Association between household poverty and transitions to union formation[1] and parenthood among young females in Europe: Evidence from the European Community Household Panel survey

(DRAFT – NOT FOR CITATION)

Abstract

We use data from the European Community Household Panel (ECHP) survey to examine the association between household poverty (income poverty and deprivation indices) and transitions to union formation and parenthood among young females in Europe. The analysis is based on both cross-sectional analysis of individual survey waves as well as longitudinal analysis of merged data across waves. The latter features multilevel analysis to explore the consistency in individuals experiences across the eight waves of the ECHP. The results show a strong association between timing of first birth and the risk of household poverty, with low age at first birth being associated with high risk of both income poverty and deprivation. However, being in union, even in teenage years, is associated with reduced risk of household poverty. An examination of the association between parenthood or union status in the previous year and risk of poverty in the subsequent year reveals that being a single parent is associated with the worst outcomes, including transition to more serious risk of poverty and persistent poverty. On the other hand, childless couples have the most favourable outcomes. A further examination of the extent to which household poverty affects transitions to parenthood and union formation suggests that being in poverty reduces the odds of transition to parenthood. Those who were not in poverty in the previous year have a 69 per cent higher odds of becoming parents in the subsequent year compared to those in severe income poverty (below 40 per cent of median income). For transition to union formation, household deprivation appears more significant than income poverty, with severe deprivation being associated with higher odds of getting into union.

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[1] Union formation as used in this study includes both formal marital unions as well as informal cohabiting partnerships.

Introduction

This study builds on earlier work on adolescent transitions and teenage motherhood in Europe based on the European Community Household Panel (ECHP) survey (Lacovou 1998; Berthoud and Robson 2001; Schizzerotto and Licchini 2002). The study has been inspired by some of the findings from these earlier studies. Lacovou (1998) suggested that the low fertility in Southern Europe was possibly due to changes in timing of childbirth, rather than delayed or low entry into parenthood. This study examines changes in timing of transition to parenthood across European countries using all waves of ECHP data and thus sheds some light on patterns of entry into parenthood across countries in Europe. Lacovou further suggested the need for research to examine factors influencing partnership and parenthood timing patterns among young people in Europe, which this study contributes to.

In their analysis of the position of women whose first child was born when they were teenagers, across 13 countries in the European Union, Berthoud and Robson (2001) observed that teenage mothers were disadvantaged in all countries with respect to educational attainment, family structure, family employment and household income, but the severity of their position varied substantially between countries. Schzzerotto and Lucchini (2002) further observed that negative economic circumstances partly explained the delay before people born in the late fifties formed their first union and had the first baby. They also observed that school credentials exerted a very strong negative effect on the transition to the first job, first union and first child. While these studies have no doubt made a significant contribution to the understanding of the relationship between individual and household socio-economic factors and adolescent transitions in Europe, there is need for further analysis of the role of household poverty on timing and sequence of transitions among young people, to better understand the relationships.

In this study, we examine the associations between household poverty and the timing as well as sequence of transitions to parenthood and union formation among young females in Europe. The specific objectives are:

i. examine patterns of timing and sequence of transitions to parenthood and union formation among young females in different countries in Europe; and
ii. establish the role of household poverty /deprivation in the transition patterns among young people.

The specific research questions include: what are the levels and trends in timing and sequence of transitions to parenthood and union formation among young females in Europe? To what extent does household poverty influence transitions to parenthood and union formation? What is the effect of timing and sequence of transitions to parenthood and union formation on the risk of poverty?

We focus on young females aged 16-35 years who are at a critical transition stage and likely to face unique educational/career, livelihood and family challenges. Limiting the study to these cohorts ensures coverage of the period when most of the transitions of interest occur while at the same time minimizes incidence of union dissolutions which would complicate the analysis if older cohorts were included. The male counterparts are excluded from the analysis given the difficulty in accurately establishing their parenthood status.

Data and Methods

The Data

The study uses data from the European Community Household Panel (ECHP) survey, a complex data set containing both cross sectional household panel surveys and longitudinal micro-data. The availability of a panel survey provides an opportunity for the analysis of timing and sequence of transition events of interest. Furthermore, the longitudinal nature of the data permits time sequencing of the events of interest which helps establish whether the adolescent transition patterns observed were a consequence of poverty, or

vice versa, something that would be impossible to ascertain from a one off cross-sectional survey. In addition, the longitudinal data minimizes recall bias which is often a major drawback in the use of event history data from cross-sectional surveys. The other main advantage of the ECHP data is the uniform design across countries which facilitates comparative analysis and makes it possible to pool data and test significance of differences across countries. Nevertheless, we recognize some critical problems associated with longitudinal data analysis, the most common of which is attrition. Attempts have been made, to the extent possible, to address these during the analysis.

We have used all the eight waves of the ECHP datasets, covering a total of 15 countries in Europe. The study focuses on information relating to union formation and motherhood status for young females aged 16-35 years, as well as household information on income, assets, amenities and housing conditions, from which poverty profiles and deprivation indices are derived. In addition, background individual factors known to influence the timing of adolescent transitions are incorporated in the analysis.

Data on timing of parenthood and union formation

One of the main drawbacks of the ECHP surveys used in this study is that they do not have direct information on age at first birth or age at first marriage. These have been derived from available information, based on a number of assumptions.

For age at first birth, we have used information on the relationships between household members and their dates of birth to estimate age at first birth of young females in the households. The approach used is similar to that used in previous studies that have used the ECHP data or similar dataset to analyse fertility patterns in Europe (see for example, Berthoud and Robson, 2001; bertrhoud, 2001). An important assumption here is that the vast majority of young children, whose mothers are aged 35 years or younger, live in the same households as their natural mothers. It is important to point out that this

approach is likely to overestimate age at first birth in countries where adoption is common.

For age at first marriage, we have used information on current union status and information on date of last change in marital status, across the 8 waves of surveys. The age at first marriage is likely to be more accurately estimated for those who had never been in union at the time they were first interviewed in ECHP, since the date of last change in marital status will either be observed during the subsequent waves of the survey, or the cases will be censured at the time of the final survey, if they remain single throughout the period. For those who were in union at the time they were first interviewed, the date of last change in marital status is taken as the first entry into union, assuming no previous union dissolutions had occurred. First marriage information is considered as missing for those who were previously married by the time they were first interviewed, since no data is available to permit a reasonable estimate.

Household income poverty and deprivation indices.

Our measurement of poverty will include income poverty profiles taking into account the persistence and recurrence of poverty among individuals over time (see Whelan et al, 2003; Fouarge and Layte, 2003) as well as household deprivation based on household possessions, amenities, housing conditions and environmental deprivation (Layte et al, 2000; Whelan et al, 2001). We have derived a summary deprivation index , based on five deprivation components: basic and secondary lifestyles deprivation; housing facilities deprivation; housing deterioration; and environment deprivation, incorporating a total of 24 items (see Whelan et al, 2001) shown below:

- Basic lifestyles deprivation
    - Cannot afford to replace any worn out furniture
    - Cannot afford a week's annual holiday away from home
    - Cannot afford new, rather than second-hand cloths
    - Cannot afford having friends or family for a meal once a month

    - Cannot afford to keep home adequately warm
    - Cannot afford to eat meat, chicken or fish every second day
    - In arreas on rent, utilities, and hire purchase

- Secondary lifestyles deprivation
    - No microwave oven in household
    - No dish-washer in household
    - No video recorder in household
    - No car in household
    - No telephone in household
    - No colour TV in household

- Housing facilities deprivation
    - No bath or shower facility
    - No indoor flushing toilet
    - No hot running water

- Housing deterioration
    - Damp home
    - Rot in home
    - Leaking roof

- Environment deprivation
    - Noise from neighbours
    - Pollution
    - Shortage of space
    - Not enough light
    - vandalism

In combining the items into scales, we use a straight forward additive procedure, where the number of items on which the household is deprived is simply summed. An earlier comparison of the additive procedure with use of scales obtained by factor scores, weighting each item by the extent to which

deprivation of that kind is experienced in specific countries, showed that weighting appeared to have no effect on the results (see Whelan et al, 2001). We have classified the aggregate deprivation score into four categories by extent of deprivation as follows:

- no deprivation on any item
- mild deprivation – on 1-2 items
- moderate deprivation – on 3-4 items
- severe deprivation – on at least 5 items.

For income poverty, we use measures of relative income, taking into account income inequality and identifying those who are below a given per cent of the median income for the relevant country in a specific year. Income used in this paper refers to household income, equivalised to take into account household size and composition, based on a modified OECD scale with a childless couple as the reference unit . Although the analysis focuses on the standard income threshold of 60 per cent below the median income, we have derived four categories showing extent of (or risk of) income poverty as follows:

1. no income poverty - (at least 70 per cent of median income)
2. mild (risk of) income poverty - (60-69 per cent of median income)
3. moderate (risk of) income poverty - (40-59 per cent of median income
4. severe (risk of) income poverty – below 40 per cent of median income.

The deprivation and income poverty indices have been used to derive an overall indicator of consistent poverty, defined as presence of both deprivation and income poverty (risk), one of which is severe.

