## The Long Run Effects of Legalizing Divorce on Children\*

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Abstract: Divorce rates have been increasing steadily in all OECD countries over the past four decades. The children of divorced parents have been observed to perform worse than children in intact families in a variety of outcomes. However, identifying the causal effect of parental divorce on child outcomes has proven hard. We propose to identify the long run effect of exposure to parental divorce on children by using the variation in the timing of divorce legalization across European countries. Four European countries legalized divorce between 1971 and 1996 (Spain, Italy, Portugal and Ireland). As a result, some cohorts of today's adults received no exposure to divorce as children at all. We exploit the variation in exposure to divorce during childhood generated by the legalization of divorce to understand the long-term effects of exposure to divorce on children. We use ECHP data on adults in the four legalizing countries, plus other European countries as controls. We find that exposure to divorce as a child had significant long run effects on a variety of adult outcomes, including marital status and family structure, fertility, education, health, living standards and labor supply.

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### 1. Introduction

Divorce rates have been increasing steadily in all OECD countries over the past four decades (OECD, 2005). Divorce has potential effects on wellbeing that can affect both the spouses and their children. Recent economic research suggests that divorce may increase physical and psychological wellbeing for the divorcing partners by increasing happiness (Gardner and Oswald, 2005) or by decreasing the likelihood of suicide or spousal homicide (Stevenson and Wolfers, 2006). However, a commonly held view is that many couples "stay together because of the children", implying that divorce has a negative impact on children.

Although the economic literature on the effects of divorce on child outcomes is relatively sparse, sociological and psychological literature is abundant (see for example Amato and Keith, 1991 or Amato, 2000 for extensive literature reviews). Parental divorce appears to be associated with negative child outcomes along several dimensions. Some of the identified pathways include disruption in parent-child relations, discord between former spouses and increased economic hardship as a result of divorce. Detrimental effects of divorce on children's outcomes seem particularly prevalent in terms of academic achievement, conduct (misbehavior, aggression or delinquency), psychological adjustment (depression, anxiety or happiness) and self-esteem, especially for females and father-child relations.

Economic theory is more ambivalent when it comes to assessing the expected effects of parental divorce on long-term outcomes for children. However, two additional pathways can be identified. Firstly, parental access to divorce can affect child outcomes positively by allowing rotten and possibly abusive relationships within the household to be ended. Stevenson and

Wolfers (2006) analyze solely the spousal relationship and find that increased access to divorce has significant positive effects on the wellbeing of females, evidenced by lower suicide rates and a reduction in domestic violence directed at females. Although their analysis does not comment on other potential intra-household effects, it is plausible with their results in mind to expect that the wellbeing of children can also improve with easier parental access to divorce. A second pathway for the effects of divorce on children's later outcomes emerges due to an income effect. In the majority of divorces, mothers are given custody of the children. Hence, the mother's lower income due to, for example, poorer access to husband's income or higher relative expenditure can reduce the chances of children's subsequent success.

In identifying the causal effect of parental divorce on children, one has to worry about selection issues, i.e. the children of divorced parents may do worse than children in intact families for reasons other than divorce, if we suspect that there are differences in unobserved dimensions that are related to both family disruption and child outcomes. Previous economic studies on the effects of divorce on children by Corak (2001) and Lang and Zagorsky (2001) attempted to solve this identification problem by using parental death as an exogenous source of family disruption. However, the exogeneity of parental decease can also be questioned, plus a death in the family may well have different effects than parental divorce.

Gruber (2004) uses instead a natural experiment approach that relies on unilateral divorce laws causing an increase in divorce rates as an identification strategy. Comparing the adult outcomes for children who were born in states with and without unilateral divorce legislation in

the US,<sup>1</sup> he finds that exposure to unilateral divorce legislation as a child has a significant negative effect on adult outcomes such as the level of education and family income. The education effect is explained to materialise through either a liquidity constraint as a child or stress during childhood leading to worse school performance. Gruber (2004) also finds that those exposed to easier divorce marry earlier but separate more often, which is consistent with parental divorce lowering marital commitment (Wolfinger, 2000). Interestingly, exposure to divorce as a child is found to increase the likelihood of suicide as an adult. He also finds that exposure to unilateral divorce as a child is associated with lower labour force attachment and earnings for women.

However, the results of Wolfers (2006) cast doubt on the identification strategy used by Gruber (2004) by concluding that unilateral divorce may not have resulted in long-term increases on the divorce rate, which is an underlying assumption in Gruber (2004). Thus his results may have been driven solely by changes in within-household bargaining power resulting from the change in the divorce regime.

We propose to identify the long run effect of exposure to divorce on children by using the variation in the timing of divorce legalization across European countries. Four European countries legalized divorce between 1971 and 1996 (Spain, Italy, Portugal and Ireland). As a result, some cohorts of today's adults received no exposure to divorce as children. We exploit

<sup>&</sup>lt;sup>1</sup> Unilateral divorce drops the requirement of mutual consent that is effective under no fault divorce laws.

the variation in exposure to divorce during childhood generated by the legalization of divorce to understand the long-term effects of easier parental divorce on children.

#### [FIGURE 1 ABOUT HERE]

Figure 1 shows that divorce legalization was followed by a significant and rising increase in the divorce rate in the four "legalizing" countries. Regression analysis confirms that legalizing divorce had significant permanent effects on divorce rates (Gonzalez and Viitanen, 2006), and therefore this provides a more robust identification strategy.

