:10.1111/j.1741-3737.2012.00993.x.

Kuperberg, A. (2019). Premarital cohabitation and direct marriage in the United States: 1956–2015. *Marriage and Family Review* 55(5): 447–475. doi:10.1080/01494929.2018.1518820.

Lersch, P.M. (2017). The marriage wealth premium revisited: Gender disparities and within-individual changes in personal wealth in Germany. *Demography* 54(3): 961–983. doi:10.1007/s13524-017-0572-4.

Light, A. (2004). Gender differences in the marriage and cohabitation income premium*. *Demography* 41(2): 263–284. doi:10.1353/dem.2004.0016.

Loh, E.S. (1996). Productivity differences and the marriage wage premium for white males. *The Journal of Human Resources* 31(3): 566–589. doi:10.2307/146266.

Ludwig, V. and Brüderl, J. (2018). Is there a male marital wage premium? New evidence from the United States. *American Sociological Review* 83(4): 744–770. doi:10.1177/0003122418784909.

Lundberg, S. and Pollak, R.A. (2007). The American family and family economics. *Journal of Economic Perspectives* 21(2): 3–26. doi:10.1257/jep.21.2.3.

McDonald, P. (2020). The male marriage premium: Selection, productivity, or employer preferences? *Journal of Marriage and Family* 82(5): 1553–1570. doi:10.1111/jomf.12683.

Ong, D. and Wang, J. (2015). Income attraction: An online dating field experiment. *Journal of Economic Behavior and Organization* 111: 13–22. doi:10.1016/j.jebo.2014.12.011.

Oropesa, R.S., Landale, N.S., and Kenkre, T. (2003). Income allocation in marital and cohabiting unions: The case of Mainland Puerto Ricans. *Journal of Marriage and Family* 65(4): 910–926. doi:10.1111/j.1741-3737.2003.00910.x.

Perelli-Harris, B., Berrington, A., Berghammer, C., Keizer, R., Lappegård, T., Mynarska, M., Evans, A., Isupova, O., Klaerner, A., and Vignoli, D. (2014). Towards a new understanding of cohabitation: Insights from focus group research across Europe and Australia. *Demographic Research* 31(34): 1043–1078. doi:10.4054/DemRes.2014.31.34.

Perelli-Harris, B., Sigle-Rushton, W., Kreyenfeld, M., Lappegård, T., Keizer, R., and Berghammer, C. (2010). The educational gradient of childbearing within cohabitation in Europe. *Population and Development Review* 36(4): 775–801. doi:10.1111/j.1728-4457.2010.00357.x.

Sassler, S. and Lichter, D.T. (2020). Cohabitation and marriage: Complexity and diversity in union-formation patterns. *Journal of Marriage and Family* 82(1): 35–61. doi:10.1111/jomf.12617.

South, S.J. and Spitze, G. (1994). Housework in marital and nonmarital households. *American Sociological Review* 59(3): 327–347. doi:10.2307/2095937.

Stratton, L.S. (2002). Examining the wage differential for married and cohabiting men. *Economic Inquiry* 40(2): 199–212. doi:10.1093/ei/40.2.199.

Taniguchi, H. (1999). The timing of childbearing and women's wages. *Journal of Marriage and the Family* 61(4): 1008. doi:10.2307/354020.

Vitali, A. and Fraboni, R. (2022). Pooling of wealth in marriage: The role of premarital cohabitation. *European Journal of Population* 38(4): 721–754. doi:10.1007/s10680-022-09627-2.

Waite, L.J. (1995). Does marriage matter? *Demography* 32(4): 483–507. doi:10.2307/2061670.

Waldfogel, J. (1997). The effect of children on women's wages. *American Sociological Review* 62(2): 209–217. doi:10.2307/2657300.

Willis, R. and Michael, R. (1994). Innovation in family formation: Evidence on cohabitation in the United States. In: Ermisch, J. and Ogawa, M. (eds.). *The family, the market and the state in ageing societies.* Oxford: Oxford University Press. doi:10.1093/oso/9780198288183.003.0002.

Appendix

Figure A-1: Distribution of weekly hours worked by gender

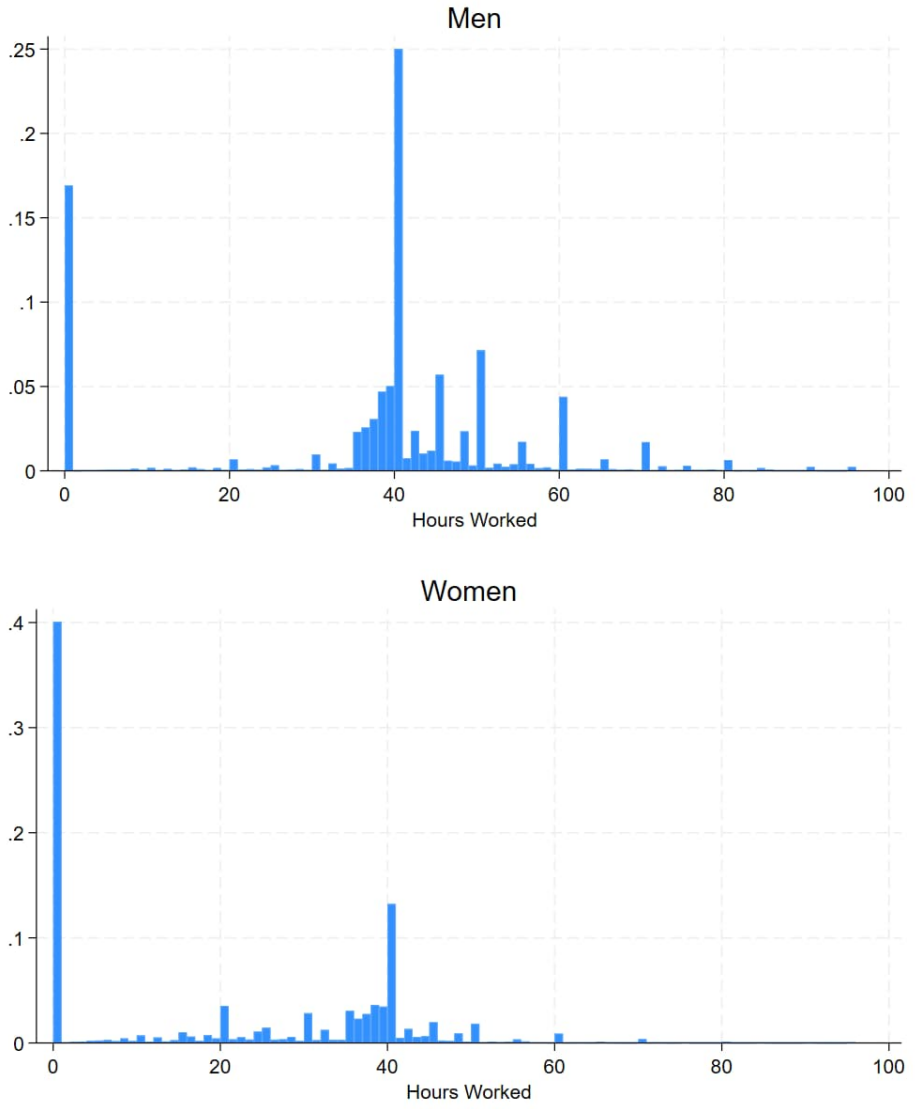


Table A-1: Summary statistics of additional controls by gender and union status

	Single		Cohabiting		Married	
	Women	Men	Women	Men	Women	Men
Student status	0.25 (0.43)	0.18 (0.39)	0.10 (0.29)	0.06 (0.24)	0.01 (0.11)	0.01 (0.10)
Less than secondary education	0.28 (0.45)	0.37 (0.48)	0.29 (0.45)	0.30 (0.46)	0.45 (0.50)	0.41 (0.49)
Tertiary education	0.16 (0.37)	0.16 (0.37)	0.28 (0.45)	0.25 (0.43)	0.20 (0.40)	0.23 (0.42)
Foreign born	0.05 (0.23)	0.05 (0.22)	0.06 (0.23)	0.06 (0.25)	0.08 (0.27)	0.08 (0.26)
Years since migration	0.57 (3.48)	0.57 (3.56)	0.44 (3.16)	0.62 (3.87)	1.09 (5.09)	1.10 (5.24)
Number of children	0.09 (0.38)	0.003 (0.07)	0.52 (0.87)	0.47 (0.80)	1.67 (1.13)	1.65 (1.11)
Age	27.01 (7.13)	27.45 (6.91)	28.82 (6.27)	30.64 (6.48)	37.82 (7.48)	39.02 (6.96)

Notes: Means with standard deviations in parentheses. This table reports additional control variables beyond those shown in Table 1. All measures correspond to the same period as the union status variables.