Analytical Methods

The analysis is carried out in two broad stages, in line with the study objectives stated above. At each stage, the analysis starts with a comparative analysis of individual countries, before pooling the data from the different

countries, as appropriate, to get a more general pattern for Europe as a whole.

i. *Examine patterns in timing and sequence of adolescent transitions to marriage and parenthood in Europe*

Young females aged 16-35 are classified into four exhaustive and mutually exclusive states:

- single without children
- single with children
- married/cohabiting without children
- married/cohabiting with children

We start with life table analysis of survival time to first birth and first marriage by country and for all the pooled data set for countries included in ECHP surveys. This is followed with a multi-state analysis (Fernando,1999) to examine patterns in timing and sequence of adolescent transitions to union formation and parenthood, and illustrate how the likelihood of being in different transition states varies with age. The analysis further examines changes in the adolescent transition patterns over time.

ii. *Establish the association between household poverty and adolescent transition patterns*

The analysis of the association between household poverty and adolescent transitions uses pooled data across countries and waves and employs multi-level models to explore observed individual and contextual factors associated with adolescent transitions to union formation and parenthood, with particular reference to household poverty and deprivation. The analysis takes into account variations between countries and other important socio-economic factors, including employment and educational attainment.

Patterns in Timing and Sequence of Transitions to parenthood and Union Formation in Europe

We start by examining the median age at first birth and first union across the eight waves of ECHP surveys by country to give an indication of country variations and trends. The result for the first wave (1994) and the final wave (2001) are presented in Table 1, while more detailed data for all waves are in Appendices I(a) and I(b).

Table 1 Life table median age at first birth and first union in 1994 and 2001 by country

	Median age at first birth		Median age at first union	
Country	1994	2001	1994	2001
Germany	25.7	27.3	24.5	25.9
Denmark	26.4	27.7	28.1	28.4
Netherlands	28.1	30.3	26.4	26.8
Belgium	26.1	28.0	24.2	25.8
Luxembourg	26.4	27.8	24.6	28.5
France	25.6	27.5	25.6	27.0
United Kingdom	26.0	27.2	25.3	26.5
Ireland	27.1	28.1	26.7	29.6
Italy	27.3	29.6	26.3	27.4
Greece	24.3	26.6	23.3	25.2
Spain	26.8	29.9	25.8	27.3
Portugal	24.5	26.2	23.6	24.6
Austria	-	26.2	-	26.3
Finland	-	27.4	-	26.1
Sweden	-	27.4	-	-
All* - Median	26.14	28.11	25.28	26.66
- Cases	19887	12429	18398	10272

* - excluding Austria, Finland and Sweden

Overall, the median age at first birth increased by about 2 years between 1994 and 2001 (from 26.1 to 28.1 years), while the median age at first union increased by about 1.4 years (i.e from 25.3 to 26.7 years). The median age at first marriage preceded the median age at first birth by almost 10 months in

1994. This gap increased to about 17 months in 2001, suggesting that in general, couples in Europe are staying childless longer.

There are significant variations between countries in both the timing and sequence of transitions of young women to parenthood and union formation Across years, the lowest median ages at first birth are observed in Greece and Portugal (and Austria in 2001), while the highest age is in The Netherlands. While Greece and Portugal also recorded among the lowest age at first marriage, the same does not apply to the Netherlands. The overall tendency for marriage to precede first birth holds for most countries, except Denmark and France where median age at first birth is lower than the median age at first marriage in both years, and in 2001 for Luxembourg, Ireland, Austria and Sweden. In the UK, first birth and union formation tend to occur around the same age.

The overall proportions in 1994 and 2001 who are not yet parents or never in union by age are presented in Figures 1a and 1b, while the more detailed data by wave are given in Appendices II(a) and II(b) .

Figure 1a: Life table cumulative proportion who are not yet parents in 1994 and 2001 by age

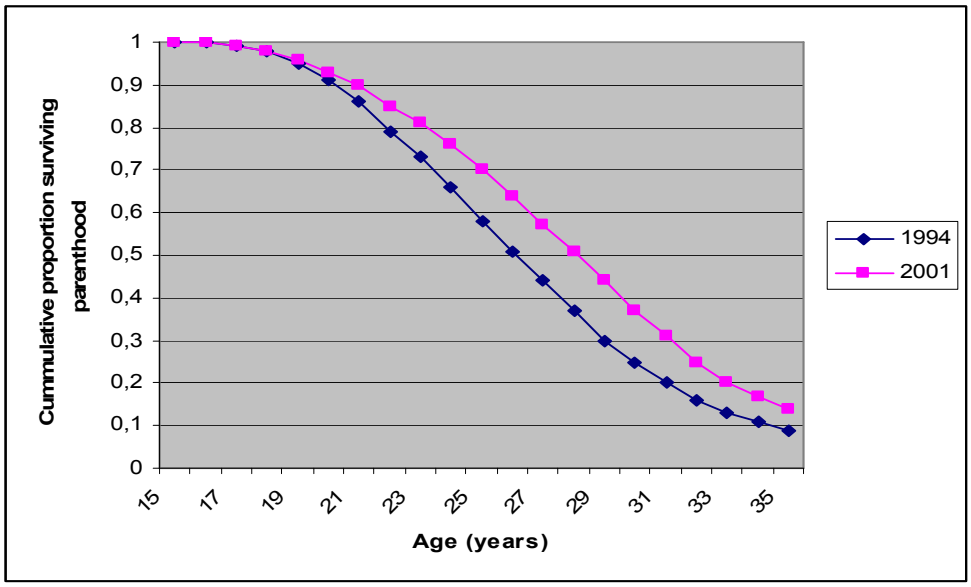
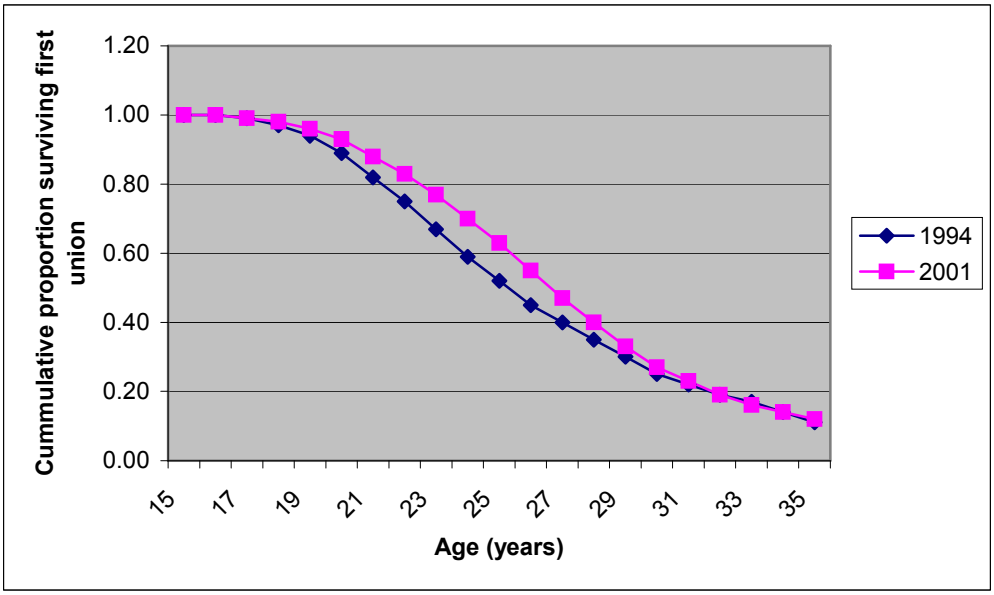


Figure 1a suggests that most first births occur between the ages of 20 and 33. About three-quarters of first births (78 % in 1994 and 73 % in 2001) occur within this age range.

Figure 1b Life table cumulative proportion who are not yet in union in 1994 and 2001 by age.



The proportion of young women who are never in union steadily declines from age 20, reaching a low of less than 10 per cent by age 35 years. Notable trend in delay of entry into union is evident between ages 20 and 30 years, but hardly any difference exists between the earlier and latter period for teenagers and those older than 30 years of age.

Detailed trends of the timing of first birth and first union by year are presented in Appendices II(a), II(b), III(a) and III(b) which also show the trends in timing of transitions to parenthood and union formation based on current status information (i.e proportion who are parents or ever in union by age.

The proportion of young females aged 16-35 in various parenthood and union statuses during the first and the final waves of ECHP surveys are presented in Figures 2(a) and 2(b) . The data for the figures are available in Appendix IV.