We exploit the fact that divorce was introduced at different times across European countries by comparing the adult outcomes (marital status and family structure, fertility, education, health, living standards and labor supply) of children who were raised in an environment where divorce was banned versus allowed under no-fault grounds.<sup>2</sup> Arguably, these legal reforms were stronger than the move towards unilateral divorce analyzed by Gruber (in an environment where divorce was always allowed), thus we may expect to see stronger effects as well. Moreover, while Gruber's analysis potentially captures the effects of the "marginal" divorce, our analysis can be thought of as shedding light on the effects of the "average" divorce.

# 2. Data and methodology

There are several advantages to using European data versus US state-level data. First, there is a greater range of divorce law regimes, and changes in those regimes, across Europe than across the US. Some countries legalized divorce fairly recently, which provides a stronger first stage.

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<sup>&</sup>lt;sup>2</sup> All four legalizing countries introduced no-fault ground for divorce at the time of legalization.

Second, since there is less mobility across European countries, there is also presumably much less divorce-driven migration (or "divorce law shopping") in Europe than in the US, and thus this factor is less likely to affect the estimates of the effects of law changes.

This paper uses the eight waves (1994-2001) of the European Community Household Panel (ECHP). The ECHP is a large-scale comparative panel study covering the EU-15. The ECHP was designed to develop comparable social indicators across the EU and covers a range of topics such as labor market activity, education, income, health and demographic characteristics at the individual level. In the first wave of interviews in 1994, data were collected for 12 EU member states: Belgium, Denmark, United Kingdom, Germany, the Netherlands, Luxembourg, France, Ireland, Italy, Greece, Spain and Portugal. Austria entered in 1995, Finland in 1996 and Sweden in 1997. Furthermore, Germany and the UK have not collected the ECHP data for waves 4-8 but instead they use national panels (SOEP and BHPS, respectively).

We define our measure of "exposure to divorce" as a dummy variable that takes value zero if an individual turned 18 before divorce legislation was passed in his or her country of birth and residence (and 1 otherwise). Thus, an adult is defined as "exposed to divorce as a child" if divorce was allowed in his or her country of birth before he or she turned 18. The sample is further restricted to include individuals aged 25-55. Furthermore, the sample includes only individuals who reside in their country of birth.

As mentioned, four countries in Europe legalized divorce only recently. Italy legalized divorce in 1971, while divorce was banned in Portugal until 1977, in Spain until 1981, and in Ireland until 1996. Thus, for instance, the "exposure" dummy takes value 1 for all individuals born in Greece in the sample, since divorce legislation was in place in Greece since 1920 (thus

all Greeks in the sample are "exposed"). Ireland was the country where divorce was introduced most recently, thus no one in the Irish sample was exposed to divorce as a child. Only individuals who turned 18 after 1996 were exposed to divorce in Ireland, but they would only be 22 in 2001, and thus would be excluded from our sample.

The remaining three legalizing countries are intermediate cases, where some individuals in the sample were exposed and others were not. For instance, divorce was introduced in Spain in 1981, thus a child born in 1970 would have been exposed to divorce since the age of 11, and would be 25 years old in 1995. On the other hand, a child born in 1964 would not have been exposed to divorce as a child at all (turning 18 the same year the divorce legislation was implemented), and this individual would be 31 years old in 1995.

Note that those individuals "exposed" to divorce are younger than those not exposed, thus it will be crucial to control for age effects. The sample results in the following cohorts that are exposed to legalized divorce:

- 1. Ireland: None are exposed. Exposed if born after 1978 (15 or younger in 1994, 22 in 2001), i.e. nobody in our sample.
- 2. Spain: exposed if born after 1964 (in 2001, people aged 25 to 36 are exposed, older than 36 not exposed).
- 3. Portugal: exposed if born after 1957 (in 2001, people aged 25 to 43 are exposed, older than 43 not exposed).
- 4. Italy: exposed if born after 1952 (in 2001, people aged 25 to 48 are exposed, older than 48 not exposed).

### 5. Rest of EU-15: All are exposed (age in 2001: 25 to 55).

To assess the impact of legalized divorce as a youth on adult outcomes, we estimate the following regression model:

$$OUTCOME_{ibct} = \alpha + \beta_1 EXPOSED_{bc} + \beta_2 AGE_{ibct} + \beta_3 AGE_{ibct}^2 + \beta_4 AGE_{ibct}^3 + \beta_5 \mu_c + \beta_6 \delta_t + \varepsilon_{ibct}$$

Where subscript i denotes the individual, b proxies year of birth, c denotes the country and t indicates the year. Different adult outcomes (OUTCOME) are estimated to be a function of exposure to divorce as a child (EXPOSED), as well as age, country and year. These regressions are estimated separately for men and women, and additional specifications are estimated including country-specific trends.<sup>3</sup> We also run regressions where exposure is measured using three separate dummies in order to account for the length of exposure (1 to 4 years, 5 to 8 years, and more than 8 years). The baseline specification follows closely the approach in Gruber (2004). The adult outcomes that we analyze can be grouped in three categories: family-related variables (marital status and fertility), income and work, and health status.

Table 1 summarizes the variables used in the analysis for the four legalizing countries plus Greece as the control country. We choose Greece as the main "control" country due to its economic and social similarities with the "treated" countries. Greece is a Southern European country, which entered the European Union recently and followed a similar path in its economic development as Spain or Portugal. It is also a country with low levels and coverage of social assistance, and although divorce has been legal since 1920, divorce rates have remained among the lowest in Europe.

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<sup>&</sup>lt;sup>3</sup> Note that when the dependent variable is binary, we estimate probit regressions instead of linear.