Table A-2: Sample sizes referring to income variables, hours worked, and additional controls by gender and union status

	Single		Cohabiting		Married	
	Women	Men	Women	Men	Women	Men
Log total AE household income	57,798	76,932	15,456	14,932	145,963	125,705
Log work net income	58,192	77,424	15,553	14,971	146,596	126,085
Weekly hours worked	67,101	91,222	21,499	21,280	187,375	162,286
Number of children and age	67,958	92,398	21,812	21,728	189,338	164,566

Table A-3: Level and change in log adult equivalent household income by marital status and by transitions into types of union

	Level models			Change models	
	(1) Men	(2) Women		(3) Men	(4) Women
Type of union (ref. single)			(ref. no change)		
Married	0.13	0.21	Single to married	0.26	0.29
	(0.112; 0.140)	(0.196; 0.224)		(0.224; 0.304)	(0.250; 0.334)
Cohabiting	0.10	0.21	Single to cohabiting	0.08	0.15
	(0.087; 0.117)	(0.195; 0.227)		(0.042; 0.112)	(0.111; 0.188)
			Cohabiting to married	0.01	0.02
				(–0.013; 0.025)	(–0.003; 0.034)
Controls			Change in		
Number of children	–0.19	–0.19		–0.22	–0.21
	(–0.200; –0.190)	(–0.197; –0.187)		(–0.227; –0.208)	(–0.220; –0.202)
Student status	–0.08	–0.08		–0.03	–0.07
	(–0.103; –0.066)	(–0.097; –0.062)		(–0.054; –0.008)	(–0.087; –0.044)
Less than secondary	–0.20	–0.24		0.01	0.01
	(–0.214; –0.195)	(–0.249; –0.229)		(–0.005; 0.020)	(–0.003; 0.026)
Tertiary	0.25	0.22		–0.01	–0.00
	(0.238; 0.260)	(0.209; 0.231)		(–0.028; 0.010)	(–0.019; 0.019)
Age	–0.31	–0.19			
	(–0.425; –0.189)	(–0.306; –0.068)			
Age squared	0.16	0.11		0.17	0.12
	(0.106; 0.216)	(0.053; 0.162)		(0.111; 0.233)	(0.052; 0.184)
Age cubed	–0.03	–0.02		–0.04	–0.03
	(–0.045; –0.023)	(–0.034; –0.012)		(–0.049; –0.024)	(–0.039; –0.013)
Age to the 4th power	0.00	0.00		0.00	0.00
	(0.002; 0.003)	(0.001; 0.003)		(0.002; 0.004)	(0.001; 0.003)
Years since migration	0.01	0.01			
	(0.003; 0.015)	(0.007; 0.014)			
Years since migration squared	–0.00	–0.00		0.00	–0.00
	(–0.002; 0.001)	(–0.002; –0.001)		(–0.001; 0.001)	(–0.003; 0.001)
Foreign	–0.17	–0.18			
	(–0.224; –0.119)	(–0.226; –0.131)			
Non-EU	–0.07	–0.02			
	(–0.110; –0.027)	(–0.059; 0.015)			

Table A-3: (Continued)

	Level models		Change models	
	(1) Men	(2) Women	(3) Men	(4) Women
Countries (ref. Germany)				
Denmark	0.11	0.09	–0.00	–0.00
	(0.096; 0.132)	(0.075; 0.110)	(–0.010; 0.007)	(–0.009; 0.008)
Netherlands	0.07	0.05	0.00	–0.00
	(0.055; 0.088)	(0.032; 0.065)	(–0.005; 0.009)	(–0.010; 0.004)
Belgium	0.12	0.09	–0.01	–0.02
	(0.098; 0.137)	(0.071; 0.110)	(–0.019; –0.003)	(–0.022; –0.008)
Luxemburg	0.59	0.63	–0.01	–0.01
	(0.566; 0.605)	(0.605; 0.647)	(–0.015; –0.000)	(–0.015; 0.002)
France	–0.02	–0.02	–0.01	–0.01
	(–0.033; 0.000)	(–0.031; 0.001)	(–0.017; –0.004)	(–0.019; –0.006)
UK	0.00	0.02	0.01	0.01
	(–0.018; 0.019)	(0.002; 0.037)	(0.001; 0.016)	(–0.002; 0.013)
Ireland	–0.02	–0.01	0.01	0.02
	(–0.036; 0.004)	(–0.034; 0.006)	(0.008; 0.022)	(0.010; 0.023)
Italy	–0.29	–0.30	–0.00	–0.01
	(–0.312; –0.276)	(–0.318; –0.283)	(–0.008; 0.004)	(–0.013; –0.001)
Greece	–0.55	–0.52	–0.01	–0.01
	(–0.571; –0.531)	(–0.541; –0.501)	(–0.020; –0.005)	(–0.018; –0.004)
Spain	–0.39	–0.39	0.01	0.01
	(–0.411; –0.373)	(–0.412; –0.374)	(0.003; 0.018)	(0.003; 0.018)
Portugal	–0.53	–0.53	0.01	0.01
	(–0.556; –0.512)	(–0.557; –0.512)	(0.008; 0.021)	(0.007; 0.020)
Austria	0.05	0.07	–0.01	–0.01
	(0.030; 0.070)	(0.046; 0.086)	(–0.014; 0.001)	(–0.020; –0.004)
Finland	–0.17	–0.20	–0.02	0.00
	(–0.191; –0.151)	(–0.214; –0.176)	(–0.030; –0.009)	(–0.009; 0.014)
Year (ref. 1994)				
1995	–0.23	–0.23		
	(–0.243; –0.226)	(–0.235; –0.218)		
1996	–0.21	–0.21	–0.04	–0.04
	(–0.221; –0.205)	(–0.219; –0.203)	(–0.045; –0.028)	(–0.049; –0.031)
1997	–0.18	–0.18	–0.01	–0.02
	(–0.184; –0.168)	(–0.184; –0.168)	(–0.021; –0.004)	(–0.026; –0.009)
1998	–0.12	–0.13	–0.01	–0.01
	(–0.132; –0.116)	(–0.133; –0.118)	(–0.015; 0.003)	(–0.021; –0.004)
1999	–0.08	–0.09	–0.01	–0.01
	(–0.088; –0.073)	(–0.095; –0.080)	(–0.017; 0.000)	(–0.023; –0.006)
2000	–0.04	–0.05	0.00	–0.01
	(–0.044; –0.030)	(–0.055; –0.042)	(–0.008; 0.010)	(–0.017; 0.002)
Constant	11.31	10.27	–0.26	–0.14
	(10.378; 12.234)	(9.338; 11.208)	(–0.391; –0.130)	(–0.278; 0.006)
Observations	213,397	214,706	165,385	167,239
R-squared	0.320	0.332	0.016	0.018

Notes: Data from ECHP 1994–2001. In parenthesis, 95% confidence intervals are clustered by id. OLS level estimates show the difference in AE household income between those either currently married or in a cohabiting union and those who are single. Change models compare those who change union status (single to married, single to cohabiting, cohabiting to married) to those who do not. Full models of results are presented in Table 2.

Table A-4: Level models for hours worked by union type, labor market participation, and gender

	All		Worked at least in t-1		Worked in both periods	
	(1)	(2)	(3)	(4)	(5)	(6)
	Women	Men	Women	Men	Women	Men
Type of union (ref. single)						
Married	–2.83	7.59	–2.39	2.07	–1.68	0.98
	(–3.241; –2.416)	(7.197; 7.989)	(–2.736; –2.035)	(1.751 – 2.381)	(–1.987; –1.365)	(0.698; 1.269)
Cohabiting	0.80	4.41	0.09	0.71	0.59	0.29
	(0.351; 1.246)	(3.981; 4.833)	(–0.321; 0.505)	(0.327; 1.100)	(0.236; 0.944)	(–0.058; 0.629)
Controls						
Number of children	–3.74	0.06	–2.33	0.35	–1.76	0.46
	(–3.881; –3.591)	(–0.093; 0.205)	(–2.492; –2.175)	(0.233; 0.473)	(–1.904; –1.607)	(0.344; 0.567)
Student status	–22.88	–27.03	–21.00	–22.39	–11.55	–12.02
	(–23.250; –22.507)	(–27.413; –26.652)	(–21.851; –20.141)	(–23.340; –21.434)	(–12.644; –10.461)	(–13.192; –10.853)
Less than secondary	–4.45	–2.02	–0.88	–0.36	0.47	0.36
	(–4.757; –4.143)	(–2.288; –1.753)	(–1.178; –0.581)	(–0.585; –0.134)	(0.199; 0.739)	(0.157; 0.566)
Tertiary	4.31	0.68	1.26	–0.14	0.40	–0.51
	(3.990; 4.638)	(0.412; 0.948)	(0.970; 1.554)	(–0.392; 0.121)	(0.127; 0.668)	(–0.756; –0.268)
Age	12.31	12.67	10.22	13.85	13.09	4.96
	(8.792 – 15.832)	(9.428 – 15.917)	(6.115 – 14.335)	(10.395 – 17.302)	(9.476 – 16.696)	(2.033 – 7.892)
Age squared	–5.52	–4.70	–4.58	–5.26	–5.84	–1.73
	(–7.129; –3.921)	(–6.168; –3.228)	(–6.421; –2.740)	(–6.790; –3.729)	(–7.460; –4.210)	(–3.036; –0.419)
Age cubed	1.12	0.78	0.92	0.88	1.13	0.26
	(0.809; 1.440)	(0.489; 1.064)	(0.560; 1.274)	(0.590; 1.178)	(0.812; 1.445)	(0.009; 0.515)
Age to the 4th power	–0.09	–0.05	–0.07	–0.06	–0.08	–0.01
	(–0.108; –0.063)	(–0.069; –0.028)	(–0.093; –0.043)	(–0.076; –0.035)	(–0.103; –0.057)	(–0.033; 0.003)
Years since migration	0.46	0.19	–0.01	0.05	–0.09	–0.07
	(0.335; 0.586)	(0.008; 0.369)	(–0.216; 0.188)	(–0.112; 0.204)	(–0.272; 0.091)	(–0.205; 0.071)
Years since migration squared	–0.06	–0.02	0.01	0.00	0.02	0.02
	(–0.091; –0.036)	(–0.065; 0.024)	(–0.033; 0.060)	(–0.032; 0.042)	(–0.019; 0.067)	(–0.013; 0.052)
Foreign	–6.66	–4.90	–0.87	–2.67	0.38	–0.70
	(–8.306; –5.024)	(–6.724; –3.067)	(–3.073; 1.335)	(–4.320; –1.014)	(–1.539 – 2.305)	(–2.125; 0.722)
Non-EU	–2.33	–2.20	–0.50	–1.14	0.22	–0.73
	(–3.525; –1.144)	(–3.366; –1.041)	(–1.720; 0.713)	(–2.104; –0.170)	(–0.847; 1.285)	(–1.600; 0.139)