Figure 2a Proportion of young females aged 16-35 in various transition statuses by age in 1994

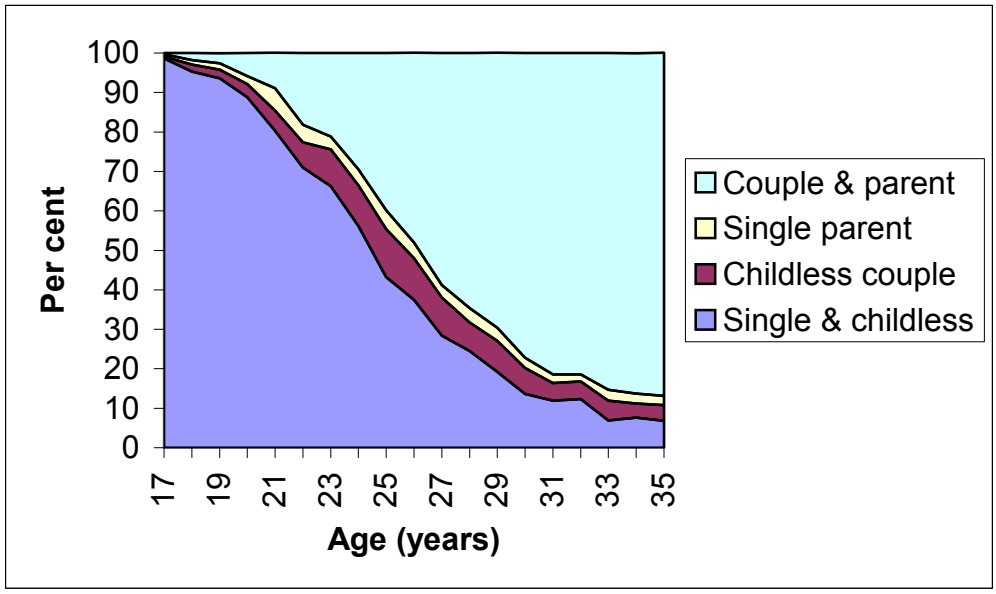
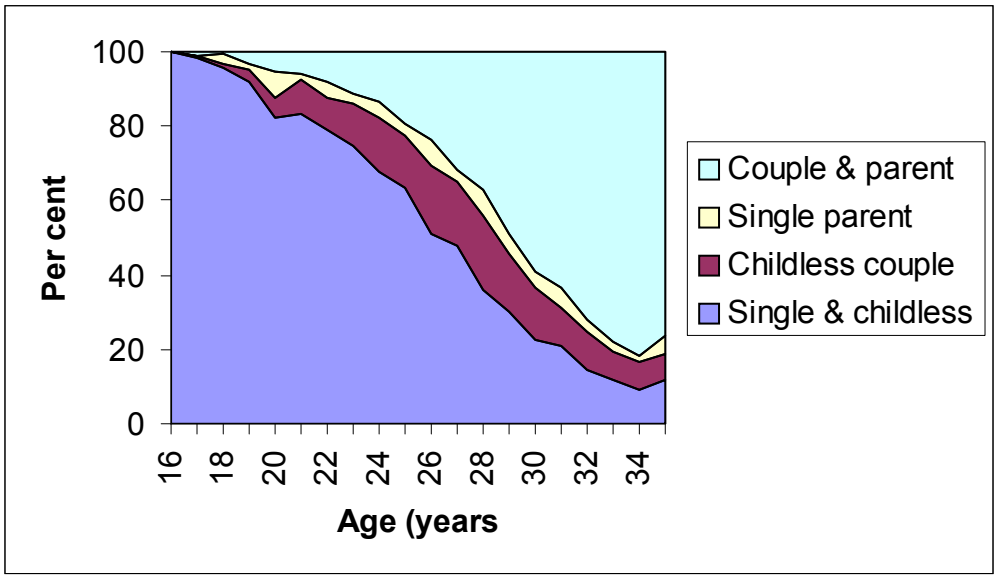


Figure 2b Proportion of young females aged 16-35 in various transition statuses by age in 2001



In both years, the proportion of females aged 16 to 35 who are single and childless steadily declines with age, while the proportion partnered and with

children steadily increases with age. The proportion who are partnered and childless peaks in the mid-twenties at slightly above 10 per cent in 1994 and in the late-twenties at almost 20 per cent in 2001. There is no systematic pattern in the proportion who are single parents by age, but there is a notable bulge in 2001.

The overall proportion of young females aged 16-35 years who were single and childless increased during the 8 year period, from 41 per cent to 44 per cent, while the proportion who were partnered with children reduced from 51 per cent to 41 per cent. A notable trend is also observed in the proportion partnered and childless, which almost doubled from 6 per cent in 1994 to 11 per cent in 2001. The proportion who are single parents is relatively low, but increased from about three per cent in 1994 to about four per cent in 2001. Table 2 highlights considerable variations in the proportion of young females in various parenthood/ union statuses by country.

Table 2 Proportion of young females aged 16-35 in various transition statuses by country

Age (years)	Wave 1 (1994)				Wave 8 (2001)			
	Single and childless	Partnered and Childless	Single parent	Partnered and parent	Single and childless	Partnered and Childless	Single parent	Partnered and parent
Germany	33.4	11.7	2.9	51.9	44.7	13.3	4.2	37.8
Denmark	33.9	14.2	4.5	47.4	28.2	15.4	1.7	54.7
Netherlands	48.9	7.1	3.2	40.7	31.8	28.5	2.0	37.7
Belgium	31.5	8.2	0.9	59.4	38.1	11.3	1.0	49.6
Luxembourg	33.9	7.6	0.7	57.8	37.7	11.5	1.5	49.2
France	40.5	3.1	3.0	53.4	42.4	7.4	2.8	47.4
U.K	28.9	9.3	5.5	56.3	32.4	14.9	8.0	44.7
Ireland	49.8	1.7	9.1	39.3	51.8	2.4	16.2	29.6
Italy	54.2	2.7	0.6	42.6	51.5	7.8	0.7	39.9
Greece	36.2	3.5	0.1	60.2	46.1	6.3	0.0	47.6
Spain	46.0	3.3	1.1	49.6	63.2	6.4	3.0	27.4
Portugal	40.0	3.3	1.5	55.3	40.8	6.3	6.5	46.5
Austria	-	-	-	-	39.6	6.3	6.0	48.2
Finland	-	-	-	-	42.9	13.9	2.4	40.8
Sweden	-	-	-	-	46.8	12.7	14.9	25.6
All - %	40.5	5.9	2.9	50.7	44.3	10.6	3.8	41.3

The proportion single and childless in 2001 varies from a low of 28 per cent in Denmark to a high of 63 per cent in Spain. These two countries have among the highest and lowest proportion partnered with children, respectively. The trends in most countries are consistent with the overall patterns showing a rise in the proportion childless for both single and partnered young females, and a decline in the proportion who are partnered with children. The Netherlands show a particularly high increase in the proportion of childless couples (from 7 per cent in 1994 to 29 per cent in 2001), while Greece and Spain show notable increases in the proportion single and childless. The latter two also show considerable declines in the proportion partnered with children. However, exceptions from the general patterns are noted in a few countries, some of which show a reversed trend. The proportion single and childless seem to have declined in Denmark, Netherlands and Italy. Also, Denmark is the only country that shows an increase in the proportion partnered with children.

Duration spent in various parenthood /union states

The duration spent in each of the four parenthood/ union states by young females aged 24-35 in 2001 (i.e aged 16-27 in 1994), who were interviewed throughout the eight waves of the ECHP are presented in Table 3a.

Table 3a: Duration spent in various parenthood/union status

Status	Duration (years)							
	1	2	3	4	5	6	7	8
Single and childless	3.0	3.5	4.6	5.9	5.3	6.6	6.9	64.3
Childless couple	12.2	14.5	16.1	12.8	11.0	10.4	9.2	13.8
Single parent	6.1	6.3	6.3	10.0	6.0	6.8	26.6	31.9
Couple with children	1.2	2.2	2.3	4.2	3.7	4.0	4.7	77.5

Base population: 4224 females aged 16-27 in 1994, interviewed through wave 8.

The majority of those who were single and childless, or partnered with children, were likely to stay in this state throughout the eight year period of ECHP. Single parents were also likely to stay in this state for a relatively long period of time, with almost 60 per cent having a duration of 7 or 8 years. The childless couple state had the shortest duration, with more than one-quarter having a duration of no more than 2 years and more than half having a duration between 1 and 4 years. The mean duration spent in the various states by country is given in Table 3b.

Table 3b Mean duration in different parenthood /union states by country

Country	Mean duration (years)			
	Single and childless	Childless couple	Single parent	Couple with children
Germany	6.0	4.8	5.7	7.1
Denmark	5.2	4.6	4.6	6.6
Netherlands	5.8	5.3	5.2	7.0
Belgium	6.4	4.7	1.7	7.5
France	6.2	3.0	4.7	7.2
U.K	5.8	5.7	5.5	7.1
Ireland	7.1	2.8	6.7	7.5
Italy	7.2	2.7	2.9	7.0
Greece	7.0	4.0	-	7.6
Spain	7.2	3.6	6.5	7.5
Portugal	6.7	3.0	6.6	7.4
All	6.8	4.3	5.9	7.3

The overall mean duration in single and childless state is 6.8, but varies from a low of 5.2 years in Denmark to a high of 7.2 years in Italy and Spain. The childless couple and single parent states show the greatest variation between countries. The longest duration in childless couple state is observed in the

UK (and to some extent Netherlands), with a mean duration about double that in Italy or Ireland. On the other hand, young females in Ireland, Portugal and Spain spend the longest duration in single parent state averaging more than 6 years, a duration considerably longer that of their counterparts in Belgium who have a mean duration less than two years.

