

The Effects of Divorce Laws on Household Retirement Security

Luca Stella and Christoph Weiss*

Abstract

This paper investigates the effect of an increase in the risk of divorce on the retirement security of married couples. My empirical strategy exploits the variation in unilateral divorce law reforms occurring between the late 1970s and the 2000s in Europe as an exogenous shock to the risk of marital breakup. Across countries and over time, these reforms shifted the ground for divorce from mutual consent to unilateral choice. By employing a unique dataset, which contains detailed work and marital histories, I discuss and test the potential mechanisms by which the introduction of unilateral divorce legislation affects the retirement well-being of households. Overall, my results suggest that increased exposure to divorce risk results in a significant wealth accumulation of married couples around retirement, thus lending support to the precautionary motive for saving.

JEL Codes: H31, H55, H30

Keywords: Divorce Risk, Household, Retirement Security, SHARELIFE.

*Email: lstella@bu.edu; christoph.weiss@eui.eu. We are greatly indebted to Claudia Olivetti, who generously provided me with her manuscript that encouraged me to work on this project and for very helpful discussions. We thank Daniele Paserman and Guglielmo Weber for their helpful suggestions. We would also like to thank participants at the International Institute of Public Finance (2014) for their comments. All errors are my own.

1 Introduction

Over the last few years, a substantial body of research has investigated the consequences of the introduction of divorce laws on a large array of household outcomes, such as divorce rates (Friedberg 1998; Wolfers 2006), well-being of children (Gruber 2004; Reinhold et al. 2013), marital conflict (Stevenson and Wolfers 2006), women’s labor supply decisions (Gray 1998; Stevenson 2007), and household saving behavior (Voena 2013; González and Özcan 2013). However, little attention to date has been given to the potential effects of divorce laws on the dimensions related to the standard of living of couples of older ages. In this paper, I aim to fill this gap by exploring the consequences of an increase in divorce risk on the wealth accumulation of people around retirement in Europe. This empirical relationship can be identified by the quasi-natural experiment provided by the wave of liberal divorce reforms that occurred in Europe during the last four decades of the 20th century. Across countries and over time, these laws made divorce less difficult: the legal regime switched from “fault divorce” to “no-fault divorce”, and in most cases, the grounds for divorce shifted from a mutual agreement to unilateral choice. Recent evidence from 18 European countries indicates that the shift to the unilateral divorce regime was accompanied by a sustainable rise in divorce rates, with an average increase of approximately 0.3-0.4 annual divorces per 1,000 people (González and Viitanen 2009). This relationship has also generated a great deal of attention from policy makers because it lies at the heart of the public debate over the financial security of retirees. There are increasing concerns that a large cohort of baby boomers is approaching retirement with low levels of financial wealth and virtually no assets other than their homes. This is a particular concern for divorced and for women who tend to live longer than men, have less attachment to labor force, earn less and are more financially illiterate (Lusardi and Mitchell 2007, 2008).

From a theoretical perspective, the literature suggests that marriage and divorce affect the incentive to save of households;¹ however, researchers remain puzzled about the potential mechanisms underlying this relationship. There are two main competing explanations through which an increase in the risk of marital breakup may affect household assets accumulation. On the one hand, Cubeddu and Rios-Rull (1997) show that increases in marital dissolution encourage household saving. They attribute this rise in saving to standard precautionary motives: because divorce is costly and households cannot hedge themselves against this negative shock, a greater risk of marital dissolution induces married couples to save more. On the other hand, Mazzocco et al. (2007) stress that an increase in the probability of divorce adversely affects

¹See, for example, Cubeddu and Rios-Rull (1997), Lupton and Smith (2003), Guner and Knowles (2004), Aura (2007), Mazzocco et al. (2007).