Table A-4: (Continued)

	All		Worked at least in t-1		Worked in both periods	
	(1) Women	(2) Men	(3) Women	(4) Men	(5) Women	(6) Men
Countries (ref. Germany)						
Denmark	4.74	–1.14	2.02	–1.62	0.93	–2.60
	(4.086; 5.393)	(–1.749; –0.536)	(1.420 – 2.625)	(–2.190; –1.051)	(0.367; 1.486)	(–3.145; –2.060)
Netherlands	–2.65	–0.52	–5.66	–1.77	–8.26	–3.57
	(–3.212; –2.092)	(–1.007; –0.037)	(–6.217; –5.099)	(–2.207; –1.325)	(–8.806; –7.712)	(–3.997; –3.148)
Belgium	2.57	1.48	3.06	1.91	1.21	0.41
	(1.782; 3.363)	(0.804 – 2.155)	(2.295; 3.822)	(1.299 – 2.518)	(0.480; 1.936)	(–0.167; 0.978)
Luxemburg	–3.56	–0.55	1.54	–1.53	–0.20	–3.22
	(–4.406; –2.723)	(–1.124; 0.029)	(0.825 – 2.247)	(–1.983; –1.080)	(–0.837; 0.446)	(–3.635; –2.814)
France	0.32	–2.13	2.14	–1.31	1.61	–2.00
	(–0.275; 0.918)	(–2.620; –1.634)	(1.584 – 2.696)	(–1.766; –0.861)	(1.105 – 2.119)	(–2.423; –1.585)
UK	1.15	1.16	0.27	2.53	–0.90	2.22
	(0.593; 1.716)	(0.640; 1.671)	(–0.283; 0.818)	(2.079 – 2.980)	(–1.436; –0.372)	(1.800 – 2.632)
Ireland	–0.89	1.51	–0.02	2.92	–1.04	2.00
	(–1.542; –0.232)	(0.796 – 2.233)	(–0.667; 0.624)	(2.282; 3.554)	(–1.640; –0.442)	(1.399 – 2.598)
Italy	–4.12	–3.57	1.91	–1.37	1.33	–2.12
	(–4.680; –3.562)	(–4.012; –3.120)	(1.369 – 2.444)	(–1.752; –0.979)	(0.832; 1.834)	(–2.471; –1.764)
Greece	–2.77	1.16	3.65	2.14	4.47	1.85
	(–3.452; –2.084)	(0.620; 1.694)	(2.984; 4.316)	(1.634 – 2.643)	(3.874; 5.075)	(1.379 – 2.321)
Spain	–4.45	–1.92	1.20	–0.35	3.07	0.33
	(–5.026; –3.875)	(–2.395; –1.449)	(0.574; 1.826)	(–0.783; 0.093)	(2.507; 3.629)	(–0.068; 0.724)
Portugal	6.46	1.96	6.67	1.33	4.79	–0.18
	(5.798; 7.124)	(1.453 – 2.468)	(6.097; 7.245)	(0.881; 1.770)	(4.254; 5.319)	(–0.586; 0.235)
Austria	3.59	3.06	3.04	2.35	1.69	1.38
	(2.773; 4.406)	(2.438; 3.688)	(2.247; 3.825)	(1.740 – 2.961)	(0.918 – 2.466)	(0.795; 1.962)
Finland	5.45	–0.91	4.81	0.94	4.91	0.84
	(4.757; 6.140)	(–1.536; –0.283)	(4.154; 5.465)	(0.315; 1.574)	(4.309; 5.508)	(0.240; 1.431)
Year (ref. 1994)						
1994	–0.72	–0.78				
	(–0.977; –0.466)	(–1.026; –0.541)				
1995	–0.49	–0.34	0.49	0.62	1.00	1.12
	(–0.732; –0.244)	(–0.569; –0.112)	(0.204; 0.769)	(0.393; 0.841)	(0.774; 1.225)	(0.942; 1.299)
1996	–0.31	–0.36	0.75	0.56	1.04	0.99
	(–0.548; –0.068)	(–0.582; –0.131)	(0.480; 1.029)	(0.342; 0.773)	(0.820; 1.258)	(0.818; 1.157)
1997	–0.17	–0.09	0.91	0.76	1.08	1.08
	(–0.406; 0.067)	(–0.318; 0.130)	(0.641; 1.176)	(0.550; 0.974)	(0.869; 1.291)	(0.911; 1.246)
1998	–0.23	–0.22	0.52	0.40	0.71	0.57
	(–0.461; –0.008)	(–0.436; –0.010)	(0.263; 0.785)	(0.198; 0.603)	(0.506; 0.910)	(0.409; 0.726)
1999	–0.19	–0.13	0.49	0.33	0.54	0.38
	(–0.404; 0.025)	(–0.333; 0.070)	(0.240; 0.744)	(0.132; 0.523)	(0.349; 0.733)	(0.227; 0.532)
2000	0.15	0.02	0.48	0.28	0.50	0.30
	(–0.052; 0.346)	(–0.172; 0.209)	(0.240; 0.723)	(0.093; 0.473)	(0.330; 0.676)	(0.155; 0.437)
Constant	–75.92	–91.08	–52.68	–94.81	–70.34	–8.94
	(–104.026; –47.819)	(–117.147; –65.010)	(–86.185; –19.166)	(–123.286; –66.327)	(–99.591; –41.084)	(–32.859 – 14.976)
Observations	269,766	268,990	124,142	171,502	112,907	164,016
R-squared	0.200	0.272	0.116	0.097	0.133	0.057

Notes: Date from ECHP 1994–2001. In parenthesis, 95% confidence intervals are clustered by id. OLS level estimates show the difference in hours worked between those either currently married or in a cohabiting union and those who are single. Full models of results are presented in Figure 1, Panel B.

Table A-5: Change models for changes in work hours at union transition by union type, labor market participation, and gender