Association between Transitions to parenthood /union formation and poverty

We start by examining bivariate associations between transitions to parenthood /union formation and the risk of income poverty and deprivation, before focusing on specific poverty measures in regression analyses which simultaneously take into account the effect of other important factors, mainly country, current age, educational attainment and employment. We first examine the associations based on the most recent survey wave conducted in 2001, before examining the associations using merged dataset across waves, and taking into account correlations between observations on individual women.

Descriptive analysis of associations between timing and sequence of transitions to parenthood/union formation and household poverty

Table 4 gives the median age at first birth and first union for various poverty groups in the final wave of ECHP surveys (2001).

Table 4a median age at first birth and first union by poverty group (ECHP, 2001)

Poverty dimension	Median age at first birth (years)	Median age at first union (years)
Income poverty group		
- not poor	28.5 A	27.0 A
- mild (60-69% of median)	25.1 C	25.6 C
- moderate (40-59 % median)	25.3 C	26.6 B

- severe (below 40%)	27.4 B	28.5 A
Income poverty at 60% of median		
- not poor	28.3 A	26.9 A
- below 60% median	25.9 B	27.1 A
Overall deprivation		
- none	28.5 A	27.8 A
- mild (1-2 item)	28.3 B	27.0 B
- moderate (3-4 items)	27.8 C	26.7 B
- severe (5+ items)	26.5 D	25.9 C
Consistent poverty		
- None	28.2 A	27.0 A
- present	25.4 B	26.2 B
All	28.1	26.7

Note: medians marked with the same letters are not significantly different based on Wilcoxon (Gehan) statistic.

In general, an increase in household income poverty and deprivation are associated with early transitions to parenthood. For instance, the median age at first birth for those in consistent poverty is three years younger than those not in consistent poverty (25 years versus 28 years). However, it is interesting to note that those in the most severe income poverty group have a higher median age at first birth compared to those in mild or moderate income poverty groups. The timing of first union does not show a systematic pattern by income poverty, but there is an indication that the more deprived have a significantly lower median age at first union compared to the less deprived.

Figures 3a and 3b show the association between consistent poverty and the timing of transitions to parenthood and union formation. The data for income poverty at 60 per cent below median and consistent poverty by age of transitions are given in Appendices V(a) and V(b).

Figure 3a Timing of transition to parenthood by consistent poverty status.

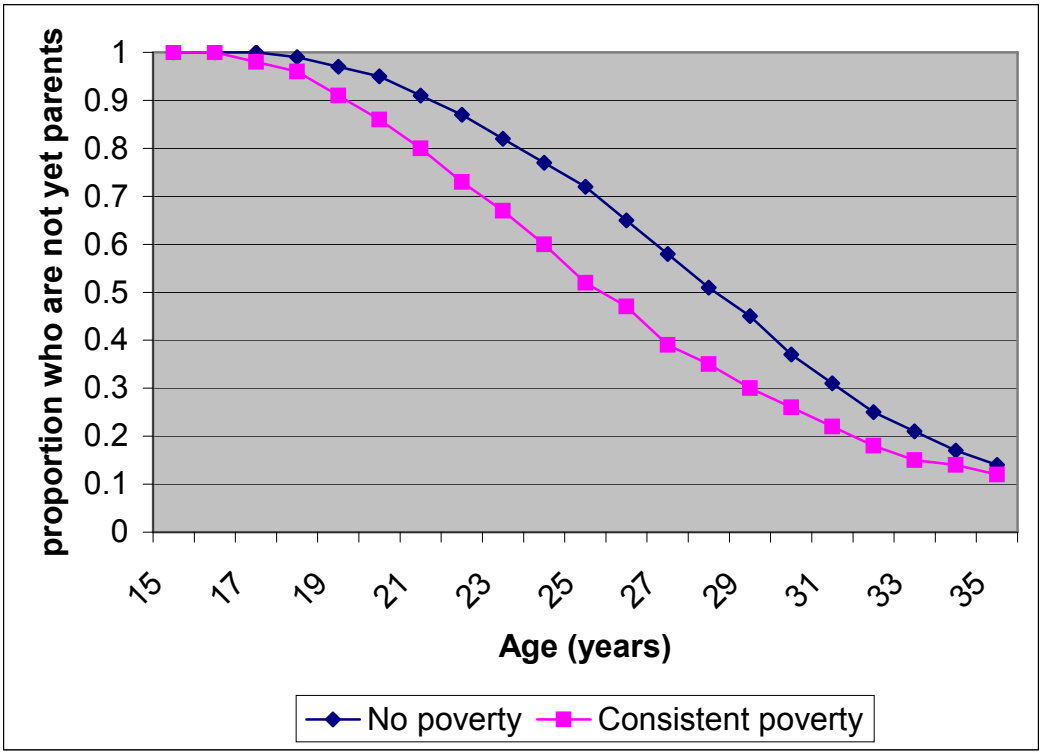
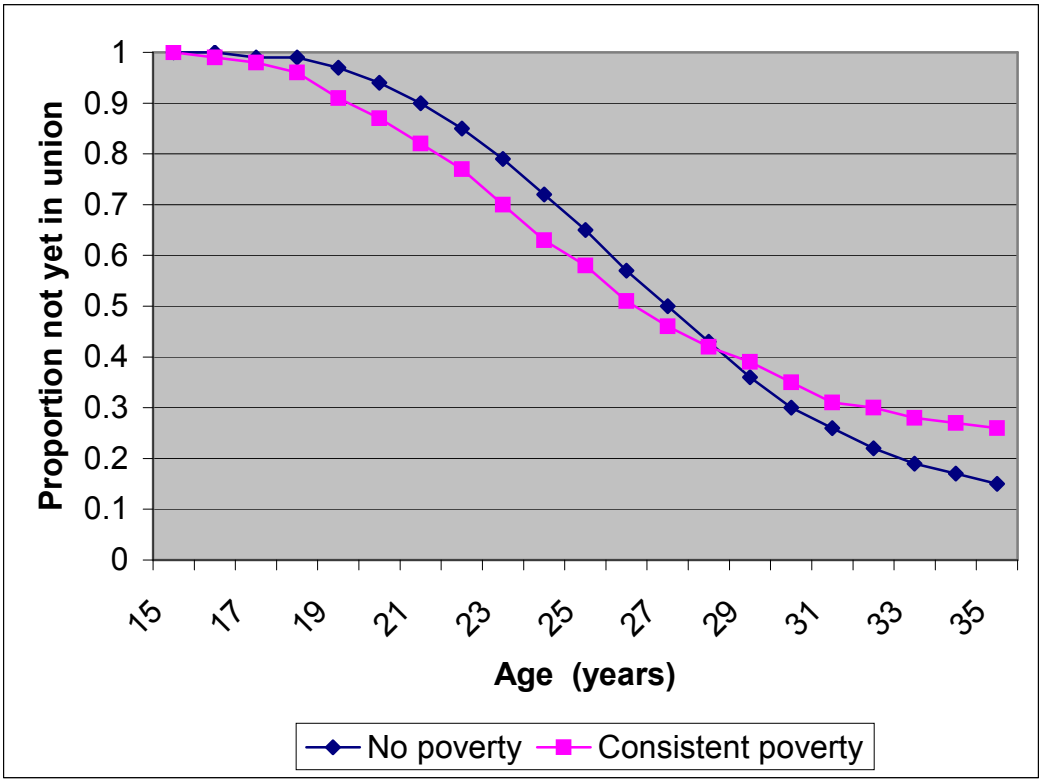


Figure 3a confirms that timing of transition to parenthood is earlier among those in consistent poverty, compared to those who are not in poverty. The gap between those in poverty and those not in poverty is particularly wide during the mid twenties when those who are in consistent poverty have about 20 per cent higher chance of having been a parent, compared to those not in consistent poverty.

The association between timing of transition to union formation and the experience of consistent poverty shows an interesting pattern (see figure 3b). Those who are in poverty tend to have an earlier transition to union formation than those who are not in poverty during the younger ages of late teens and early twenties. However, this pattern is reversed for older females in their thirties for whom those in poverty are less likely to get into union than those not in poverty.

Figure 3b Timing of transition to union formation by consistent poverty status



To what extent does household poverty affect transitions to parenthood and union formation?

This section of the analysis focuses on individuals interviewed throughout the eight ECHP waves and links poverty status in the previous year with parenthood/union transitions in the subsequent year. Transition to parenthood or union formation is considered to have occurred when an individual becomes a parent or gets into union for the first time. The bivariate associations are presented in Table 5a while the results of the logistic regression analysis are presented in Table 5b. Results from multilevel logistic regression shows no evidence of correlation at individual woman level, hence, the results presented in Table 5b are based on a single-level logistic model.