saving while married because asset division laws impose a division of the marital property among the couple, thereby creating incentives for spouses to increase current consumption. However, only a few contributions have made attempts to test which of these channels dominate in practice, and the resulting empirical evidence remains inconclusive. For example, Voena (2013) develops a model to evaluate the effect of the adoption of unilateral divorce laws and different property rights regimes on the intertemporal labor supply and saving behavior of married couples. She tests the model using US longitudinal data and provides support for the precautionary saving channel by demonstrating that when the risk of marital breakup increases and assets are equally divided among the spouses, men tend to increase savings to offset the potential loss of half of their assets to their wives when the marriage ends. González and Özcan (2013) use Irish panel data and conclude that the legalization of divorce in 1996 leads to a significant increase in the propensity to save by married individuals. Similar conclusions are obtained in Pericoli and Ventura (2012) analyzing the same relationship in Italy. However, the positive relationship between the increased risk of family disruption and households asset accumulation is not entirely consistent with the study by Stevenson (2007), which offers evidence of a decline in the propensity to undertake marriage-specific investments, such as supporting a spouse through school or buying a home, with the results varying significantly with the property division regime prevailing in the United States.

Overall, these studies do not consider the standard of living of married couples around retirement as the outcome and limit their empirical analyses to specific countries (US and Ireland). This paper contributes to previous studies by estimating the impact of divorce risk on the economic security of married couples around retirement and evaluates the relative weight of these two competing hypotheses using a European dataset. To achieve identification, I take advantage of an exogenous increase in the risk of divorce provided by the introduction of unilateral divorce legislation across Europe.

2 Data and Institutional Context

The primary data used in this paper are drawn from the Survey of Health, Ageing and Retirement in Europe (SHARE). This survey provides information on demographics, current socio-economic status, health, expectations as well as social and family networks for nationally representative samples of European individuals aged fifty and over, who speak the official language of each country, and do not live abroad or in an institution, as well as their spouses or partners, independent of age. The main advantage of this data source is related to the representativeness of the sample of elderly people in Europe because this survey is constructed to ensure the comparability of the analysis across different countries. Specifically, I use data

from the third wave, which was collected in 2008/2009 and is known as SHARELIFE, and focuses on many dimensions of the life histories of respondents, starting from childhood and arriving to the present. This wave is particularly suitable for my investigation because it provides uniquely detailed data on the individuals' accommodation, working and marital histories.² In this paper, I present evidence from eleven countries for which I was able to collect information on unilateral divorce laws. These countries represent the various regions of continental Europe, ranging from Scandinavia (Sweden and Denmark) through Central Europe (Austria, Belgium, France, Germany, Switzerland and the Netherlands) and the Mediterranean countries (Italy, Spain and Greece).

In my sample selection, because economic outcomes are measured at the household level, I constrain the sample to couples who are still in their first marriage at the time of the interview. Consistent with Alessie et al. (2013), I restrict my attention to spouses born between 1931 and 1952, aged 55-75 in the interview year of wave 4, to obtain a sample of couples around retirement. Moreover, the choice of this interval enables me to consider spouses who were married before or after the introduction of unilateral divorce in their corresponding country. I also use data from the fourth wave of SHARE because information on economic well-being later in life was not collected in SHARELIFE. These indicators include total net worth, financial assets, real assets and home-ownership. To be more precise, the total net worth is computed as the sum of the net values of: (a) the primary residence net mortgage; (b) other real estate; (c) business; (d) cars; and (e) savings, stocks and bonds, mutual funds, IRA's and life insurances. Imputations on net worth are provided in the SHARE data to correct for missing values. This net worth is expressed in PPP-adjusted Euros. Home-ownership is measured as a dichotomous variable that takes the value 0 if a respondent does not own the house that he or she occupies at the time of the interview and 1 if he or she does own their residence.

With regards to the institutional context, I obtain information on unilateral divorce legislation across the above-mentioned European countries mainly from the work by Boele-Woelki et al. (2003, 2004), González and Viitanen (2009) and Kneip et al. (2009, 2013). Table 1 illustrates the year of the introduction of de-facto unilateral divorce laws and the distribution of the sample of couples married before and after the unilateral divorce laws across countries. A feature worth stressing is that there is a large multi-country variability in the year of the introduction of unilateral divorce laws. Particularly striking is that the year of introduction ranges from 1915 in Sweden to 2000 in Switzerland and 2010 in Italy. The distribution of total net worth and other wealth components is shown in Table 2. In addition, the financial wealth distribution is very

²Further details on SHARELIFE can be found in Börsch-Supan et al. (2011).

skewed: the households' median financial wealth is €18,607, while the mean is approximately three times greater (€51,766). Table 3 shows the distribution of the total net worth and home ownership according to educational groups as well as for couples without children.