The whole sample is included in column 1 and then separated into sub-samples of "not exposed" and "exposed" to divorce during childhood in column 2 and column 3, respectively. Sample size is almost 276,000 observations. About 52.5% of the individuals in the sample were exposed to divorce as children, and average exposure before age 18 is 6 years. Average age is 39, but the sample of exposed children is significantly younger than the sample not exposed. Thus it will be crucial to account for age in all specifications.

Exposed individuals are more likely to be never married and less likely to be living in a couple, married, separated or divorced than those not exposed, while they are more likely to have children. The exposed sample has lower income and earnings but is more educated. They are also less likely to report bad health. Note that these associations are likely to be related to the different age profiles of the two sub-samples.

## 3. Results

All specifications reported in this section use pooled data for the period 1994-2001 and are estimated separately for the sample of men and women. The sample includes men or women aged 25 to 55 and born and living in Greece, Ireland, Italy, Portugal or Spain. All models include as controls age, age squared and age cubed, as well as dummy indicators for each of the 8 years. All standard errors are clustered at the level of birth year interacted with country (the level of aggregation of the main explanatory variable).

Table 2 presents the results of three specifications for each of the income and employment outcome variables. Each cell reports the coefficient and standard error corresponding to

exposure to divorce during childhood in the different regressions,<sup>4</sup> where the dependent variable is a measure of income, employment or earnings (depending on the row). The first column reports the estimates from the basic specification that controls only for age and year. The second column adds country fixed effects, in order to account for country-specific unobserved factors that may affect both the outcome variables and the timing of the divorce legislation. The third column adds country-specific trends to control for unobserved variables that may be changing at different paces across countries.

The initial specification suggests that adults who were exposed to divorce as children have lower income and earnings compared with those not exposed. Most coefficients are strongly significant and all signs are the same for men and women. This specification, however, does not account for unobserved country characteristics (fixed or trending) that may be correlated both with income variables and divorce legislation.

Once we introduce country fixed effects (columns 2 and 3, without and with country-specific trends), some coefficients turn insignificant. Exposed men suffer a 4 percent income loss relative to those not exposed, but this gap is much more pronounced for women (28 percent). Exposed men are found to be significantly more likely to work, and their earnings and wages are significantly higher compared with men not exposed to divorce during childhood. The are also less likely to be benefit recipients. Note, however, that the higher earnings are not the consequence of higher educational attainment, since exposure to divorce is associated with a slightly lower likelihood of completing high school.

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<sup>&</sup>lt;sup>4</sup> We report OLS coefficients for continuous variables and probit marginal effects for binary variables.

Interestingly, the effects on employment and earnings have the opposite sign for women. Females exposed to divorce as children are less likely to be employed as adults, and if they do work, their earnings and wages are lower relative to women to exposed to divorce as kids. Thus exposure to divorce appears to have unambiguously negative effects on financial and labor market outcomes for women, which confirms the findings in Gruber (2004). This asymmetry is in line with previous studies that suggest that parental divorce may affect boys and girls differently (add references, see further discussion below).

Table 3 presents the results for the family-related outcomes. All dependent variables (marital status, fertility and single parenthood indicators) are binary, thus the table shows marginal effects from probit specifications. Most of the coefficients are not significant once we include the country dummies. Exposed men are found slightly more likely to have children, while exposed women are slightly less likely to be single mothers. Both exposed men and women are less likely to be never married and more likely to be married or living in a couple, but these results are not significant. Thus, we cannot confirm the results by Gruber (2004), who concluded that both men and women who were exposed to unilateral divorce as children tended to marry earlier as adults, but also separate more often.

Finally, table 4 shows the results of specifications that estimate the effect of exposure to divorce during childhood on health outcomes. Three dependent variables are considered: the first two are indicators of overall self-reported health status, while the third one is an indicator variable that takes value one if an individual spent at least one night in the hospital over the previous 12 months.

Both exposed men and women are less likely to self-report bad health. Exposed men are also less likely to have been hospitalized recently (a more objective measure of health problems). However, women who were exposed to divorce during childhood seem significantly more likely to have had recent hospital stays. This suggests negative health effects of exposure to divorce during childhood, consistent with Gruber's results that women exposed to unilateral divorce as children were more likely to commit suicide as adults.

In sum, the results suggest no clear effect of exposure to divorce during childhood on family formation or dissolution patterns for either men or women. Men exposed to divorce appear to experience better labor market outcomes than those not exposed, while exposed women work less, earn less and have lower incomes than those not exposed to divorce as children. Exposed women also show a higher risk of health problems.

## 4. Robustness checks

As a robustness check, we estimate all specifications with different sets of "control" countries. In some specifications we include France as well as Greece as controls. France legalized divorce in 1884, and divorce rates in recent decades have been comparable to those in the "treatment" countries. We also estimate a set of regressions where all EU-15 countries are included as controls. The results seem very robust to the alternative control groups.

We also estimate all specifications where the standard errors are clustered at the individual level rather than at the treatment variable level, to account for the fact that the same individual is observed repeatedly across the different waves of the panel. Significance levels barely change.

Additional specifications are also estimated that include a control for current exposure to divorce (in addition to exposure during childhood). However, the only adults not currently exposed to divorce in the sample are those in Ireland in 1994 and 1995 (since divorce was legalized in 1996). This variable is never significant and its inclusion does not significantly alter any of the results.

We may expect that, if exposure to divorce during childhood were driving the estimated effects, those effects would be stronger for children exposed during their whole childhood than for those exposed during a shorter period. The effects may also be different for children exposed since early ages versus those exposed only since their teen years. Thus we exploit the variation in length of exposure by defining three separate dummies for children exposed during 1 to 4 years, 5 to 8 years, and 9 or more years. The results for the three sets of outcome variables are reported in tables 5, 6 and 7.