Table 5a: Per cent distribution of poverty characteristics and other factors included as covariates in the logistic regression analysis by transitions to parenthood and union formation

Parenthood / union status	Row per cent		Cases
	Transition to parenthood	Transition to union formation	
Income poverty in previous year$	***	ns	
- no poverty	3.1	4.4	20807
- mild (60-69% of median)	1.3	4.0	2469
- moderate (40-59% of median)	1.8	4.8	3728
- severe (below 40% of median)	2.1	5.2	2292
Deprivation in previous year$	***	*	
- none	3.2	5.1	6073
- mild (1-2 items)	3.3	4.0	8202
- moderate (3-4 items)	2.2	4.4	5492
- severe (at least 5 items)	2.8	4.6	9801
Consistent poverty in previous year$	***	ns	
- not in poverty	2.9	4.5	24565
- in poverty	1.8	4.7	5003
Highest education level$	***	***	
- at least Level 3	3.3	4.8	5990
- level 2	2.4	4.3	12983
- below Level 2	2.2	3.2	13278
Employment Status$	***	***	
- employed	2.8	5.3	16787
- student	0.6	2.1	4776
- unpaid family housework	3.0	2.4	7070
- unemployed /inactive	2.1	3.1	4879
Country	***	***	
- Germany	3.2	5.4	4648
- Denmark	4.9	4.8	1296
- Netherlands	2.6	6.1	2176
- Belgium	2.1	3.9	1328
- France	2.7	5.5	3368
- U.K	2.5	3.1	3328
- Ireland	2.3	2.3	1512
- Italy	2.5	3.9	5224
- Greece	1.8	2.7	3080
- Spain	1.4	3.2	4392
- Portugal	2.5	3.6	3440
All	2.8	4.5	33792

***p<0.001, ** p<0.01, * p<0.05 ns – not significant
Base population – cases for persons interviewed in waves 1 through 8.
$ - cases do not add up to the total due to missing data

Table 5b results of logistic regression analysis of factors associated with transition to parenthood and union formation.

Parameter	Transition to parenthood		Transition to union formation	
	Estimate (s.e)	O.R.	Estimate (s.e)	O.R.
Income poverty in previous year				
- no poverty	0.52 (0.237)*	1.69	-0.30 (0.154)	0.74
- mild	-0.48 (0.251)	0.62	-0.25 (0.154)	0.78
- moderate	-0.12 (0.203)	0.89	-0.06 (0.134)	0.94
- severe [R]	-	1.00	-	1.00
Deprivation in previous year				
- none	-0.20 (0.133)	0.98	-0.29 (0.110)*	0.75
- mild	0.09 (0.110)	1.09	-0.40 (0.093)*	0.67
- moderate	-0.16 (0.120)	0.85	-0.23 (0.094)*	0.79
- severe [R]	-	1.00	-	1.00
Consistent poverty in previous year				
- not in poverty [R]	-	1.00	-	1.00
- in poverty	-0.12 (0.208)	0.89	0.10 (0.136)	1.10
Highest education				
- at least Level 3	0.49 (0.104)*	1.63	0.72 (0.087)*	2.05
- level 2	0.11 (0.089)	1.11	0.39 (0.071)*	1.48
- below Level 2[R]	-	1.00	-	1.00
Employment status				
- employed	0.11 (0.114)	1.12	0.77 (0.097)*	2.15
- student	-1.42 (0.214)*	0.24	-0.66 (0.137)*	0.52
- family unpaid	0.63 (0.128)*	1.88	0.21 (0.121)	1.24
- unemployed /inactive[R]	-	1.00	-	1.00
Country				
- Germany[R]	-	1.00	-	1.00
- Denmark	0.53 (0.167)*	1.70	-0.24 (0.159)	0.79
- Netherlands	-0.12 (0.174)	0.89	0.22 (0.126)	1.25
- Belgium	-0.56 (0.220)*	0.57	-0.62 (0.174)*	0.54
- France	-0.23 (0.166)	0.79	-0.28 (0.133)*	0.75
- U.K	-0.43 (0.161)*	0.65	-0.85 (0.138)*	0.43
- Ireland	-0.53 (0.187)*	0.59	-1.05 (0.175)*	0.35
- Italy	-0.17 (0.148)	0.84	-0.45 (0.122)*	0.64
- Greece	-0.81 (0.185)*	0.45	-1.00 (0.153)*	0.37
- Spain	-0.87 (0.169)*	0.42	-0.69 (0.128)*	0.50
- Portugal	-0.26 (0.162)	0.77	-0.71 (0.136)*	0.49
Current age	-0.08 (0.011)*	0.93	-0.13 (0.009)*	0.88
Survey wave	0.04 (0.20)*	1.04	-0.06 (0.016)*	0.94

R – reference category

The results in Tables 5a and 5b suggest that being in poverty in associated with reduced odds of transition to parenthood. This relationship persists for income poverty, even after taking into account the effects of other important factors such as educational attainment, employment status, country, current age and survey wave. For instance, those who were not in poverty in the previous year have a 69 per cent higher odds of transiting to parenthood in the subsequent year compared to those in severe income poverty (below 40 per cent of median income). For transition to union formation, household deprivation appears more significant than income poverty, with severe deprivation being associated with higher odds of getting into union.

To what extent does timing and sequence of transitions to parenthood and union formation affect the risk of poverty?

We first examine the association between timing and sequence of transitions to parenthood and union formation and the risk of income poverty and deprivation based on the final wave of the ECHP. We then focus on poverty persistence and transitions among individuals interviewed throughout the eight waves of ECHP and examine the effect of parenthood/union status on the poverty dynamics.

The bivariate associations between the timing and sequence of transitions to parenthood and union formation and the risk of income poverty and deprivation based on the final wave of the ECHP are presented in tables 6a and 6b.

The results in Table 6a show that earlier age at first birth and first marriage are associated with higher risk of income poverty. Being a single parent is associated with the highest risk of income poverty while childless couples have the lowest risk of income poverty.

Table 6a per cent distribution of income poverty by transitions to parenthood and union formation

Prenthood / union status	Income poverty status				Cases
	Not poor	60-69% of median	40-59 % of median	Below 40% of median	
Age at first birth ***					
- below 20 years	52.2	10.9	25.6	11.3	887
- 20-24 years	69.9	11.1	13.5	5.5	2785
- 25-29 years	84.3	6.1	7.4	2.1	2741
- 30-35 years	87.6	4.5	5.6	2.3	954
- No birth	74.8	6.8	10.4	8.1	7327
Age at first union***$					
- below 20 years	62.3	10.3	16.2	11.2	735
- 20-24 years	76.6	9.0	10.6	3.8	2342
- 25-29 years	86.6	4.7	6.7	2.0	1619
- 30-35 years	88.9	4.6	3.7	2.8	324
- Never in union	70.4	7.8	12.7	9.1	6790
Family Status ***					
- single & childless	71.6	7.5	11.7	9.2	6080
- childless couple	87.3	4.0	5.2	3.4	1509
- single parent	60.0	10.8	20.9	8.3	713
- couple with children	76.4	8.3	11.0	4.3	5795
All	74.7	7.6	11.2	6.5	14694

***p<0.01, $age at first union missing for those previously in union at first interview

The result for household deprivation presented in Table 6b shows more or less the same patterns as income poverty: early transitions to parenthood and union formation are associated with severe household deprivation; and single parents are the most likely, while childless couples are the least likely to experience severe deprivation.

Table 6b per cent distribution of overall deprivation by transitions to parenthood and union formation

Parenthood / union status	deprivation status				Cases
	Not deprived	Mild (1-2 items)	Moderate (3-4 items)	Severe (5+ items)	
Age at first birth***					
- below 20 years	15.6	26.3	19.8	38.3	893
- 20-24 years	23.7	32.0	16.9	27.5	2812
- 25-29 years	29.9	36.4	18.9	14.8	2759
- 30-35 years	33.1	37.8	16.9	12.3	962
- No birth	28.6	31.8	17.8	21.8	7632
Age at first union***$					
- below 20 years	16.2	24.4	19.2	40.2	757
- 20-24 years	19.6	35.9	19.3	25.2	2541
- 25-29 years	24.1	39.0	21.0	15.9	2111
- 30-35 years	25.1	46.2	16.8	11.9	459
- Never in union	27.9	30.0	17.8	24.3	6116
Family status ***					
- single & childless	27.6	30.6	18.1	23.8	5518
- childless couple	33.1	36.7	16.6	13.5	2111
- single parent	31.5	24.7	15.4	28.4	598
- couple with children	25.2	34.5	18.3	22.0	6831
All	27.4	32.5	17.9	22.2	15058

***p<0.01

$age at first union missing for those previously in union at first interview

The distribution of variables used in the regression analysis for income poverty (below 60 % median) and consistent poverty based on the final wave of the ECHP are given in appendix vi while results of the regression analysis are presented in Table 7a. Table 7b presents the multilevel logistic regression analysis of the risk of income poverty and consistent poverty, based on all the eight waves of ECHP.