	All		Worked at least in t-1		Worked in both periods	
	(1) Women	(2) Men	(3) Women	(4) Men	(5) Women	(6) Men
Type of union (ref. no change)						
Single to married	–1.72	1.35	–2.16	1.18	–0.62	0.49
	(–2.522; –0.921)	(0.615 – 2.078)	(–3.042; –1.285)	(0.578; 1.782)	(–1.153; –0.086)	(0.021; 0.958)
Single to cohabiting	0.31	1.76	–0.18	0.11	–0.21	–0.12
	(–0.340; 0.968)	(1.049 – 2.464)	(–0.847; 0.481)	(–0.477; 0.689)	(–0.687; 0.260)	(–0.550; 0.309)
Cohabiting to married	–1.43	–0.27	–0.95	0.24	–0.29	–0.14
	(–2.072; –0.791)	(–0.868; 0.332)	(–1.580; –0.312)	(–0.266; 0.751)	(–0.680; 0.101)	(–0.542; 0.255)
Controls						
Change in:						
Number of children	–2.99	–0.32	–3.87	0.04	–1.19	–0.19
	(–3.204; –2.776)	(–0.557; –0.092)	(–4.161; –3.574)	(–0.168; 0.238)	(–1.372; –1.005)	(–0.347; –0.028)
Student status	–16.64	–17.42	–19.91	–20.65	–12.80	–12.02
	(–17.104; –16.170)	(–17.965; –16.880)	(–20.667; –19.156)	(–21.557; –19.736)	(–13.835; –11.764)	(–13.143; –10.906)
Less than secondary	–0.23	0.05	–0.58	–0.28	–0.31	–0.38
	(–0.518; 0.056)	(–0.269; 0.377)	(–0.931; –0.220)	(–0.573; 0.013)	(–0.565; –0.064)	(–0.609; –0.147)
Tertiary	–0.09	0.10	–0.84	–0.68	–0.43	–0.33
	(–0.433; 0.251)	(–0.290; 0.489)	(–1.203; –0.468)	(–1.044; –0.317)	(–0.708; –0.154)	(–0.619; 0.032)
Age squared	–4.19	–2.03	–0.13	13.68	–5.35	–1.63
	(–5.530; –2.854)	(–3.582; –0.487)	(–2.522 – 2.260)	(11.618 – 15.750)	(–6.833; –3.872)	(–2.857; –0.397)
Age cubed	0.77	0.22	0.33	–2.27	1.00	0.26
	(0.504; 1.032)	(–0.086; 0.519)	(–0.133; 0.793)	(–2.659; –1.872)	(0.719; 1.291)	(0.023; 0.497)
Age to the 4th power	–0.05	–0.01	–0.04	0.14	–0.07	–0.02
	(–0.073; –0.035)	(–0.030; 0.013)	(–0.073; –0.007)	(0.111; 0.165)	(–0.089; –0.049)	(–0.033; 0.000)
Years since migration squared	–0.01	–0.04	–0.04	–0.05	0.00	–0.00
	(–0.049; 0.023)	(–0.087; –0.002)	(–0.089; 0.013)	(–0.087; –0.004)	(–0.023; 0.032)	(–0.024; 0.023)
Countries (ref. Germany)						
Denmark	0.55	–0.00	0.87	0.75	–0.15	–0.17
	(0.325; 0.766)	(–0.235; 0.234)	(0.566; 1.183)	(0.482; 1.013)	(–0.324; 0.026)	(–0.343; –0.002)
Netherlands	0.36	0.21	1.61	1.26	–0.09	0.06
	(0.200; 0.515)	(0.042; 0.376)	(1.368; 1.852)	(1.057; 1.466)	(–0.233; 0.062)	(–0.065; 0.180)
Belgium	0.11	0.28	1.19	0.73	–0.35	–0.24
	(–0.078; 0.298)	(0.087; 0.482)	(0.904; 1.484)	(0.485; 0.984)	(–0.512; –0.181)	(–0.378; –0.094)
Luxemburg	0.23	–0.04	1.33	1.12	–0.42	–0.34
	(0.005; 0.452)	(–0.253; 0.171)	(0.980; 1.690)	(0.881; 1.351)	(–0.610; –0.226)	(–0.471; –0.206)
France	0.29	0.27	–0.26	–0.15	–0.30	–0.32
	(0.114; 0.458)	(0.073; 0.457)	(–0.553; 0.028)	(–0.387; 0.086)	(–0.444; –0.163)	(–0.442; –0.198)
UK	0.26	0.03	1.35	0.37	0.07	–0.12
	(0.082; 0.436)	(–0.167; 0.225)	(1.089; 1.604)	(0.119; 0.612)	(–0.083; 0.224)	(–0.255; 0.016)
Ireland	0.51	0.21	0.26	0.50	–0.47	–0.15
	(0.321; 0.706)	(–0.008; 0.429)	(–0.080; 0.593)	(0.223; 0.772)	(–0.654; –0.277)	(–0.318; 0.012)
Italy	0.21	0.37	0.21	0.54	–0.16	–0.04
	(0.063; 0.353)	(0.215; 0.525)	(–0.063; 0.479)	(0.336; 0.738)	(–0.289; –0.026)	(–0.142; 0.067)
Greece	0.50	0.25	–1.28	–0.05	–0.19	–0.23
	(0.315; 0.691)	(0.053; 0.456)	(–1.653; –0.907)	(–0.309; 0.203)	(–0.373; 0.001)	(–0.380; –0.080)
Spain	0.73	0.68	–1.43	–0.84	0.08	–0.14
	(0.563; 0.892)	(0.493; 0.858)	(–1.794; –1.068)	(–1.094; –0.590)	(–0.105; 0.258)	(–0.273; –0.009)
Portugal	0.49	–0.10	0.57	0.81	–0.38	–0.31
	(0.316; 0.660)	(–0.272; 0.073)	(0.296; 0.850)	(0.601; 1.029)	(–0.520; –0.244)	(–0.428; –0.190)
Austria	–0.01	–0.12	0.55	0.62	–0.45	–0.37
	(–0.230; 0.211)	(–0.332; 0.100)	(0.225; 0.885)	(0.358; 0.876)	(–0.643; –0.261)	(–0.524; –0.220)
Finland	0.77	0.82	0.20	0.38	–0.06	–0.06
	(0.517; 1.014)	(0.557; 1.077)	(–0.154; 0.545)	(0.079; 0.682)	(–0.273; 0.145)	(–0.258; 0.140)

Table A-5: (Continued)

	All		Worked at least in t-1		Worked in both periods	
	(1) Women	(2) Men	(3) Women	(4) Men	(5) Women	(6) Men
Year (ref. 1974–1975)						
1995	0.16	0.49	–0.53	–0.35	0.06	0.21
	(–0.046; 0.362)	(0.255; 0.721)	(–0.777; –0.273)	(–0.561; –0.129)	(–0.118; 0.231)	(0.044; 0.376)
1996	–0.01	0.17	–0.29	–0.31	0.17	0.19
	(–0.209; 0.185)	(–0.053; 0.386)	(–0.537; –0.053)	(–0.511; –0.107)	(0.004; 0.337)	(0.034; 0.336)
1997	0.10	0.38	–0.24	–0.17	0.09	0.29
	(–0.099; 0.291)	(0.165; 0.603)	(–0.482; –0.006)	(–0.376; 0.028)	(–0.073; 0.259)	(0.134; 0.443)
1998	–0.06	0.23	–0.44	–0.46	–0.07	–0.08
	(–0.261; 0.143)	(0.009; 0.457)	(–0.684; –0.198)	(–0.661; –0.255)	(–0.243; 0.094)	(–0.232; 0.079)
1999	0.14	0.33	0.11	0.13	0.22	0.20
	(–0.065; 0.339)	(0.111; 0.550)	(–0.128; 0.351)	(–0.072; 0.323)	(0.053; 0.389)	(0.050; 0.359)
2000	0.09	0.31	0.12	0.19	0.23	0.18
	(–0.134; 0.315)	(0.065; 0.552)	(–0.130; 0.376)	(–0.023; 0.401)	(0.050; 0.418)	(0.009; 0.351)
Constant	10.37	7.54	–6.51	–37.43	12.45	4.55
	(7.459 – 13.277)	(4.133 – 10.940)	(–11.829; –1.192)	(–42.121; –32.737)	(9.140 – 15.755)	(1.793; 7.315)
Observations	211,180	208,629	123,113	170,192	111,989	162,777
R-squared	0.066	0.053	0.059	0.040	0.024	0.011

Notes: Data from ECHP 1994–2001. In parenthesis, 95% confidence intervals clustered by id. Change models compare those who change union status (single to married, single to cohabiting, cohabiting to married) to those who do not. Full models of results are presented in Figure 2.

Table A–6: Level and change in log total individual income by marital status and transitions into types of union

	Level models			Change models	
	(1) Women	(2) Men		(3) Women	(4) Men
Type of union (ref. single)			(ref. no change)		
Married	–0.81	0.94	Single to married	–0.30	0.04
	(–0.880; –0.734)	(0.891; 0.980)		(–0.441; –0.160)	(–0.057; 0.127)
Cohabiting	0.00	0.72	Single to cohabiting	–0.10	–0.03
	(–0.064; 0.074)	(0.677; 0.761)		(–0.175; –0.028)	(–0.087; 0.018)
			Cohabiting to married	–0.20	–0.08
				(–0.292; –0.115)	(–0.131; –0.038)
Controls			Change in:		
Number of children	–0.36	–0.02		–0.17	–0.02
	(–0.392; –0.335)	(–0.030; –0.008)		(–0.209; –0.131)	(–0.040; 0.004)
Student status	–2.30	–2.49		–0.71	–0.71
	(–2.382; –2.213)	(–2.580; –2.406)		(–0.792; –0.630)	(–0.797; –0.622)
Less than secondary	–0.88	–0.14		–0.01	–0.12
	(–0.940; –0.817)	(–0.176; –0.109)		(–0.067; 0.048)	(–0.165; –0.072)
Tertiary	0.82	0.24		0.09	0.00
	(0.757; 0.877)	(0.207; 0.269)		(0.021; 0.153)	(–0.058; 0.062)
Age	3.07	2.78			
	(2.401; 3.732)	(2.339; 3.221)			
Age squared	–1.24	–1.06		–2.21	–1.08
	(–1.553; –0.929)	(–1.264; –0.865)		(–2.491; –1.929)	(–1.320; –0.835)
Age cubed	0.23	0.18		0.40	0.16
	(0.163; 0.289)	(0.143; 0.221)		(0.343; 0.456)	(0.114; 0.210)
Age to the 4th power	–0.02	–0.01		–0.03	–0.01
	(–0.020; –0.011)	(–0.014; –0.009)		(–0.031; –0.023)	(–0.013; –0.006)
Years since migration	0.07	0.02			
	(0.053; 0.097)	(0.006; 0.040)			
Years since migration squared	–0.01	–0.00		–0.01	–0.00
	(–0.015; –0.005)	(–0.008; 0.000)		(–0.010; –0.001)	(–0.003; 0.002)
Foreign	–0.85	–0.45			
	(–1.133; –0.573)	(–0.624; –0.267)			