Table 5 reports the results for the income variables by length of exposure. These estimates support the finding that exposure to divorce during childhood is associated with higher earnings for men, but lower for women. Length of exposure is associated with significantly lower income for women, with no significant effect for men. Note that the sizes of these effects increase with length of exposure, lending additional credibility to the causal interpretation. The employment probability decreases with length of exposure for women, while men's likelihood

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<sup>&</sup>lt;sup>5</sup> Note that we cannot separate the effect of years of exposure from the effect of age at exposure since they are perfectly correlated. A child exposed to divorce for 10 years will necessarily be exposed since age 7.

<sup>&</sup>lt;sup>6</sup> As in Gruber (2004).

of being on benefits falls. Length of exposure appears to have detrimental effects on educational attainment, particularly for men.

We still find no significant effects on marital status for either men or women (table 6). If anything, exposed men seem slightly more likely to be married or living in a couple, while exposed women appear less likely to be single mothers.

Finally, table 7 reports the results for the health outcomes. Length of exposure to divorce as children is associated with a lower probability of reporting bad health for men, and a significantly lower likelihood of hospital stays. However, the likelihood of hospital stays increases significantly with length of exposure for women, which supports the conclusion that exposure to divorce during childhood has significant detrimental long term effects on health for women.

## 5. Conclusions

We estimate the causal effect of legalizing divorce on long-term outcomes for children. The outcome variables of interest include marital status and family structure, fertility, education, health, living standards and labor supply. The effect of legalizing divorce on child outcomes is estimated in a natural experiment setting where we compare the adult outcomes of children growing up in a country where divorce was allowed versus a country where divorce was illegal.

We find no clear effect of exposure to divorce during childhood on family formation or dissolution patterns for either men or women. Thus we cannot confirm the results by Gruber (2004), who finds that exposure to unilateral divorce during childhood resulted in earlier marriages and more separations.

We do find that men exposed to divorce as children experience better labor market outcomes as adults than those not exposed, while exposed women work less, earn less and have lower incomes than those not exposed to divorce as children. These results are in line with Gruber's, who finds negative effects on employment and earnings for women but positive effects for men. We also find some evidence of negative effects on educational attainment, particularly for men.

Finally, exposed women show a higher risk of health problems, as captured by hospital stays. Again, this result is in line with Gruber's finding that adults who were exposed to unilateral divorce as children are more likely to commit suicide as adults, and the effect is stronger for women.

Thus we conclude that legalizing divorce had long-term negative consequences for children, much more pronounced for women than for men. Children who grew up in an environment where divorce was legal acquired less education than those in an environment without divorce. Females ended up working less, earning less, and experiencing more health problems than their "untreated" counterparts.

These effects may have resulted directly from the increase in divorce rates following the legalization of divorce, but they may also at least in part be the result of changes in other dimensions following the introduction of divorce, which could have affected household bargaining power, and even marriage and fertility rates.

#### References

Amato, P.R. (2000) "The Consequences of Divorce for Adults and Children", *Journal of Marriage and the Family*, 62: 1269-1287.

Amato, P.R. and Keith, B. (1991) "Parental Divorce and the Well-Being of Children: A Meta Analysis", *Psychological Bulletin*, 110(1): 24-46.

Cherlin, A.J., Chase-Landsdale, P.L. and McRae, C. (1998) "Effects of parental divorce on mental health throughout the life course", *American Sociological Review*, 63: 239-249.

Corak, M. (2001) "Death and Divorce: The Long-Term Consequences of Parental Loss on Adolescents", *Journal of Labor Economics*, 19(3): 682-715.

Gardner, J. and Oswald, A.J. (2006) "Do Divorcing Couples Become Happier by Breaking Up?" *Journal of the Royal Statistical Society Series A*, 169(2): 319-336.

Gonzalez, L. and Viitanen, T.K. (2006) "The Effect of Divorce Laws on Divorce Rates in Europe", IZA Discussion Paper No. 2023.

Gruber, J. (2004) "Is Making Divorce Easier Bad for Children? The Long-Run Implications of Unilateral Divorce", *Journal of Labor Economics*, 22(4): 799-833.

Johnson, J.H. and Mazingo, C.J. (2000) "The Economic Consequences of Unilateral Divorce for Children", University of Illinois CBA Office of Research Working Paper 00-0112.

Lang, K. and Zagorsky, J.L. (2001) "Does Growing Up with a Parent Absent Really Hurt?", *Journal of Human Resources*, 36(2): 253-273.

OECD (2005) Society at a Glance: OECD Social Indicators. OECD, Paris.

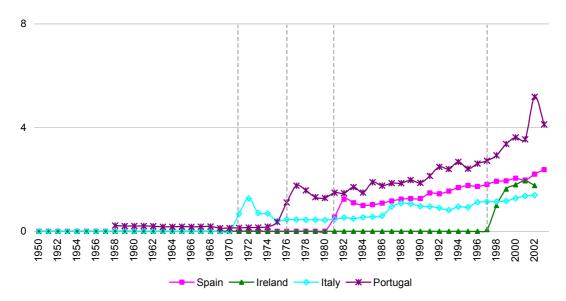
Stevenson, B. and Wolfers, J. (2006) "Bargaining in the Shadow of the Law: Divorce Laws and Family Distress." *Quarterly Journal of Economics*, 121(1).