Table 7a Results of logistic regression analysis on income poverty at 60 per cent of median threshold and consistent poverty (2001 survey)

Parameter	Income poverty at 60%		Consistent poverty	
	Estimate (s.e)	O.R.	Estimate (s.e)	O.R.
Age at first birth				
- below 20 years	1.33 (0.136)*	3.76	1.23 (0.150)*	3.42
- 20-24 years	0.70 (0.116)*	2.02	0.69 (0.131)*	1.99
- 25-29 years	0.24 (0.136)	1.27	0.18 (0.158)	1.20
- 30-35 years	0.05 (0.229)	1.05	-0.33 (0.298)	0.72
- No birth^{R}	-	1.00	-	1.00
Age at first union				
- below 20 years	-0.82 (0.142)*	0.44	-1.01 (0.156)*	0.37
- 20-24 years	-1.08 (0..118)*	0.34	-1.29 (0.135)*	0.28
- 25-29 years	-1.19 (0.139)*	0.31	-1.36 (0.165)*	0.26
- 30-35 years	-1.34 (0.260)*	0.26	-1.33 (0.309)*	0.27
- Never in union^{R}	-	1.00	-	1.00
Highest education				
- at least Level 3	-0.54 (0.087)*	0.58	-0.59 (0.100)*	0.56
- level 2	-0.53 (0.066)*	0.59	-0.58 (0.074)*	0.56
- below Level 2^{R}	-	1.00	-	1.00
Employment status				
- employed	-1.11 (0.086)*	0.33	-1.41 (0.095)*	0.24
- student	-0.20 (0.096)*	0.82	-0.52 (0.103)*	0.60
- family unpaid	0.34 (0.099)*	1.40	0.35 (0.107)*	1.42
- unemployed /inactive^{R}	-	1.00	-	1.00
Country				
- Germany^{R}	-	1.00	-	1.00
- Denmark	1.00 (0.171)*	2.72	1.69 (0.223)*	5.41
- Netherlands	0.16 (0.139)	1.17	0.70 (0.192)*	2.01
- Belgium	-0.23 (0.191)	0.80	0.35 (0.261)	1.42
- Luxembourg	0.37 (0.205)	1.45	-1.12 (0.530)*	0.33
- France	0.13 (0.136)	1.14	1.07 (0.183) *	2.93
- U.K	0.45 (0.142)*	1.57	0.69 (0.200)*	2.00
- Ireland	-0.24 (0.152)	0.78	0.32 (0.208)	1.37
- Italy	0.31 (0.120)*	1.37	1.42 (0.166)*	4.13
- Greece	-0.28 (0.138)*	0.75	1.20 (0.175)*	3.33
- Spain	-0.06 (0.122)	0.95	0.93 (0.169)*	2.54
- Portugal	-0.32 (0.130)*	0.72	1.14 (0.170)*	3.14
- Austria	-0.13 (0.156)	0.88	0.67 (0.209)*	1.95
- Finland	0.49 (0.148)*	1.63	1.31 (0.196)*	3.69
Current age	-0.02 (0.007)*	0.98	-0.02 (0.008)*	0.98

R – reference category

Table 7b Results of multilevel logistic regression analysis on income poverty at 60 per cent of median threshold and consistent poverty (survey waves 1-8))

	Income poverty at 60%	Consistent poverty
Fixed effects	Estimate (s.e)	Estimate (s.e)
Age at first birth		
- below 20 years	1.01 (0.044)*	1.00 (0.049)*
- 20-24 years	0.67 (0.037)*	0.68 (0.041)*
- 25-29 years	0.06 (0.041)	0.04 (0.047)
- 30-35 years	-0.29 (0.068)*	-0.31 (0.078)*
- No birth^{R}	-	-
Age at first union		
- below 20 years	-0.82 (0.044)*	-0.80 (0.048)*
- 20-24 years	-1.04 (0.036)*	-1.06 (0.041)*
- 25-29 years	-1.01 (0.040)*	-1.07 (0.046)*
- 30-35 years	-0.81 (0.062)*	-0.79 (0.071)*
- Never in union^{R}	-	-
Highest education		
- at least Level 3	-0.59 (0.030)*	-0.76 (0.035)*
- level 2	-0.35 (0.019)*	-0.43 (0.022)*
- below Level 2^{R}	-	-
Employment status		
- employed	-1.06 (0.026)*	-1.12 (0.029)*
- student	-0.38 (0.030)*	-0.54 (0.032)*
- family unpaid	0.19 (0.029)*	0.13 (0.031)*
- unemployed /inactive^{R}	-	-
Country		
- Germany^{R}	-	-
- Denmark	0.11 (0.145)	0.02 (0.164)
- Netherlands	0.04 (0.135)	-0.15 (0.152)
- Belgium	-0.20 (0.147)	-0.17 (0.166)
- Luxembourg	0.35 (0.282)	-0.36 (0.331)
- France	0.17 (0.142)	0.45 (0.158)*
- U.K	0.52 (0.135)*	0.37 (0.150)*
- Ireland	-0.29 (0.172)	-0.21 (0.192)
- Italy	0.47 (0.262)	0.68 (0.291)*
- Greece	-0.29 (0.139)*	0.44 (0.153)*
- Spain	-0.01 (0.143)	0.43 (0.159)*
- Portugal	-0.55 (0.210)*	0.09 (0.226)
- Austria	-0.22 (0.258)	-0.27 (0.246)
- Finland	0.42 (0.258)	0.85 (0.283)*
Current age	-0.02 (0.002)*	-0.02 (0.003)*
Wave	0.01 (0.003)*	-0.02 (0.004)*
Random Variance at woman level		
Constant	0.67 (0.034)*	0.83 (0.043)*

R – reference category

Base population – all cases in waves 1-8 with non-missing data, n=115346.

The results of the logistic regression analyses in tables 7a and 7b confirm the high risk of poverty associated with early transition to parenthood, especially those who had their first births as teenagers or in their early twenties, who have about four times and about triple the odds of experiencing consistent poverty, respectively, compared to those who had their first births in their early thirties. With regards to transitions to union formation, those who had their first union in their twenties have the most favourable outcomes, while those who have never been in union have considerably higher odds of experiencing both income poverty and consistent poverty than those who have ever been in union.

Poverty persistence and transitions, and the association with parenthood or union status.

This section of the analysis focuses on the association between parenthood/union status in the previous year and poverty persistence and transitions based on data for young females aged 16-35 who were interviewed throughout the eight years of ECHP. The results are presented in Table 8 below.

The results in Table 8 show that single parents are the most likely to experience persistent poverty in consecutive years or make a transition to a worse income poverty situation. On the other hand, childless couples are the least likely to experience persistent poverty or make a transition to worse income poverty. For instance, single parents have about five times higher odds of staying in income poverty (below 60 per cent of median) in consecutive years, and almost triple the odds of moving into worse poverty status, compared to childless couples.

Table 8: results of multilevel logistic regression analysis of factors associated with persistent poverty in consecutive years and transitions to worse income poverty and deprivation

Fixed effects	persistent income poverty below 60% median	Transition to worse Income poverty	Transition to worse deprivation
	Estimate (s.e)	Estimate (s.e)	Estimate (s.e)
Parenthood /union status in previous year			
- single and childless	0.15 (0.070)*	-0.03 (0.061)	-0.04 (0.048)
- childless couple	-1.02 (0.109)*	-0.66 (0.082)*	0.03 (0.051)
- single parent	0.68 (0.111)*	0.31 (0.102)*	-0.09 90.091)
- couple with children	-	-	-
Highest education			
- at least Level 3	-0.91 (0.179)*	-0.56 (0.066)*	0.21 (0.047)*
- level 2	-0.58 (0.052)*	-0.32 (0.04)*	0.21 (0.038)*
- below Level 2^{R}	-	-	-
Employment status			
- employed	-1.19 (0.064)*	-0.85 (0.056)*	-0.04 (0.048)
- student	-0.32 (0.076)*	-0.30 (0.071)*	0.13 (0.063)*
- family unpaid	0.05 (0.065)	0.02 (0.060)	-0.06 (0.057)
- unemployed /inactive^{R}	-	-	-
Country			
- Germany^{R}	-	-	-
- Denmark	-0.96 (0.752)	0.01 (0.224)	0.36 (0.098)*
- Netherlands	-0.56 (0.722)	-0.13 (0.212)	0.50 (0.087)*
- Belgium	-1.00 (0.764)	-0.01 (0.230)	0.35 (0.102)*
- France	-0.02 (0.720)	0.20 (0.207)	0.45 (0.083)*
- U.K	0.94 (0.756)	0.14 (0.221)	0.66 (0.083)*
- Ireland	-0.37 (0.771)	-0.38 (0.233)	0.33 (0.100)*
- Italy	0.34 (0.844)	0.08 (0.236)	0.26 (0.084)*
- Greece	-0.62 (0.717)	-0.08 (0.204)	-0.13 (0.087)
- Spain	-0.41 (0.720)	0.09 (0.203)	0.36 (0.078)*
- Portugal	-1.46 (0.881)	-0.53 (0.251)	-0.59 (0.102)*
Current age	-0.04 (0.008)*	-0.04 (0.007)*	-0.01 (0.006)
Wave	0.05 (0.013)*	-0.00(0.011)	0.01 (0.009)
Random Variance at woman level			
Constant	2.45 (0.212)*	0.14 (0.028)*	0.01 (0.006)

R – reference category

The random variance at individual level is particularly large for persistent poverty, suggesting that individuals who experience poverty in any two consecutive years are highly likely to have poverty persisting in the following subsequent years.