Non-EU	–0.69 (–0.923; –0.452)	0.01 (–0.124; 0.135)

Table A–6: (Continued)

	Level models		Change models	
	(1) Women	(2) Men	(3) Women	(4) Men
Countries (ref. Germany)				
Denmark	1.35 (1.268; 1.428)	0.28 (0.227; 0.334)	–0.04 (–0.062; –0.015)	–0.05 (–0.066; –0.029)
Netherlands	–0.32 (–0.445; –0.201)	0.20 (0.153; 0.239)	0.09 (0.058; 0.127)	0.02 (–0.004; 0.037)
Belgium	0.62 (0.511; 0.728)	0.07 (0.014; 0.134)	–0.00 (–0.038; 0.033)	0.05 (0.016; 0.075)
Luxemburg	–1.37 (–1.572; –1.165)	0.46 (0.384; 0.541)	0.08 (0.011; 0.146)	0.08 (0.045; 0.118)
France	0.42 (0.321; 0.513)	0.22 (0.174; 0.261)	–0.05 (–0.077; –0.019)	0.03 (0.014; 0.054)
UK	0.88 (0.807; 0.960)	0.13 (0.091; 0.175)	–0.06 (–0.080; –0.033)	–0.04 (–0.056; –0.020)
Ireland	0.65 (0.553; 0.739)	0.35 (0.293; 0.405)	0.01 (–0.016; 0.044)	0.01 (–0.017; 0.036)
Italy	–2.71 (–2.831; –2.591)	–1.38 (–1.450; –1.310)	0.01 (–0.020; 0.042)	0.08 (0.053; 0.102)
Greece	–2.76 (–2.896; –2.621)	–1.20 (–1.273; –1.125)	0.00 (–0.038; 0.041)	0.02 (–0.014; 0.047)
Spain	–2.68 (–2.804; –2.566)	–0.90 (–0.956; –0.841)	0.05 (0.010; 0.081)	0.08 (0.052; 0.103)
Portugal	–1.32 (–1.455; –1.194)	–0.88 (–0.943; –0.818)	0.10 (0.069; 0.138)	0.06 (0.031; 0.082)
Austria	0.04 (–0.088; 0.172)	0.11 (0.050; 0.173)	–0.05 (–0.088; –0.003)	–0.04 (–0.065; –0.009)
Finland	1.37 (1.288; 1.447)	0.31 (0.258; 0.361)	–0.03 (–0.053; –0.001)	–0.05 (–0.071; –0.024)
Year (ref. 1994)				
1995	–0.46 (–0.505; –0.416)	–0.27 (–0.295; –0.235)		
1996	–0.40 (–0.442; –0.357)	–0.24 (–0.271; –0.214)	–0.08 (–0.122; –0.046)	–0.05 (–0.081; –0.021)
1997	–0.32 (–0.356; –0.275)	–0.20 (–0.226; –0.170)	–0.06 (–0.100; –0.023)	–0.04 (–0.071; –0.011)
1998	–0.24 (–0.278; –0.200)	–0.11 (–0.137; –0.083)	–0.09 (–0.130; –0.054)	0.01 (–0.023; 0.035)
1999	–0.21 (–0.250; –0.177)	–0.11 (–0.134; –0.083)	–0.07 (–0.112; –0.036)	–0.02 (–0.046; 0.013)
2000	–0.19 (–0.219; –0.154)	–0.07 (–0.097; –0.051)	–0.05 (–0.092; –0.008)	0.01 (–0.021; 0.043)
Constant	–19.16 (–24.315; –13.996)	–18.14 (–21.689; –14.582)	5.51 (4.910; 6.113)	3.22 (2.686; 3.749)
Observations	214,837	213,493	167,368	165,483
R-squared	0.285	0.382	0.012	0.020

Notes: Data from ECHP 1994–2001. In parenthesis, 95% confidence intervals are clustered by id. OLS level estimates show the difference in log total individual income between those either currently married or in a cohabiting union and those who are single. Change models compare those who change union status (single to married, single to cohabiting, cohabiting to married) to those who do not.

Table A-7: Level models for log work income by union type, labor market participation, and gender

	All		Worked at least in t–1		Worked in both periods	
	(1) Women	(2) Men	(3) Women	(4) Men	(5) Women	(6) Men
Type of union (ref. single)						
Married	–0.02	0.97	–0.09	0.53	–0.08	0.45
	(–0.076; 0.045)	(0.911; 1.024)	(–0.146; –0.039)	(0.487; 0.568)	(–0.132; –0.031)	(0.410; 0.489)
Cohabiting	0.11	0.78	–0.00	0.41	–0.01	0.35
	(0.040; 0.183)	(0.716; 0.837)	(–0.053; 0.051)	(0.369; 0.448)	(–0.060; 0.038)	(0.314; 0.390)
Controls						
Work hours	0.14	0.08	0.02	0.00	0.01	–0.00
	(0.138; 0.141)	(0.078; 0.082)	(0.018; 0.022)	(–0.000; 0.003)	(0.007; 0.012)	(–0.005; –0.002)
Number of children	–0.32	–0.08	–0.31	–0.01	–0.28	–0.00
	(–0.342; –0.292)	(–0.097; –0.059)	(–0.336; –0.280)	(–0.025; –0.002)	(–0.306; –0.250)	(–0.011; 0.010)
Student status	–0.61	–1.96	–0.96	–1.03	–0.74	–0.67
	(–0.692; –0.531)	(–2.049; –1.872)	(–1.088; –0.830)	(–1.154; –0.909)	(–0.871; –0.616)	(–0.786; –0.562)
Less than secondary	–0.65	–0.34	–0.60	–0.23	–0.52	–0.21
	(–0.697; –0.597)	(–0.375; –0.296)	(–0.655; –0.548)	(–0.263; –0.205)	(–0.573; –0.467)	(–0.239; –0.183)
Tertiary	0.71	0.40	0.50	0.30	0.43	0.29
	(0.651; 0.761)	(0.357; 0.433)	(0.458; 0.543)	(0.276; 0.325)	(0.386; 0.467)	(0.265; 0.312)
Age	0.86	1.70	1.07	1.08	0.89	0.89
	(0.302; 1.425)	(1.218 – 2.190)	(0.451; 1.681)	(0.671; 1.497)	(0.292; 1.487)	(0.492; 1.293)
Age squared	–0.39	–0.70	–0.44	–0.40	–0.36	–0.32
	(–0.650; –0.124)	(–0.928; –0.480)	(–0.727; –0.156)	(–0.584; –0.212)	(–0.639; –0.085)	(–0.505; –0.144)
Age cubed	0.08	0.13	0.09	0.07	0.07	0.05
	(0.028; 0.134)	(0.085; 0.174)	(0.029; 0.143)	(0.030; 0.102)	(0.014; 0.125)	(0.018; 0.088)
Age to the 4th power	–0.01	–0.01	–0.01	–0.00	–0.01	–0.00
	(–0.010; –0.003)	(–0.012; –0.006)	(–0.011; –0.002)	(–0.007; –0.002)	(–0.009; –0.001)	(–0.006; –0.001)
Years since migration	0.05	0.03	0.05	0.02	0.04	0.02
	(0.036; 0.069)	(0.008; 0.051)	(0.028; 0.078)	(0.008; 0.038)	(0.016; 0.058)	(0.003; 0.030)
Years since migration squared	–0.01	–0.00	–0.01	–0.00	–0.01	–0.00
	(–0.011; –0.004)	(–0.010; 0.001)	(–0.016; –0.003)	(–0.007; –0.000)	(–0.012; –0.001)	(–0.006; 0.001)
Foreign	–0.57	–0.45	–0.43	–0.35	–0.27	–0.26
	(–0.794; –0.353)	(–0.659; –0.236)	(–0.686; –0.165)	(–0.516; –0.182)	(–0.503; –0.030)	(–0.413; –0.097)
Non-EU	–0.38	–0.06	–0.07	0.00	0.03	0.02
	(–0.567; –0.202)	(–0.227; 0.103)	(–0.251; 0.103)	(–0.110; 0.115)	(–0.141; 0.193)	(–0.092; 0.125)
Countries (ref. Germany)						
Denmark	0.86	0.35	0.39	0.02	0.26	–0.05
	(0.761; 0.957)	(0.267; 0.431)	(0.326; 0.452)	(–0.022; 0.063)	(0.204; 0.320)	(–0.087; –0.010)
Netherlands	0.84	0.34	0.15	0.03	0.03	–0.00
	(0.740; 0.942)	(0.270; 0.410)	(0.071; 0.226)	(–0.016; 0.074)	(–0.043; 0.099)	(–0.045; 0.037)
Belgium	0.08	–0.01	0.09	0.01	0.04	–0.03
	(–0.047; 0.199)	(–0.100; 0.085)	(–0.010; 0.182)	(–0.041; 0.067)	(–0.045; 0.133)	(–0.082; 0.016)
Luxemburg	–0.26	0.76	0.62	0.72	0.62	0.66
	(–0.401; –0.121)	(0.666; 0.848)	(0.512; 0.730)	(0.668; 0.768)	(0.521; 0.715)	(0.615; 0.700)
France	0.46	0.26	0.53	0.12	0.41	0.05
	(0.376; 0.547)	(0.197; 0.327)	(0.482; 0.584)	(0.088; 0.156)	(0.364; 0.456)	(0.016; 0.078)
UK	0.48	–0.19	0.32	0.11	0.15	0.06
	(0.392; 0.563)	(–0.259; –0.128)	(0.275; 0.374)	(0.074; 0.143)	(0.105; 0.194)	(0.033; 0.096)
Ireland	0.05	–0.09	0.16	0.15	0.07	0.09
	(–0.055; 0.161)	(–0.176; 0.005)	(0.071; 0.248)	(0.103; 0.202)	(–0.015; 0.150)	(0.047; 0.141)
Italy	–0.99	–0.67	–0.28	–0.37	–0.18	–0.35
	(–1.076; –0.906)	(–0.738; –0.605)	(–0.369; –0.199)	(–0.419; –0.322)	(–0.261; –0.101)	(–0.396; –0.305)
Greece	–1.84	–1.08	–1.82	–0.82	–1.62	–0.79
	(–1.948; –1.733)	(–1.162; –1.003)	(–1.970; –1.663)	(–0.883; –0.750)	(–1.780; –1.463)	(–0.853; –0.723)
Spain	–1.15	–0.69	–0.79	–0.52	–0.50	–0.45
	(–1.235; –1.060)	(–0.753; –0.618)	(–0.886; –0.692)	(–0.568; –0.465)	(–0.594; –0.414)	(–0.496; –0.401)
Portugal	–1.05	–0.73	–0.77	–0.61	–0.87	–0.67
	(–1.149; –0.946)	(–0.805; –0.656)	(–0.884; –0.663)	(–0.663; –0.551)	(–0.979; –0.757)	(–0.722; –0.615)
Austria	–0.76	–0.06	–0.78	–0.03	–0.75	–0.10
	(–0.909; –0.616)	(–0.159; 0.031)	(–0.919; –0.636)	(–0.093; 0.034)	(–0.891; –0.615)	(–0.158; –0.035)
Finland	0.76	0.28	0.31	0.02	0.30	–0.00
	(0.660; 0.866)	(0.192; 0.366)	(0.248; 0.380)	(–0.037; 0.075)	(0.238; 0.359)	(–0.056; 0.052)