Thiessen, I. (1993) "The impact of divorce on children", Early Child Development and Care, 96: 19-26.

Wolfers, J. (2006) "Did Universal Divorce Laws Raise Divorce Rates? A Reconciliation and New Results." *American Economic Review*, forthcoming.

Wolfinger, N.H. (2000) "Beyond the Intergenerational Transmission of Divorce: Do People Replicate the Patterns of Marital Instability They Grew Up With?" *Journal of Family Issues*, 21(8): 1061-1086.

Figure 1. Divorce Rates in countries that legalized divorce, 1950-2003



Note: Dotted vertical line indicates legalization of divorce. Italy legalized divorce in 1971, while divorce was banned in Portugal until 1977, in Spain until 1981, and in Ireland until 1996.

Table 1. Summary statistics

|  | A       | All      | Not E   | xposed   | Exp     | osed     |
|--|---------|----------|---------|----------|---------|----------|
|  | Mean    | Stdev.   | Mean    | Stdev.   | Mean    | Stdev.   |
| Exposed                                | 0,5255  | (0,4993) | 0,00    | (0,00)   | 1,00    | (0,00)   |
| Years of exposure as a child (0 to 17) | 6,02    | (7,07)   | 0,00    | (0,00)   | 11,46   | (5,72)   |
| Age (25 to 55)                         | 39,35   | (8,93)   | 44,54   | (7,29)   | 34,66   | (7,58)   |
| Female                                 | 0,5064  | (0,5000) | 0,5108  | (0,4999) | 0,5025  | (0,5000) |
| Year (1994 to 2001)                    | 1996,8  | (2,39)   | 1996,4  | (2,30)   | 1997,2  | (2,42)   |
| 1) Family variables                    |         |          |         |          |         |          |
| Never married                          | 0,2172  | (0,4123) | 0,1237  | (0,3292) | 0,3016  | (0,4590) |
| Lliving in a couple                    | 0,7575  | (0,4286) | 0,8352  | (0,3710) | 0,6873  | (0,4636) |
| Married                                | 0,7364  | (0,4406) | 0,8165  | (0,3871) | 0,6640  | (0,4723) |
| Separated                              | 0,0178  | (0,1322) | 0,0235  | (0,1515) | 0,0127  | (0,1118) |
| Divorced                               | 0,0137  | (0,1164) | 0,0142  | (0,1184) | 0,0133  | (0,1146) |
| Children under 16.                     | 0,3703  | (0,4829) | 0,3379  | (0,4730) | 0,3995  | (0,4898) |
| Single parent (dependent kids)         | 0,0116  | (0,1071) | 0,0140  | (0,1174) | 0,0095  | (0,0968) |
| 2) Income and work                     |         |          |         |          |         |          |
| Total household income                 | 16611   | (10535)  | 18415   | (11503)  | 14987   | (9285)   |
| Per capita income in the household     | 4812    | (3510)   | 5126    | (3771)   | 4529    | (3231)   |
| Individual income                      | 6670    | (6537)   | 7693    | (7371)   | 5750    | (5524)   |
| Satisfaction with financial situation  | 3,178   | (1,294)  | 3,258   | (1,341)  | 3,107   | (1,246)  |
| Current employment                     | 0,6694  | (0,4704) | 0,6459  | (0,4782) | 0,6906  | (0,4623) |
| Current monthly earnings               | 775     | (436)    | 905     | (511)    | 661     | (316)    |
| Hourly wage                            | 4,745   | (2,852)  | 5,623   | (3,362)  | 3,977   | (2,025)  |
| Benefit recipient                      | 0,2242  | (0,4170) | 0,3044  | (0,4602) | 0,1517  | (0,3587) |
| 3) Education                           |         |          |         |          |         |          |
| Secondary completed or more.           | 0,4298  | (0,4950) | 0,3484  | (0,4765) | 0,5032  | (0,5000) |
| University education.                  | 0,1559  | (0,3628) | 0,1330  | (0,3396) | 0,1765  | (0,3813) |
| 4) Health and satisfaction             |         |          |         |          |         |          |
| Bad health (5 categories)              | 2,039   | (0,863)  | 2,223   | (0,889)  | 1,873   | (0,804)  |
| Bad health (binary)                    | 0,0589  | (0,2355) | 0,0835  | (0,2766) | 0,0368  | (0,1883) |
| Hospital stays                         | 0,0618  | (0,2408) | 0,0711  | (0,2570) | 0,0534  | (0,2249) |
| N                                      | 275.631 |          | 130.776 |          | 144.855 |          |

Note: ECHP data, 1994-2001, for Greece, Ireland, Italy, Portugal and Spain. "Exposed" takes value 1 if divorce was allowed in the individual's country of birth before he or she turned 18.