Table 1: Unilateral Divorce Laws by Country, 1950-2008

Country	Year of introduction	No unilateral divorce at first marriage	Unilateral divorce at first marriage	Total
Austria	1978	190	28	218
Belgium	1975	633	167	800
Denmark	1970	264	292	556
France	1976	459	143	602
Germany (FRG)	1977	372	83	455
Greece	1983	823	86	909
Italy	2010	963	0	963
Netherlands	1971	380	292	672
Spain	1981	587	53	640
Sweden	1915	0	454	454
Switzerland	2000	340	1	341
Total		5,011	1,599	6,610

Notes: Source: Boele-Woelki et al. (2003, 2004), González et al. (2009), Kneip et al. (2009), Reinhold et al. (2012). Column 2 shows the year when de facto unilateral, no-fault divorce was first allowed.

Table 2: Distribution of total net worth and wealth components, Sample of Households (€2007)

Percentile	Total net worth (€)	Housing wealth (€)	Financial wealth (€)
p5	9,599	1,924	-1,368
p10	34,902	8,928	0
p25	116,375	93,738	2,553
p50	222,097	184,330	18,607
p75	381,705	303,004	64,028
p90	558,648	462,815	158,238
p95	682,896	575,941	227,752
Mean	270,333	218,568	51,766
Std dev	209,533	178,492	80,916

Table 3: Total net worth and home ownership by demographic group, Sample of Households (€2007)

Group	25th pctl	Median	Mean	75th pctl	N	% Owner first house	% Owner second house	N
Education								
<HS	86,509	166,527	208,366	293,364	2,730	0.82	0.24	2,500
HS graduate	127,292	236,395	272,263	384,953	1,996	0.81	0.24	1,850
Some college	166,588	272,035	313,267	417,797	244	0.82	0.41	225
College graduate	191,894	326,757	362,748	495,397	1,603	0.87	0.34	1,483
>College	268,986	363,765	460,118	602,399	40	0.89	0.46	35
Children								
None	103,923	214,921	261,748	363,248	378	0.78	0.23	340
Some	116,660	222,732	270,853	382,775	6,247	0.83	0.27	5,765

3 Empirical Model

To examine how an increase in the risk of divorce generated by the switch to unilateral divorce laws affects the retirement well-being of married couples, I estimate the following fixed-effects OLS regression:

$$A_{ij} = \beta_0 + \beta_1 exposure_{ij} + \gamma X_i + \sum_j Country\ fixed\ effects_j + \sum_i Year\ of\ marriage\ fixed\ effects_i + \sum_c Cohort\ fixed\ effects_c + \epsilon_{ij}$$

where the dependent variable, A_{ij} , represents a measure of the retirement preparedness for household i living in country j , i.e., the total net worth or net financial assets. Importantly, all of the economic variables are defined at the time of the household interview, which rules out the possibility of using a differences-in-differences approach. $Exposure_{ij}$ measures the degree of exposure, and is defined as the ratio between the number of years that the couple was exposed to unilateral divorce and the marriage duration. The rationale for using this continuous variable is that a couple might have married before the law change, but may have spent most of their marriage during the period in which the unilateral regime was in place. Formally, the variable can be written in the following manner:

$$exposure_{ij} = \begin{cases} (years\ of\ exposure)_{ij} / (years\ since\ marriage)_i & \text{if couple } i \text{ married before UDL} \\ 1 & \text{if couple } i \text{ married after UDL} \end{cases}$$

Thus, I construct the variable of interest in such a way that it depends on three factors: the country j in which the reform took place, the couple's year of marriage, and the year when the unilateral divorce law was first adopted. The main parameter of interest is β_1 , which identifies whether the retirement wealth is larger for households for whom divorce becomes less costly at the time of the first marriage. Equation (1) then includes a set of country, year of marriage and birth cohort dummies. X is a vector that includes retirement wealth, real wealth and a set of household-level controls, such as household size and education. Finally, ϵ_{ij} represents an idiosyncratic error term.