Table A-7: (Continued)

	All		Worked at least in t–1		Worked in both periods	
	(1) Women	(2) Men	(3) Women	(4) Men	(5) Women	(6) Men
Year (ref. 1994)						
1995	–0.45	–0.38	–0.40	–0.29	–0.29	–0.26
	(–0.492; –0.404)	(–0.415; –0.342)	(–0.439; –0.352)	(–0.317; –0.262)	(–0.332; –0.254)	(–0.280; –0.230)
1996	–0.42	–0.35	–0.32	–0.27	–0.26	–0.24
	(–0.464; –0.377)	(–0.389; –0.319)	(–0.359; –0.276)	(–0.294; –0.242)	(–0.301; –0.226)	(–0.267; –0.219)
1997	–0.33	–0.28	–0.25	–0.21	–0.23	–0.20
	(–0.374; –0.291)	(–0.313; –0.245)	(–0.291; –0.210)	(–0.237; –0.186)	(–0.265; –0.192)	(–0.225; –0.178)
1998	–0.22	–0.17	–0.16	–0.13	–0.13	–0.12
	(–0.262; –0.179)	(–0.200; –0.133)	(–0.196; –0.117)	(–0.150; –0.101)	(–0.166; –0.095)	(–0.146; –0.101)
1999	–0.19	–0.13	–0.10	–0.10	–0.09	–0.10
	(–0.228; –0.148)	(–0.158; –0.094)	(–0.138; –0.062)	(–0.127; –0.080)	(–0.126; –0.059)	(–0.122; –0.079)
2000	–0.16	–0.08	–0.11	–0.06	–0.07	–0.05
	(–0.200; –0.125)	(–0.111; –0.051)	(–0.142; –0.068)	(–0.079; –0.034)	(–0.098; –0.036)	(–0.074; –0.034)
Constant	–3.72	–9.98	–1.65	–1.98	0.47	0.23
	(–8.071; 0.632)	(–13.814; –6.148)	(–6.473; 3.180)	(–5.328; 1.360)	(–4.219; 5.167)	(–3.026; 3.479)
Observations	212,473	210,623	124,511	172,119	112,083	162,819
R-squared	0.553	0.489	0.147	0.141	0.139	0.136

Notes: Data from ECHP 1994–2001. In parenthesis, 95% confidence intervals are clustered by id. OLS level estimates show the difference in log work income between those either currently married or in a cohabiting union and those who are single. Full models of results are presented in Figure 3, Panel A.

Table A-8: Level models for log work income with and without controlling for hours by union type and gender

	Without hours		With hours	
	(1) Women	(2) Men	(3) Women	(4) Men
Type of union (ref. single)				
Married	–0.39	1.59	–0.02	0.97
	(–0.481; –0.291)	(1.519; 1.666)	(–0.076; 0.045)	(0.911; 1.024)
Cohabiting	0.24	1.16	0.11	0.78
	(0.134; 0.343)	(1.082; 1.235)	(0.040; 0.183)	(0.716; 0.837)
Controls				
Work hours			0.14	0.08
			(0.138; 0.141)	(0.078; 0.082)
Number of children	–0.85	–0.08	–0.32	–0.08
	(–0.887; –0.817)	(–0.107; –0.057)	(–0.342; –0.292)	(–0.097; –0.059)
Student status	–3.63	–3.98	–0.61	–1.96
	(–3.730; –3.537)	(–4.078; –3.889)	(–0.692; –0.531)	(–2.049; –1.872)
Less than secondary	–1.21	–0.48	–0.65	–0.34
	(–1.285; –1.137)	(–0.529; –0.431)	(–0.697; –0.597)	(–0.375; –0.296)
Tertiary	1.32	0.45	0.71	0.40
	(1.242; 1.397)	(0.409; 0.496)	(0.651; 0.761)	(0.357; 0.433)
Age	2.23	2.60	0.86	1.70
	(1.438; 3.017)	(2.017; 3.179)	(0.302; 1.425)	(1.218; 2.190)
Age squared	–1.00	–1.02	–0.39	–0.70
	(–1.375; –0.632)	(–1.287; –0.751)	(–0.650; –0.124)	(–0.928; –0.480)
Age cubed	0.21	0.18	0.08	0.13
	(0.135; 0.285)	(0.125; 0.232)	(0.028; 0.134)	(0.085; 0.174)
Age to the 4th power	–0.02	–0.01	–0.01	–0.01
	(–0.022; –0.011)	(–0.016; –0.008)	(–0.010; –0.003)	(–0.012; –0.006)
Years since migration	0.10	0.03	0.05	0.03
	(0.078; 0.128)	(0.005; 0.062)	(0.036; 0.069)	(0.008; 0.051)
Years since migration squared	–0.01	–0.00	–0.01	–0.00
	(–0.020; –0.008)	(–0.012; 0.003)	(–0.011; –0.004)	(–0.010; 0.001)
Foreign	–1.31	–0.68	–0.57	–0.45
	(–1.638; –0.976)	(–0.951; –0.408)	(–0.794; –0.353)	(–0.659; –0.236)
Non-EU	–0.79	–0.25	–0.38	–0.06
	(–1.085; –0.502)	(–0.461; –0.035)	(–0.567; –0.202)	(–0.227; 0.103)

Table A-8: (Continued)