Table 2. Regression Results Income and Work Variables

| Men                                 | 1        |     | 2        |     | 3        |     |
|-------------------------------------|----------|-----|----------|-----|----------|-----|
| 1. Log total household income       | -0,2687  | *** | -0,0070  |     | -0,0073  |     |
|                                     | (0.0417) |     | (0,0145) |     | (0,0144) |     |
| 2. Log per capita income in the hh. | -0,2341  | *** | -0,0088  |     | -0,0126  |     |
| •                                   | (0,0446) |     | (0,0176) |     | (0,0173) |     |
| 3. Log individual income            | -0,2084  | *** | -0,0430  | **  | -0,0436  | **  |
|                                     | (0,0469) |     | (0,0215) |     | (0,0208) |     |
| 4. Satisfaction with financial sit. | -0,1184  | *** | 0,0115   |     | 0,0132   |     |
|                                     | (0,0292) |     | (0,0269) |     | (0,0267) |     |
| 5. Current employment               | 0,0441   | *** | 0,0249   | *** | 0,0243   | *** |
|                                     | (0,0078) |     | (0,0094) |     | (0,0094) |     |
| 6. Log current monthly earnings     | -0,2653  | *** | 0,0289   | **  | 0,0303   | **  |
|                                     | (0,0483) |     | (0,0126) |     | (0,0122) |     |
| 7. Log hourly wage                  | -0,2687  | *** | 0,0244   | *   | 0,0243   | *   |
|                                     | (0,0532) |     | (0,0130) |     | (0,0127) |     |
| 8. Benefit recipient                | -0,132   | *** | -0,048   | *** | -0,049   | *** |
|                                     | (0,024)  |     | (0,015)  |     | (0,016)  |     |
| 9. Secondary completed or more      | 0,046    | **  | -0,023   | *   | -0,026   | **  |
|                                     | (0,021)  |     | (0,012)  |     | (0,012)  |     |
| 10. University education.           | 0,002    |     | 0,013    |     | 0,009    |     |
|                                     | (0,014)  |     | (0,010)  |     | (0,010)  |     |
| Women                               |          |     |          |     |          |     |
| 1. Log total household income       | -0,2791  | *** | -0,0219  |     | -0,0215  |     |
|                                     | (0,0434) |     | (0,0152) |     | (0,0153) |     |
| 2. Log per capita income in the hh. | -0,2143  | *** | -0,0098  |     | -0,0127  |     |
|                                     | (0,0420) |     | (0,0172) |     | (0,0168) |     |
| 3. Log individual income            | -0,1208  | **  | -0,2987  | *** | -0,2807  | *** |
|                                     | (0,0556) |     | (0,0550) |     | (0,0529) |     |
| 4. Satisfaction with financial sit. | -0,2274  | *** | -0,0436  |     | -0,0371  |     |
|                                     | (0,0319) |     | (0,0272) |     | (0,0273) |     |
| 5. Current employment               | 0,0104   |     | -0,0035  |     | -0,0029  |     |
|                                     | (0,0152) |     | (0,0143) |     | (0,0142) |     |
| 6. Log current monthly earnings     | -0,2351  | *** | -0,1154  | *** | -0,1119  | *** |
|                                     | (0,0514) |     | (0,0257) |     | (0,0252) |     |
| 7. Log hourly wage                  | -0,2971  | *** | -0,0484  | **  | -0,0462  | **  |
|                                     | (0,0650) |     | (0,0202) |     | (0,0197) |     |
| 8. Benefit recipient                | -0,205   | *** | 0,017    |     | 0,016    |     |
|                                     | (0,033)  |     | (0,014)  |     | (0,014)  |     |
| 9. Secondary completed or more      | 0,024    |     | 0,008    |     | 0,004    |     |
|                                     | (0,020)  |     | (0,014)  |     | (0,014)  |     |
| 10. University education.           | -0,004   |     | 0,009    |     | 0,003    |     |
|                                     | (0,011)  |     | (0,010)  |     | (0,011)  |     |
| Country fixed effects?              | N        |     | Y        |     | Y        |     |
| Country-specific trends?            | N        |     | N        |     | Y        |     |

Note: ECHP data, 1994-2001, for Greece, Ireland, Italy, Portugal and Spain. Reported coefficients are from OLS or probit regressions, for the explanatory variable "exposed".

Table 3. Regression Results Family Variables

| Men                      | 1        |     | 2        |    | 3        |    |
|--------------------------|----------|-----|----------|----|----------|----|
| 1. Never married         | -0,0298  | *** | -0,0118  |    | -0,0096  |    |
|                          | (0,0078) |     | (0,0122) |    | (0,0121) |    |
| 2. Living in a couple    | 0,0198   | **  | 0,0121   |    | 0,0100   |    |
| -                        | (0,0078) |     | (0,0119) |    | (0,0118) |    |
| 3. Married               | 0,0335   | *** | 0,0202   |    | 0,0189   |    |
|                          | (0,0080) |     | (0,0123) |    | (0,0123) |    |
| 4. Separated             | -0,0052  | *** | 0,0000   |    | -0,0003  |    |
| •                        | (0,0018) |     | (0,0021) |    | (0,0022) |    |
| 5. Divorced              | 0,0026   | **  | 0,0008   |    | 0,0005   |    |
|                          | (0,0012) |     | (0,0015) |    | (0,0015) |    |
| 6. Children under 16     | -0,0073  |     | 0,0393   | ** | 0,0405   | ** |
|                          | (0,0122) |     | (0,0191) |    | (0,0192) |    |
| 7. Single parent         | 0,0000   |     | 0,0005   |    | 0,0004   |    |
|                          | (0,0003) |     | (0,0004) |    | (0,0004) |    |
| Women                    |          |     |          |    |          |    |
| 1. Never married         | -0,0376  | *** | -0,0123  |    | -0,0123  |    |
|                          | (0,0075) |     | (0,0095) |    | (0,0094) |    |
| 2. Living in a couple    | 0,0287   | *** | 0,0022   |    | 0,0014   |    |
|                          | (0,0076) |     | (0,0113) |    | (0,0114) |    |
| 3. Married               | 0,0388   | *** | 0,0021   |    | 0,0020   |    |
|                          | (0,0086) |     | (0,0120) |    | (0,0121) |    |
| 4. Separated             | -0,0124  | *** | 0,0041   |    | 0,0038   |    |
|                          | (0,0022) |     | (0,0029) |    | (0,0029) |    |
| 5. Divorced              | 0,0056   | **  | -0,0004  |    | -0,0006  |    |
|                          | (0,0024) |     | (0,0029) |    | (0,0029) |    |
| 6. Children under 16     | -0,0665  | *** | -0,0140  |    | -0,0117  |    |
|                          | (0,0130) |     | (0,0214) |    | (0,0214) |    |
| 7. Single parent         | -0,0057  | *** | -0,0052  | *  | -0,0048  | *  |
|                          | (0,0022) |     | (0,0030) |    | (0,0030) |    |
| Country fixed effects?   | N        |     | Y        |    | Y        |    |
| Country-specific trends? | N        |     | N        |    | Y        |    |