I identify the causal effect of the risk of divorce on the wealth of married couples around retirement by exploiting the variation provided by the adoption of unilateral divorce legislation over the couple's year of

marriage and across European countries. The key identification assumption is that changes in unilateral divorce laws generate an exogenous increase in the risk of marital dissolution. In other words, these laws provide a source of variation in divorce risk that is credibly exogenous and is unlikely to be related to unobservable characteristics of spouses that might explain the different wealth accumulation behaviors of married couples around retirement. While the country and time variation of unilateral divorce laws offer an appealing identification strategy for the estimation of the effect of divorce laws on wealth accumulation later in life, the main threat to identification is that couples can endogenously adjust their year of marriage in response to expected changes in unilateral divorce laws. As a result, the anticipation of unilateral divorce laws by spouses would violate the identifying assumption described above, thereby producing biased estimates. To overcome this endogeneity problem, in the robustness analysis I resort to estimating equation (1) where spouses who were married in close vicinity of the divorce laws (i.e., two years before or after the change in the laws) were excluded.

4 Results

Table 4 and Table 5 present the estimation results of main interest. In column 1 of Table 4, I find that a one standard deviation increase in the exposure to divorce laws induces couples to accumulate more assets during retirement. The magnitude of the effects is large: one standard deviation increases wealth accumulation by approximately 20% for total wealth (see column 1 of Table 4), 53% for financial wealth (see column 2 of Table 4) and 18% for real wealth (see column 3 of Table 4).

Table 4: Naive OLS - logs - Sample of Married Couples

Dependent Variable:	(1)	(2)	(3)
	Total wealth - logs	Financial wealth - logs	Real wealth - logs
Degree of exposure	0.196** (0.085)	0.528*** (0.103)	0.179* (0.094)
Country F.E.	YES	YES	YES
Cohort F.E. (for each spouse)	YES	YES	YES
Years married (quadratic)	YES	YES	YES
Family size	YES	YES	YES
Observations	6,191	6,191	6,191
R^2	0.061	0.203	0.064

Notes: Standard errors in parentheses are clustered by household's country and year of marriage. The degree of exposure is defined as the ratio between the years of exposure to UDL and the marriage duration. The dependent variable is in logs. Degree of exposure is standardized. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 5: Naive OLS - levels - Sample of Married Couples

Dependent Variable:	(1)	(2)	(3)
	Total wealth - levels	Financial wealth - levels	Real wealth - levels
Degree of exposure	112,245*** (37,753)	37,813*** (12,346)	74,432** (35,083)
Country F.E.	YES	YES	YES
Cohort F.E. (for each spouse)	YES	YES	YES
Years married (quadratic)	YES	YES	YES
Family size	YES	YES	YES
Observations	6,191	6,191	6,191
R^2	0.076	0.188	0.065

Notes: Standard errors in parentheses are clustered by household's country and year of marriage. The degree of exposure is defined as the ratio between the years of exposure to UDL and the marriage duration. The dependent variable is in levels. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

\

5 Conclusion

The risk of family disruption may have potential effects on several important dimensions related to household well-being. In this paper, I examine how an increase in the risk of divorce affects the wealth accumulation of people around retirement, exploiting variation in unilateral divorce laws in Europe. Overall, the results indicate that the switch from mutual agreement to unilateral divorce determines a significant accumulation of wealth by elderly couples, which offers support to the standard precautionary motive for saving.

References

Alessie, Rob, Viola Angelini, and Peter van Santen (2013). “Pension wealth and household savings in Europe: Evidence from SHARELIFE” *European Economic Review*, vol. 63(C), pp. 308-328.

Aura, Saku (2007). “Uncommitted Couples: Some Efficiency and Policy Implications of Marital Bargaining.” University of Missouri, Department of Economics. Unpublished.

Boele-Woelki, K. et al. (Eds.), (2003). *European Family Law in Action*. Vol. 1: Grounds for Divorce. Intersentia, Antwerp-Oxford-New York.