	Without hours		With hours	
	(1) Women	(2) Men	(3) Women	(4) Men
Countries (ref. Germany)				
Denmark	1.52	0.26	0.86	0.35
	(1.379; 1.669)	(0.167; 0.362)	(0.761; 0.957)	(0.267; 0.431)
Netherlands	0.37	0.27	0.84	0.34
	(0.225; 0.523)	(0.184; 0.353)	(0.740; 0.942)	(0.270; 0.410)
Belgium	0.45	0.08	0.08	–0.01
	(0.277; 0.627)	(–0.032; 0.198)	(–0.047; 0.199)	(–0.100; 0.085)
Luxemburg	–0.99	0.45	–0.26	0.76
	(–1.218; –0.767)	(0.319; 0.585)	(–0.401; –0.121)	(0.666; 0.848)
France	0.58	0.13	0.46	0.26
	(0.443; 0.714)	(0.047; 0.208)	(0.376; 0.547)	(0.197; 0.327)
UK	0.63	–0.09	0.48	–0.19
	(0.501; 0.762)	(–0.173; 0.001)	(0.392; 0.563)	(–0.259; –0.128)
Ireland	–0.09	0.04	0.05	–0.09
	(–0.262; 0.077)	(–0.078; 0.166)	(–0.055; 0.161)	(–0.176; 0.005)
Italy	–1.56	–0.97	–0.99	–0.67
	(–1.693; –1.422)	(–1.050; –0.883)	(–1.076; –0.906)	(–0.738; –0.605)
Greece	–2.26	–1.00	–1.84	–1.08
	(–2.411; –2.103)	(–1.092; –0.911)	(–1.948; –1.733)	(–1.162; –1.003)
Spain	–1.84	–0.87	–1.15	–0.69
	(–1.969; –1.701)	(–0.955; –0.789)	(–1.235; –1.060)	(–0.753; –0.618)
Portugal	–0.18	–0.56	–1.05	–0.73
	(–0.328; –0.031)	(–0.648; –0.467)	(–1.149; –0.946)	(–0.805; –0.656)
Austria	–0.26	0.20	–0.76	–0.06
	(–0.439; –0.079)	(0.104; 0.296)	(–0.909; –0.616)	(–0.159; 0.031)
Finland	1.49	0.18	0.76	0.28
	(1.346; 1.627)	(0.086; 0.274)	(0.660; 0.866)	(0.192; 0.366)
Year (ref. 1994)				
1995	–0.56	–0.44	–0.45	–0.38
	(–0.618; –0.507)	(–0.477; –0.396)	(–0.492; –0.404)	(–0.415; –0.342)
1996	–0.47	–0.37	–0.42	–0.35
	(–0.524; –0.416)	(–0.413; –0.334)	(–0.464; –0.377)	(–0.389; –0.319)
1997	–0.39	–0.31	–0.33	–0.28
	(–0.439; –0.337)	(–0.344; –0.268)	(–0.374; –0.291)	(–0.313; –0.245)
1998	–0.24	–0.18	–0.22	–0.17
	(–0.293; –0.194)	(–0.215; –0.141)	(–0.262; –0.179)	(–0.200; –0.133)
1999	–0.21	–0.15	–0.19	–0.13
	(–0.260; –0.167)	(–0.185; –0.116)	(–0.228; –0.148)	(–0.158; –0.094)
2000	–0.17	–0.10	–0.16	–0.08
	(–0.215; –0.132)	(–0.131; –0.070)	(–0.200; –0.125)	(–0.111; –0.051)
Constant	–11.49	–16.47	–3.72	–9.98
	(–17.593; –5.387)	(–21.059; –11.891)	(–8.071; 0.632)	(–13.814; –6.148)
Observations	214,837	213,493	212,473	210,623
R-squared	0.242	0.330	0.553	0.489

Note: Data from ECHP 1994–2001. In parenthesis, 95% confidence intervals are clustered by id. OLS level estimates show the difference in log work income with and without controlling for hours worked between those either currently married or in a cohabiting union and those who are single. Full models of results are presented in Table 3, Panel A.

Table A-9: Change models for change log work income with and without controlling for hours by union type and gender

	Without hours		With hours	
	(1) Women	(2) Men	(3) Women	(4) Men
Type of union (ref. no change)				
Single to married	–0.43	0.02	–0.34	–0.02
	(–0.585; –0.276)	(–0.101; 0.133)	(–0.489; –0.187)	(–0.139; 0.092)
Single to cohabiting	–0.15	0.01	–0.14	–0.02
	(–0.278; –0.029)	(–0.087; 0.116)	(–0.262; –0.021)	(–0.126; 0.079)
Cohabiting to married	–0.41	–0.14	–0.34	–0.14
	(–0.547; –0.278)	(–0.224; –0.066)	(–0.473; –0.213)	(–0.219; –0.061)
Controls				
Change in:				
Work hours			0.04	0.03
			(0.042; 0.046)	(0.027; 0.029)
Number of children	–0.60	–0.07	–0.45	–0.05
	(–0.650; –0.548)	(–0.100; –0.032)	(–0.497; –0.398)	(–0.084; –0.015)
Student status	–1.42	–1.32	–0.73	–0.86
	(–1.529; –1.317)	(–1.430; –1.203)	(–0.839; –0.624)	(–0.969; –0.741)
Less than secondary	–0.02	–0.07	–0.02	–0.05
	(–0.083; 0.045)	(–0.122; –0.011)	(–0.081; 0.048)	(–0.109; 0.005)
Tertiary	0.11	0.00	0.11	0.00
	(0.031; 0.189)	(–0.070; 0.079)	(0.029; 0.184)	(–0.074; 0.076)
Age squared	–1.95	–0.46	–1.78	–0.58
	(–2.253; –1.638)	(–0.753; –0.177)	(–2.072; –1.483)	(–0.857; –0.294)
Age cubed	0.36	0.04	0.33	0.07
	(0.297; 0.421)	(–0.019; 0.096)	(0.269; 0.387)	(0.009; 0.121)
Age to the 4th power	–0.03	–0.00	–0.02	–0.00
	(–0.030; –0.020)	(–0.005; 0.004)	(–0.027; –0.018)	(–0.007; 0.002)
Years since migration squared	–0.00	–0.00	–0.00	0.00
	(–0.010; 0.006)	(–0.006; 0.004)	(–0.010; 0.007)	(–0.004; 0.005)
Countries (ref. Germany)				
Denmark	0.06	0.01	0.04	0.01
	(0.003; 0.109)	(–0.029; 0.046)	(–0.013; 0.087)	(–0.027; 0.046)
Netherlands	0.15	0.08	0.14	0.07
	(0.102; 0.191)	(0.045; 0.115)	(0.097; 0.181)	(0.039; 0.107)
Belgium	0.01	0.06	0.02	0.06
	(–0.036; 0.062)	(0.022; 0.103)	(–0.022; 0.072)	(0.022; 0.101)
Luxemburg	0.11	0.09	0.05	0.03
	(0.044; 0.178)	(0.043; 0.137)	(–0.011; 0.113)	(–0.009; 0.075)
France	0.12	0.08	0.14	0.09
	(0.075; 0.156)	(0.051; 0.113)	(0.098; 0.176)	(0.063; 0.127)
UK	–0.02	–0.01	–0.02	–0.01
	(–0.065; 0.019)	(–0.039; 0.026)	(–0.063; 0.015)	(–0.039; 0.024)
Ireland	0.14	0.11	0.11	0.10
	(0.090; 0.189)	(0.071; 0.154)	(0.069; 0.161)	(0.064; 0.142)
Italy	0.01	0.07	0.00	0.07
	(–0.032; 0.042)	(0.036; 0.098)	(–0.031; 0.039)	(0.041; 0.100)
Greece	0.03	0.03	0.02	0.03
	(–0.012; 0.075)	(–0.007; 0.064)	(–0.019; 0.062)	(–0.006; 0.064)
Spain	0.11	0.12	0.09	0.10
	(0.069; 0.152)	(0.083; 0.151)	(0.048; 0.125)	(0.069; 0.135)
Portugal	0.09	0.05	0.07	0.05
	(0.053; 0.135)	(0.013; 0.078)	(0.035; 0.111)	(0.014; 0.077)
Austria	0.01	–0.02	0.02	–0.00
	(–0.051; 0.070)	(–0.058; 0.025)	(–0.034; 0.081)	(–0.044; 0.036)
Finland	0.07	0.04	0.03	0.02
	(0.010; 0.123)	(–0.008; 0.085)	(–0.025; 0.081)	(–0.030; 0.061)

Table A-9: Change models for change log work income with and without controlling for hours by union type and gender

	Without hours		With hours	
	(1) Women	(2) Men	(3) Women	(4) Men
Year (ref. 1974–1975)				
1996	–0.10	–0.06	–0.09	–0.07
	(–0.140; –0.052)	(–0.097; –0.019)	(–0.138; –0.051)	(–0.104; –0.027)
1997	–0.07	–0.05	–0.05	–0.03
	(–0.115; –0.027)	(–0.086; –0.010)	(–0.097; –0.010)	(–0.070; 0.006)
1998	–0.07	0.02	–0.05	0.02
	(–0.110; –0.023)	(–0.020; 0.054)	(–0.095; –0.010)	(–0.018; 0.056)
1999	–0.08	–0.03	–0.07	–0.03
	(–0.124; –0.034)	(–0.070; 0.006)	(–0.116; –0.028)	(–0.070; 0.005)
2000	–0.05	0.02	–0.05	0.02
	(–0.097; –0.002)	(–0.022; 0.058)	(–0.093; 0.002)	(–0.020; 0.061)
Constant	4.85	1.98	4.42	2.12
	(4.199; 5.500)	(1.362; 2.603)	(3.791; 5.040)	(1.513; 2.724)
Observations	167,368	165,483	164,104	161,536
R-squared	0.023	0.024	0.069	0.054

Notes: Data from ECHP 1994–2001. In parenthesis, 95% confidence intervals are clustered by id. Change models compare those who change union status (single to married, single to cohabiting, cohabiting to married) to those who do not. Full models of results are presented in Table 3, Panel B.