Note: ECHP data, 1994-2001, for Greece, Ireland, Italy, Portugal and Spain. Reported coefficients are marginal effects from probit regressions, for the explanatory variable "exposed", which takes value 1 if divorce was allowed in the individual's country of birth before an individual turned 18. Standard errors are in parentheses. One \* indicates significance at the 90% confidence level, two indicate 95%, and three indicate 99%. All specifications include as controls age, age squared, age cubed and year dummies.

Table 4. Regression Results Health Variables

| Men                          | 1        |     | 2        |    | 3        |    |
|------------------------------|----------|-----|----------|----|----------|----|
| 1. Bad health (5 categories) | -0,1880  | *** | -0,0181  |    | -0,0250  |    |
|                              | (0,0599) |     | (0,0166) |    | (0,0162) |    |
| 2. Bad health (binary)       | -0,0099  | **  | -0,0087  | ** | -0,0081  | ** |
|                              | (0,0043) |     | (0,0039) |    | (0,0039) |    |
| 3. Hospital stays            | -0,0126  | *** | -0,0053  |    | -0,0057  | *  |
|                              | (0,0027) |     | (0,0033) |    | (0,0034) |    |
| Women                        |          |     |          |    |          |    |
| 1. Bad health (5 categories) | -0,1625  | **  | -0,0183  |    | -0,0260  |    |
|                              | (0,0629) |     | (0,0184) |    | (0,0182) |    |
| 2. Bad health (binary)       | -0,0238  | *** | -0,0083  | ** | -0,0083  | ** |
|                              | (0,0053) |     | (0,0038) |    | (0,0038) |    |
| 3. Hospital stays            | -0,0193  | *** | 0,0086   | ** | 0,0078   | ** |
|                              | (0,0036) |     | (0,0035) |    | (0,0034) |    |
| Country fixed effects?       | N        |     | Y        |    | Y        |    |
| Country-specific trends?     | N        |     | N        |    | Y        |    |

Note: ECHP data, 1994-2001, for Greece, Ireland, Italy, Portugal and Spain. Reported coefficients are from OLS (outcome variable 1) or marginal effects from probit (outcomes 2 and 3) regressions, for the explanatory variable "exposed", which takes value 1 if divorce was allowed in the individual's country of birth before an individual turned 18. Standard errors are in parentheses. One \* indicates significance at the 90% confidence level, two indicate 95%, and three indicate 99%. All specifications include as controls age, age squared, age cubed and year dummies.

Table 5. Length of Exposure, Income Variables

|                            |             | Men          |             | Women         |               |             |  |  |
|----------------------------|-------------|--------------|-------------|---------------|---------------|-------------|--|--|
|                            | Exp. 1 to 4 | Exp. 5 to 8  | Exp. 9+     | Exp. 1 to 4   | Exp. 5 to 8   | Exp. 9+     |  |  |
| 1. Log household income    | -0,0144     | 0,0041       | -0,0098     | -0,0267       | -0,0091       | -0,0324     |  |  |
|                            | (0,0159)    | (0,0162)     | (0,0203)    | (0,0182)      | (0,0174)      | (0,0211)    |  |  |
| 2. Log individual income   | -0,0401 *   | -0,0605 **   | -0,0183     | -0,2061 ***   | · -0,2982 *** | -0,4665 *** |  |  |
|                            | (0,0220)    | (0,0253)     | (0,0344)    | (0,0483)      | (0,0572)      | (0,0736)    |  |  |
| 3. Current employment      | 0,0267 **   | * 0,0274 *** | * 0,0078    | -0,0040       | 0,0125        | -0,0335 *   |  |  |
|                            | (0,0097)    | (0,0086)     | (0,0135)    | (0,0174)      | (0,0161)      | (0,0195)    |  |  |
| 4. Log monthly earnings    | 0,0096      | 0,0419 ***   | * 0,0869 ** | * -0,0819 *** | · -0,1372 *** | -0,1725 *** |  |  |
|                            | (0,0114)    | (0,0152)     | (0,0154)    | (0,0247)      | (0,0271)      | (0,0332)    |  |  |
| 5. Benefit recipient       | -0,021      | -0,045 ***   | * -0,136 ** | * 0,015       | 0,028         | 0,000       |  |  |
|                            | (0,014)     | (0,015)      | (0,018)     | (0,016)       | (0,020)       | (0,020)     |  |  |
| 6. Secondary or more educ. | -0,0164     | -0,0196      | -0,0668 *** | * 0,0121      | 0,0013        | -0,0196     |  |  |
|                            | (0,0143)    | (0,0128)     | (0,0160)    | (0,0173)      | (0,0157)      | (0,0176)    |  |  |
| Country fixed effects?     | Y           | Y            | Y           | Y             | Y             | Y           |  |  |
| Country-specific trends?   | Y           | Y            | Y           | Y             | Y             | Y           |  |  |

Note: ECHP data, 1994-2001, for Greece, Ireland, Italy, Portugal and Spain. Reported coefficients are from OLS (outcome variables 1, 2 and 4) or marginal effects from probit (outcomes 3, 5 and 6) regressions, for the three exposure dummies, which take value 1 if an individual was exposed to divorce as a child for 1 to 4 years, 5 to 8, or more than 9 years. Standard errors are in parentheses. One \* indicates significance at the 90% confidence level, two indicate 95%, and three indicate 99%. All specifications include as controls age, age squared, age cubed and year dummies.