Boele-Woelki, K., Ferrand, F., González Beilfuss, C., Jänterä-Jareborg, M., Lowe, N., Martiny, D., Pintens, W., (2004). *Principles of European Family Law Regarding Divorce and Maintenance Between Former Spouses*. Intersentia, Antwerp-Oxford.

Börsch-Supan, A., Brandt M., Hank K., Schröder M., eds. (2011). *The individual and the Welfare State. Life Histories in Europe*. Heidelberg: Springer.

Cubeddu, Luis, and Jose V. Rios-Rull (1997). “Marital Risk and Capital Accumulation.” *Staff Report 235*, Federal Reserve Bank of Minneapolis.

Friedberg, Leora (1998). “Did Unilateral Divorce Raise Divorce Rates? Evidence from Panel Data.” *American Economic Review*, Vol. 88(3): 608-627.

González, Libertad, and Tarja K. Viitanen (2009). “The effect of divorce laws on divorce rates in Europe” *European Economic Review*, Vol. 53: 127-138.

González, Libertad, and Berkay Özcan (2013). “The Risk of Divorce and Household Saving Behavior” *Journal of Human Resources*, Vol. 48(2): 404-434.

Gray, Jeffrey (1998). “Divorce-Law Changes, Household Bargaining and Married Women’s Labor Supply.” *American Economic Review*, Vol. 88(3): 628-642.

Gruber, Jonathan (2004). “Is making divorce easier bad for children? The long-run implications of unilateral divorce.” *Journal of Labor Economics*, Vol. 22(4): 799-833.

Guner, Nezih, and John Knowles (2004). "Marital Instability and the Distribution of Wealth." Madrid: Universidad Carlos III, Department of Economics. Unpublished.

Kneip, Thorsten, and Gerrit Bauer (2009). "Did Unilateral Divorce Laws Raise Divorce Rates in Western Europe?" *Journal of Marriage and Family*, Vol. 71: 592-607.

Lupton, Joseph P., and James P. Smith (2003). "Marriage, Assets and Savings." In *Marriage and the Economy*, ed. S.A. Grossbard-Shechtman. Cambridge: Cambridge University Press.

Lusardi, Annamaria, and Olivia S. Mitchell (2007). "Baby Boomer Retirement Security: The Roles of Planning, Financial Literacy, and Housing Wealth." *Journal of Monetary Economics*, Vol. 54(1): 205-224.

Lusardi, Annamaria, and Olivia S. Mitchell (2008). "Planning and Financial Literacy: How Do Women Fare?" *American Economic Review: Papers & Proceedings*, Vol. 98(2): 1-5.

Mazzocco, Maurizio, Claudia Ruiz, and Shintaro Yamaguchi (2007). "Labor Supply, Wealth Dynamics, and Marriage Decisions." Department of Economics, CCPR Working Paper.

Pericoli, Filippo, and Luigi Ventura (2012). "Family dissolution and precautionary savings: an empirical analysis" *Review of Economics of the Household*, Vol. 10: 573-595.

Reinhold, Steffen, Thorsten Kneip, and Gerrit Bauer (2013). "The long run consequences of unilateral divorce laws on children - evidence from SHARELIFE" *Journal of Population Economics*, Vol. 26(3): 1035-1056.

Stevenson, Betsey (2007). "The Impact of Divorce Laws on Marriage-Specific Capital" *Journal of Labor Economics*, Vol. 25(1): 75-94

Stevenson, Betsey and Justin Wolfers (2006). "Bargaining in the Shadow of the Law: Divorce Laws and Family Distress" *Quarterly Journal of Economics*, vol. 121(1): 267-288.

Stevenson, Betsey and Justin Wolfers (2007). "Marriage and divorce: Changes and their driving forces." *Journal of Economic Perspectives*, Vol. 21(2): 27-52.

Voena, Alessandra (2013). "Yours, Mine and Ours: Do Divorce Laws Affect the Intertemporal Behavior of Married Couples?" *American Economic Review*.

Wolfers, Justin (2006). "Did Unilateral Divorce Laws Raise Divorce Rates? A Reconciliation and New Results." *American Economic Review*, Vol. 96(5): 1802-1820.