Table A-10: Change models for changes in log work income at union transition by union type, labor market participation, and gender

	All		Worked at least in t-1		Worked in both periods	
	(1) Women	(2) Men	(3) Women	(4) Men	(5) Women	(6) Men
Type of union (ref. no change)						
Single to married	–0.34	–0.02	–0.15	–0.04	–0.15	–0.02
	(–0.489; –0.187)	(–0.139; 0.092)	(–0.305; 0.002)	(–0.146; 0.069)	(–0.287; –0.003)	(–0.123; 0.085)
Single to cohabiting	–0.14	–0.02	–0.08	–0.02	–0.13	–0.05
	(–0.262; –0.021)	(–0.126; 0.079)	(–0.185; 0.032)	(–0.104; 0.068)	(–0.243; –0.026)	(–0.133; 0.039)
Cohabiting to married	–0.34	–0.14	–0.24	–0.11	–0.22	–0.13
	(–0.473; –0.213)	(–0.219; –0.061)	(–0.349; –0.131)	(–0.178; –0.045)	(–0.324; –0.122)	(–0.191; –0.061)
Controls						
Change in:						
Work hours	0.04	0.03	0.04	0.02	0.04	0.02
	(0.042; 0.046)	(0.027; 0.029)	(0.037; 0.041)	(0.022; 0.025)	(0.041; 0.045)	(0.023; 0.026)
Number of children	–0.45	–0.05	–0.21	–0.02	–0.16	–0.02
	(–0.497; –0.398)	(–0.084; –0.015)	(–0.260; –0.151)	(–0.050; 0.010)	(–0.207; –0.107)	(–0.045; 0.012)
Student status	–0.73	–0.86	–1.12	–1.44	–1.19	–1.56
	(–0.839; –0.624)	(–0.969; –0.741)	(–1.276; –0.970)	(–1.591; –1.281)	(–1.349; –1.027)	(–1.723; –1.400)
Less than secondary	–0.02	–0.05	–0.06	–0.07	–0.07	–0.06
	(–0.081; 0.048)	(–0.109; 0.005)	(–0.133; 0.017)	(–0.126; –0.022)	(–0.138; 0.002)	(–0.108; –0.010)
Tertiary	0.11	0.00	0.06	–0.05	0.04	–0.04
	(0.029; 0.184)	(–0.074; 0.076)	(–0.016; 0.142)	(–0.120; 0.014)	(–0.037; 0.110)	(–0.100; 0.028)
Age squared	–1.78	–0.58	–1.84	–1.92	–1.79	–2.09
	(–2.072; –1.483)	(–0.857; –0.294)	(–2.301; –1.374)	(–2.267; –1.565)	(–2.220; –1.354)	(–2.427; –1.754)
Age cubed	0.33	0.07	0.34	0.32	0.32	0.35
	(0.269; 0.387)	(0.009; 0.121)	(0.248; 0.431)	(0.256; 0.391)	(0.239; 0.408)	(0.285; 0.414)
Age to the 4th power	–0.02	–0.00	–0.02	–0.02	–0.02	–0.02
	(–0.027; –0.018)	(–0.007; 0.002)	(–0.030; –0.017)	(–0.025; –0.016)	(–0.028; –0.016)	(–0.026; –0.017)
Years since migration squared	–0.00	0.00	0.01	0.00	0.01	0.00
	(–0.010; 0.007)	(–0.004; 0.005)	(0.001; 0.013)	(–0.000; 0.009)	(0.002; 0.013)	(–0.001; 0.008)

Table A-10: (Continued)

	All		Worked at least in t-1		Worked in both periods	
	(1) Women	(2) Men	(3) Women	(4) Men	(5) Women	(6) Men
Countries (ref. Germany)						
Denmark	0.04	0.01	0.10	0.08	0.03	0.05
	(–0.013; 0.087)	(–0.027; 0.046)	(0.044; 0.150)	(0.039; 0.112)	(–0.022; 0.074)	(0.014; 0.080)
Netherlands	0.14	0.07	0.08	0.02	0.10	0.03
	(0.097; 0.181)	(0.039; 0.107)	(0.030; 0.133)	(–0.010; 0.058)	(0.056; 0.145)	(–0.004; 0.055)
Belgium	0.02	0.06	–0.07	0.03	–0.06	0.01
	(–0.022; 0.072)	(0.022; 0.101)	(–0.123; –0.016)	(–0.010; 0.063)	(–0.109; –0.017)	(–0.025; 0.041)
Luxemburg	0.05	0.03	–0.24	–0.02	–0.13	–0.04
	(–0.011; 0.113)	(–0.009; 0.075)	(–0.319; –0.167)	(–0.050; 0.011)	(–0.177; –0.077)	(–0.062; –0.009)
France	0.14	0.09	0.19	0.13	0.08	0.07
	(0.098; 0.176)	(0.063; 0.127)	(0.147; 0.233)	(0.104; 0.161)	(0.036; 0.117)	(0.044; 0.097)
UK	–0.02	–0.01	0.16	0.09	0.07	0.04
	(–0.063; 0.015)	(–0.039; 0.024)	(0.116; 0.198)	(0.061; 0.117)	(0.033; 0.108)	(0.010; 0.062)
Ireland	0.11	0.10	0.24	0.19	0.17	0.12
	(0.069; 0.161)	(0.064; 0.142)	(0.177; 0.300)	(0.150; 0.233)	(0.109; 0.222)	(0.086; 0.162)
Italy	0.00	0.07	–0.09	0.09	0.02	0.11
	(–0.031; 0.039)	(0.041; 0.100)	(–0.139; –0.037)	(0.057; 0.120)	(–0.021; 0.062)	(0.080; 0.135)
Greece	0.02	0.03	0.13	0.14	0.20	0.15
	(–0.019; 0.062)	(–0.006; 0.064)	(0.063; 0.190)	(0.101; 0.175)	(0.137; 0.257)	(0.120; 0.188)
Spain	0.09	0.10	0.07	0.16	0.21	0.18
	(0.048; 0.125)	(0.069; 0.135)	(0.007; 0.141)	(0.118; 0.193)	(0.156; 0.272)	(0.141; 0.209)
Portugal	0.07	0.05	0.15	0.13	0.12	0.10
	(0.035; 0.111)	(0.014; 0.077)	(0.100; 0.197)	(0.097; 0.161)	(0.072; 0.160)	(0.067; 0.126)
Austria	0.02	–0.00	0.10	0.10	0.10	0.05
	(–0.034; 0.081)	(–0.044; 0.036)	(0.026; 0.173)	(0.058; 0.134)	(0.028; 0.164)	(0.014; 0.086)
Finland	0.03	0.02	0.06	0.09	–0.02	0.05
	(–0.025; 0.081)	(–0.030; 0.061)	(0.005; 0.121)	(0.049; 0.127)	(–0.076; 0.030)	(0.009; 0.082)
Year (ref. 1974–1975)						
1996	–0.09	–0.07	–0.11	–0.04	–0.09	–0.04
	(–0.138; –0.051)	(–0.104; –0.027)	(–0.163; –0.066)	(–0.074; –0.006)	(–0.131; –0.043)	(–0.069; –0.006)
1997	–0.05	–0.03	–0.05	–0.01	–0.04	–0.02
	(–0.097; –0.010)	(–0.070; 0.006)	(–0.095; 0.001)	(–0.048; 0.018)	(–0.085; 0.005)	(–0.047; 0.015)
1998	–0.05	0.02	–0.05	0.02	–0.02	0.01
	(–0.095; –0.010)	(–0.018; 0.056)	(–0.093; –0.001)	(–0.014; 0.050)	(–0.064; 0.022)	(–0.015; 0.045)
1999	–0.07	–0.03	–0.07	–0.02	–0.07	–0.02
	(–0.116; –0.028)	(–0.070; 0.005)	(–0.115; –0.019)	(–0.057; 0.009)	(–0.114; –0.024)	(–0.056; 0.007)
2000	–0.05	0.02	–0.06	0.01	–0.02	0.01
	(–0.093; 0.002)	(–0.020; 0.061)	(–0.109; –0.008)	(–0.020; 0.049)	(–0.071; 0.023)	(–0.020; 0.045)
Constant	4.42	2.12	4.55	5.01	4.55	5.54
	(3.791; 5.040)	(1.513; 2.724)	(3.533; 5.559)	(4.227; 5.794)	(3.597; 5.503)	(4.789; 6.299)
Observations	164,104	161,536	96,574	132,576	87,286	125,675
R-squared	0.069	0.054	0.089	0.076	0.117	0.087

Notes: Data from ECHP 1994–2001. In parenthesis, 95% confidence intervals are clustered by id. Change models compare those who change union status (single to married, single to cohabiting, cohabiting to married) to those who do not. Full models of results are presented in Figure 4.