Discussions and Conclusions

(*SECTION UNDER DEVELOPMENT*)

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Appendix I(a) Life table median age at first birth by country (1994 – 2001)

Country	1994	1995	1996	1997	1998	1999	2000	2001
Germany	25.7	25.5	25.9	25.9	26.3	26.7	27.1	27.3
Denmark	26.4	26.6	26.8	27.1	27.3	27.4	27.5	27.7
Netherlands	28.1	28.7	28.8	29.3	29.6	30.0	30.2	30.3
Belgium	26.1	26.4	26.5	26.7	26.9	27.5	27.7	28.0
Luxembourg	26.4	27.4	27.5	28.0	27.9	27.7	27.7	27.8
France	25.6	26.0	26.3	26.4	26.7	27.1	27.2	27.5
U.K.	26.0	26.0	26.1	26.5	26.8	27.1	27.2	27.2
Ireland	27.1	26.9	27.2	27.2	27.4	27.5	27.7	28.1
Italy	27.3	27.8	28.4	28.7	28.9	29.1	29.4	29.6
Greece	24.3	24.7	24.8	25.1	25.3	25.6	26.2	26.6
Spain	26.8	27.3	28.0	28.3	28.7	29.0	29.4	29.9
Portugal	24.5	24.8	24.8	25.3	25.5	25.9	26.0	26.2
Austria	-	24.9	25.0	25.4	25.5	25.7	25.9	26.2
Finland	-	-	26.8	26.9	27.3	27.2	27.2	27.4
Sweden	-	-	-	26.4	26.6	26.7	26.9	27.4
All - Median	26.14	26.44	26.73	27.07	27.40	27.70	27.92	28.11
All Cases (Unweighted)	19887	19676	18573	15702	14806	13867	13116	12429

* - Totals exclude Austria, Finland and Sweden since these were not included in Wave 1

Appendix I(b) Life table median age at first union by country (1994 – 2001)

Country	1994	1995	1996	1997	1998	1999	2000	2001
Germany	24.5	24.6	24.9	24.7	25.1	25.4	25.6	25.9
Denmark	28.1	28.0	28.3	28.4	28.5	28.6	28.3	28.4
Netherlands	26.4	25.6	25.8	25.9	26.2	26.3	26.5	26.8
Belgium	24.2	24.5	24.7	25.0	25.2	25.4	25.5	25.8
Luxembourg	24.6	26.5	26.5	27.7	28.1	28.4	28.6	28.5
France	25.6	25.8	25.9	26.2	26.7	26.7	26.8	27.0
U.K	25.3	25.6	25.7	26.1	26.3	26.5	26.4	26.5
Ireland	26.7	26.4	26.8	26.8	27.3	27.8	28.9	29.6
Italy	26.3	26.7	26.9	26.9	27.0	27.0	27.3	27.4
Greece	23.3	23.7	23.8	23.8	24.1	24.2	24.9	25.2
Spain	25.8	26.1	26.4	26.4	26.7	26.8	27.1	27.3
Portugal	23.6	23.8	24.0	24.2	24.3	24.3	24.4	24.6
Austria	-	25.5	25.5	25.8	26.0	26.1	26.3	26.3
Finland	-	-	26.0	26.1	26.1	26.2	26.3	26.1
All - Median	25.28	25.48	25.70	25.86	26.12	26.24	26.43	26.66
All Cases (Unweighted)	18398	17936	16796	14116	13061	11958	11116	10272

* - Totals exclude Austria, Finland and Sweden since these were not included in Wave 1
** - Youngest age at union (marriage or cohabitation) reported in waves 1-8.
Note: information on age at first union is not available for Sweden since information on date of last change in marital status is not available.

Appendix II(a) Overall cumulative proportion surviving parenthood by age

Age,x (years)	Cumulative proportion surviving to age x							
	1994	1995	1996	1997	1998	1999	2000	2001
15	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
16	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
17	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
18	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
19	0.95	0.95	0.96	0.96	0.96	0.96	0.96	0.96
20	0.91	0.92	0.92	0.92	0.92	0.93	0.93	0.93
21	0.86	0.86	0.87	0.88	0.88	0.89	0.90	0.90
22	0.79	0.81	0.82	0.82	0.83	0.84	0.85	0.85
23	0.73	0.74	0.76	0.77	0.78	0.79	0.80	0.81
24	0.66	0.67	0.69	0.71	0.72	0.74	0.75	0.76
25	0.58	0.61	0.62	0.64	0.66	0.68	0.69	0.70
26	0.51	0.53	0.55	0.57	0.60	0.62	0.63	0.64
27	0.44	0.46	0.48	0.50	0.53	0.55	0.56	0.57
28	0.37	0.39	0.41	0.44	0.46	0.48	0.49	0.51
29	0.30	0.32	0.34	0.37	0.39	0.41	0.42	0.44
30	0.25	0.26	0.28	0.31	0.33	0.35	0.36	0.37
31	0.20	0.22	0.24	0.26	0.27	0.29	0.30	0.31
32	0.16	0.18	0.20	0.22	0.23	0.24	0.25	0.25
33	0.13	0.15	0.16	0.18	0.19	0.20	0.20	0.20
34	0.11	0.13	0.14	0.15	0.16	0.16	0.17	0.17
35	0.09	0.10	0.12	0.14	0.13	0.15	0.15	0.14
All - Median	26.14	26.44	26.73	27.07	27.40	27.70	27.92	28.11
All Cases (Unweighted)	19887	19676	18573	15702	14806	13867	13116	12429

[x] x based on n<50.
[-] suppressed when n<20.

Appendix II(b) Overall cumulative proportion surviving union formation by age

Age,x (years)	Cumulative proportion surviving to age x							
	1994	1995	1996	1997	1998	1999	2000	2001
15	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
16	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
17	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
18	0.97	0.98	0.98	0.98	0.98	0.98	0.98	0.98
19	0.94	0.95	0.95	0.95	0.95	0.95	0.96	0.96
20	0.89	0.90	0.90	0.91	0.91	0.92	0.92	0.93
21	0.82	0.83	0.84	0.85	0.86	0.87	0.88	0.88
22	0.75	0.76	0.77	0.79	0.80	0.81	0.82	0.83
23	0.67	0.69	0.70	0.72	0.73	0.74	0.76	0.77
24	0.59	0.61	0.63	0.64	0.66	0.67	0.69	0.70
25	0.52	0.53	0.55	0.57	0.59	0.60	0.61	0.63
26	0.45	0.46	0.48	0.49	0.51	0.52	0.53	0.55
27	0.40	0.40	0.41	0.42	0.44	0.44	0.46	0.47
28	0.35	0.35	0.35	0.36	0.37	0.38	0.39	0.40
29	0.30	0.30	0.30	0.30	0.31	0.32	0.33	0.33
30	0.25	0.25	0.25	0.25	0.26	0.26	0.26	0.27
31	0.22	0.21	0.21	0.21	0.21	0.21	0.22	0.23
32	0.19	0.18	0.18	0.18	0.18	0.18	0.18	0.19
33	0.17	0.16	0.15	0.15	0.15	0.15	0.15	0.16
34	0.14	0.13	0.12	0.12	0.12	0.12	0.13	0.14
35	0.11	0.10	0.10	0.09	0.09	0.10	0.11	0.12
All - Median	25.28	25.48	25.70	25.86	26.12	26.24	26.43	26.66
All Cases (Unweighted)	18398	17936	16796	14116	13061	11958	11116	10272

[x] x based on n<50.
[-] suppressed when n<20.

Appendix III(a)Trends of proportion of young females aged 16-35 who are parents by age

Age (years)	Per cent who are parents							
	1994	1995	1996	1997	1998	1999	2000	2001
16	[-]	[-]	[-]	0.0	0.0	1.8	0.0	[0.0]
17	0.8	0.7	0.7	1.7	1.3	2.1	1.7	1.0
18	2.9	2.2	2.2	2.0	3.0	3.2	3.6	3.3
19	4.2	4.7	3.9	5.4	4.2	4.6	5.1	4.9
20	8.0	9.0	6.6	6.2	6.6	6.0	5.9	12.3
21	14.3	11.4	10.8	9.9	8.6	7.3	11.5	7.8
22	22.5	16.4	15.3	13.2	12.3	9.7	11.1	12.1
23	24.5	29.2	20.5	17.0	12.6	14.2	12.7	14.0
24	33.5	31.5	31.7	23.5	20.5	20.6	18.8	17.5
25	44.6	37.1	37.4	34.2	31.6	23.3	28.0	22.8
26	52.0	49.6	42.9	43.0	38.9	36.9	29.4	30.5
27	62.0	56.1	55.9	46.2	41.8	46.3	40.0	35.2
28	68.3	65.3	62.5	61.3	53.7	50.3	50.1	44.0
29	72.9	71.1	69.1	65.8	63.7	60.6	59.0	54.3
30	79.8	75.0	73.2	72.2	71.2	70.3	64.6	63.4
31	86.6	80.7	77.2	75.6	76.5	73.5	74.0	68.7
32	83.2	84.2	84.4	77.8	77.7	80.5	76.1	75.2
33	88.1	84.6	86.4	84.5	79.7	79.3	81.3	80.6
34	88.7	87.8	85.1	87.2	85.9	81.0	81.2	83.4
35	89.3	88.5	88.6	86.9	88.5	87.4	81.0	81.4
All - %	53.5	53.4	52.2	49.7	49.4	48.0	46.2	45.1
- Median								
All Cases (Unweighted)	19887	19676	18573	15702	14806	13867	13116	12429

[x] based on n<50.
[-] suppressed when n<20.