Table 6. Family Variables, Length of Exposure

|                          | Men         |             |          | Women       |             |          |     |
|--------------------------|-------------|-------------|----------|-------------|-------------|----------|-----|
|                          | Exp. 1 to 4 | Exp. 5 to 8 | Exp. 9+  | Exp. 1 to 4 | Exp. 5 to 8 | Exp. 9+  |     |
| 1. Never married         | -0,0003     | -0,0207 *   | -0,0146  | -0,0152     | -0,0059     | -0,0184  |     |
|                          | (0,0148)    | (0,0121)    | (0,0177) | (0,0098)    | (0,0099)    | (0,0129) |     |
| 2. Living in a couple    | -0,0015     | 0,0241 *    | 0,0140   | 0,0089      | -0,0032     | -0,0101  |     |
|                          | (0,0139)    | (0,0130)    | (0,0172) | (0,0120)    | (0,0130)    | (0,0172) |     |
| 3. Married               | 0,0059      | 0,0317 **   | 0,0330   | * 0,0093    | -0,0076     | 0,0007   |     |
|                          | (0,0150)    | (0,0131)    | (0,0184) | (0,0121)    | (0,0140)    | (0,0183) |     |
| 4. Separated             | 0,0002      | -0,0003     | -0,0054  | * 0,0031    | 0,0055      | 0,0049   |     |
|                          | (0,0022)    | (0,0026)    | (0,0028) | (0,0042)    | (0,0037)    | (0,0049) |     |
| 5. Divorced              | 0,0011      | 0,0000      | -0,0029  | -0,0007     | 0,0006      | -0,0047  |     |
|                          | (0,0017)    | (0,0017)    | (0,0023) | (0,0028)    | (0,0040)    | (0,0038) |     |
| 6. Children under 16     | 0,0434 **   | 0,0389      | 0,0349   | 0,0078      | -0,0300     | -0,0347  |     |
|                          | (0,0218)    | (0,0285)    | (0,0252) | (0,0195)    | (0,0347)    | (0,0288) |     |
| 7. Single parent         | 0,0006      | 0,0003      | -0,0007  | -0,0031     | -0,0049     | -0,0111  | *** |
|                          | (0,0007)    | (0,0006)    | (0,0006) | (0,0028)    | (0,0027)    | (0,0036) |     |
| Country fixed effects?   | Y           | Y           | Y        | Y           | Y           | Y        |     |
| Country-specific trends? | Y           | Y           | Y        | Y           | Y           | Y        |     |

Note: ECHP data, 1994-2001, for Greece, Ireland, Italy, Portugal and Spain. Reported coefficients are marginal effects from probit regressions, for the three exposure dummies, which take value 1 if an individual was exposed to divorce as a child for 1 to 4 years, 5 to 8, or more than 9 years. Standard errors are in parentheses. One \* indicates significance at the 90% confidence level, two indicate 95%, and three indicate 99%. All specifications include as controls age, age squared, age cubed and year dummies.

Table 7. Length of Exposure, Health Outcomes

|                              | Men         |           |           |     | Women     |             |     |          |     |
|------------------------------|-------------|-----------|-----------|-----|-----------|-------------|-----|----------|-----|
|                              | Exp. 1 to 4 | Exp. 5 to | 8 Exp. 9+ |     | Exp. 1 to | 4 Exp. 5 to | 8   | Exp. 9+  |     |
| 1. Bad health (5 categories) | -0,0088     | -0,0176   | -0,0908   | *** | -0,0224   | -0,0269     |     | -0,0358  |     |
|                              | (0,0173)    | (0,0164)  | (0,0254)  |     | (0,0180)  | (0,0223)    |     | (0,0259) |     |
| 2. Bad health (binary)       | -0,0038     | -0,0066   | -0,0241   | *** | -0,0047   | -0,0112     | *** | -0,0153  | *** |
|                              | (0,0036)    | (0,0040)  | (0,0051)  |     | (0,0041)  | (0,0034)    |     | (0,0054) |     |
| 3. Hospital stays            | -0,0001     | -0,0063   | * -0,0184 | *** | 0,0053    | 0,0076      | **  | 0,0184   | *** |
|                              | (0,0030)    | (0,0033)  | (0,0044)  |     | (0,0050)  | (0,0039)    |     | (0,0044) |     |
| Country fixed effects?       | Y           | Y         | Y         |     | Y         | Y           |     | Y        |     |
| Country-specific trends?     | Y           | Y         | Y         |     | Y         | Y           |     | Y        |     |

Note: ECHP data, 1994-2001, for Greece, Ireland, Italy, Portugal and Spain. Reported coefficients are from OLS (outcome variable 1) or logit (outcomes 2 and 3) regressions, for the three exposure dummies, which take value 1 if an individual was exposed to divorce as a child for 1 to 4 years, 5 to 8, or more than 9 years. Standard errors are in parentheses. One \* indicates significance at the 90% confidence level, two indicate 95%, and three indicate 99%. All specifications include as controls age, age squared, age cubed and year dummies.