Appendix III(b) Trends of proportion of young females aged 16-35 who are ever in union by age

Age (years)	Per cent ever in union							
	1994	1995	1996	1997	1998	1999	2000	2001
16	[-]	[-]	[-]	0.0	0.0	1.9	0.0	0.0
17	0.8	1.3	2.4	1.3	1.3	1.3	0.7	1.8
18	3.6	3.4	1.9	2.0	4.7	3.4	3.9	1.9
19	4.9	4.9	5.0	4.0	5.6	5.7	4.5	6.0
20	9.1	11.3	9.5	8.7	9.3	8.5	9.9	10.4
21	14.1	15.8	13.9	16.6	14.2	14.0	12.2	14.7
22	24.7	22.4	20.6	19.7	18.8	16.6	17.9	16.8
23	30.5	32.0	27.4	23.4	24.7	24.2	22.6	22.8
24	39.6	43.5	38.3	34.4	29.7	27.9	29.8	28.2
25	51.9	47.6	51.9	45.3	40.7	37.0	38.1	33.3
26	58.5	58.2	53.2	57.4	48.5	49.5	44.6	41.8
27	68.4	66.6	65.4	57.1	62.1	59.7	52.3	49.0
28	71.9	73.9	71.2	69.6	63.5	65.5	62.5	56.7
29	77.5	76.4	76.9	74.6	73.7	70.6	70.7	64.6
30	83.8	79.3	78.4	79.6	77.9	80.0	71.1	73.4
31	86.0	85.5	82.3	80.1	83.6	79.5	82.6	73.9
32	85.8	86.8	88.5	82.3	82.7	86.2	81.9	82.2
33	90.4	86.9	90.0	88.5	83.6	83.9	88.4	85.5
34	89.9	91.3	87.4	91.0	88.9	85.0	83.7	89.0
35	91.0	90.0	91.7	89.1	91.7	89.8	85.5	83.0
All - %	56.6	58.3	57.6	55.6	55.6	55.1	53.2	51.8
- Median								
All cases (Unweighted)	19887	19676	18573	15702	14806	13867	13116	12427

Appendix IV: Proportion of young females aged 16-35 in various transition statuses by age

Age (years)	Wave 1 (1994)				Wave 8 (2001)			
	Single and childless	Partnered and Childless	Single parent	Partnered and parent	Single and childless	Partnered and Childless	Single parent	Partnered and parent
16	[-]	[-]	[-]	[-]	100.0	0.0	0.0	0.0
17	98.6	0.5	0.6	0.3	98.2	0.8	0.0	1.0
18	95.3	1.8	1.1	1.8	95.5	1.2	2.9	0.5
19	93.6	2.2	1.6	2.5	92.2	2.9	1.8	3.1
20	88.8	3.3	2.1	5.8	82.5	5.2	6.9	5.4
21	80.3	5.1	5.7	9.0	83.6	8.8	1.7	5.9
22	71.0	6.4	4.4	18.2	79.3	8.6	3.9	8.2
23	66.3	9.3	3.2	21.2	74.7	11.4	2.6	11.4
24	56.2	10.3	4.1	29.4	67.8	14.5	4.0	13.7
25	43.2	12.2	4.8	39.8	63.5	13.8	3.2	19.5
26	37.5	10.5	4.0	48.1	51.3	18.2	6.8	23.7
27	28.4	9.6	3.2	58.8	47.7	17.2	3.4	31.8
28	24.5	7.2	3.7	64.6	36.2	19.8	7.1	36.8
29	19.2	7.9	3.3	69.7	30.0	15.7	5.5	48.8
30	13.6	6.6	2.6	77.2	22.4	14.1	4.2	59.3
31	11.9	4.5	2.2	81.4	21.0	10.3	5.0	63.7
32	12.3	4.5	1.8	81.4	14.7	10.1	3.0	72.2
33	6.9	5.0	2.8	85.3	12.0	7.3	2.6	78.2
34	7.6	3.6	2.5	86.2	9.4	7.3	1.6	81.7
35	6.8	4.0	2.3	87.0	11.7	6.9	5.3	76.1
All - %	40.5	5.9	2.9	50.7	44.3	10.6	3.8	41.3

Appendix V(a): Age at first birth by poverty (2001 survey)

Age (years)	Income poverty at 60% med.		Consistent poverty	
	Not poor	Below 60%	no	yes
15	1.00	1.00	1.00	1.00
16	1.00	1.00	1.00	1.00
17	1.00	0.99	1.00	0.98
18	0.99	0.96	0.99	0.96
19	0.97	0.92	0.97	0.91
20	0.95	0.87	0.95	0.86
21	0.92	0.81	0.91	0.80
22	0.88	0.74	0.87	0.73
23	0.83	0.69	0.82	0.67
24	0.78	0.62	0.77	0.60
25	0.72	0.55	0.72	0.52
26	0.66	0.49	0.65	0.47
27	0.59	0.42	0.58	0.39
28	0.52	0.37	0.51	0.35
29	0.45	0.32	0.45	0.30
30	0.37	0.27	0.37	0.26
31	0.31	0.23	0.31	0.22
32	0.25	0.19	0.25	0.18
33	0.21	0.14	0.21	0.15
34	0.17	0.12	0.17	0.14
35	0.14	0.11	0.14	0.12
Median	28.3	25.9	28.2	25.4
Cases	12034	2660	13221	1837

Appendix V(b) : Age at first union by poverty (2001 survey)

Age (years)	Income poverty at 60% med.		Consistent poverty	
	Not poor	Below 60%	no	yes
15	1.00	1.00	1.00	1.00
16	1.00	0.99	1.00	0.99
17	0.99	0.99	0.99	0.98
18	0.99	0.97	0.99	0.96
19	0.97	0.93	0.97	0.91
20	0.94	0.90	0.94	0.87
21	0.90	0.85	0.90	0.82
22	0.84	0.80	0.85	0.77
23	0.79	0.75	0.79	0.70
24	0.72	0.68	0.72	0.63
25	0.65	0.63	0.65	0.58
26	0.57	0.55	0.57	0.51
27	0.49	0.51	0.50	0.46
28	0.42	0.45	0.43	0.42
29	0.36	0.41	0.36	0.39
30	0.30	0.37	0.30	0.35
31	0.25	0.33	0.26	0.31
32	0.21	0.32	0.22	0.30
33	0.19	0.30	0.19	0.28
34	0.16	0.28	0.17	0.27
35	0.14	0.27	0.15	0.26
Median	26.9	27.1	27.0	26.2
Cases	9456	2234	10360	1624

Appendix VI: Per cent distribution of variables used in the logistic regression analysis of income poverty below 60 per cent median and consistent poverty.

Parenthood / union status	Row per cent		Cases
	Below 60% of median income	Consistent poverty	
Age at first birth***			
- below 20 years	35.5	27.6	656
- 20-24 years	18.9	14.6	2025
- 25-29 years	9.8	6.8	1966
- 30-35 years	6.5	3.3	684
- No birth	18.1	13.6	5866
Age at first union***			
- below 20 years	27.2	22.4	748
- 20-24 years	14.3	10.5	2513
- 25-29 years	8.6	5.6	2091
- 30-35 years	6.5	4.6	456
- Never in union	20.5	15.5	5389
Highest education level***			
- at least Level 3	11.2	7.7	2432
- level 2	14.7	10.6	4401
- below Level 2	24.2	19.0	4364
Employment Status***			
- employed	9.4	5.8	5971
- student	26.5	19.2	2069
- unpaid family housework	29.0	24.6	2043
- unemployed /inactive	27.4	23.9	1114
Country***			
- Germany	16.0	5.6	1042
- Denmark	23.7	14.9	325
- Netherlands	20.4	11.6	784
- Belgium	10.3	5.4	398
- Luxembourg	19.6	1.8	257
- France	17.8	13.7	866
- U.K	22.1	11.0	785
- Ireland	15.9	9.6	530
- Italy	22.1	20.4	1511
- Greece	14.8	17.7	972
- Spain	17.4	14.3	1403
- Portugal	13.9	15.9	1204
- Austria	12.6	8.3	565
- Finland	21.2	14.9	555
All	17.5	13.1	11197

***p<0.01

Base population – non-missing cases in 2001 used in regression analysis