

Coping with Family Break-ups: Converging Consequences for Fathers and Mothers?

Material and immaterial adjustment to divorce before and
after the revision of the law in 2000 in Switzerland

Dorian Kessler
dorian.kessler@bfh.ch

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1 Abstract

This article examines two sources of heterogeneity in gender differentials in parents' adjustment to family break-up: variations in the domain of well-being and historical changes. With respect to domain-specificity of the consequences of divorce, it examines whether mothers, with reference to their specialization in child care and housework, suffer greater losses than fathers in adjusted household incomes as a result of divorce, as well as whether or not these inequalities are also found in subjective evaluations of financial well-being. On the downside, it analyzes whether fathers, with reference to the disadvantages they face in separation dynamics, in terms of marriage health premiums and access to social resources after divorce, suffer drops in immaterial well-being similar to those experienced by mothers.

The results from bivariate regressions on five pooled, cross-sectional datasets of divorcees and entropy-balanced counterfactual samples of continuously married individuals suggest that there is no well-being domain in which divorced fathers fare relatively worse than divorced mothers. Surprisingly, fathers and mothers subjective reports of facing more difficulties than their counterfactuals in making ends meet are quite similar. Yet, unlike fathers, mothers for whom the divorce happened long ago are significantly less happy and worse off in terms of subjective health and permanent health problems than their counterfactuals.

Comparisons of parents who separated before the divorce law revision in Switzerland (2000) with those that separated after it, however, suggest that the long-term disadvantages of divorced mothers might be a reflection of the higher divorce effects among older cohorts, or the higher selectivity of divorcees among these cohorts. Mothers who divorced after the turn of the millennium report levels of happiness that are more similar to the levels reported by their counterfactuals than mothers who separated before the turn of the millennium. This decrease in the happiness disadvantage of divorce for mothers cannot be explained by more equal child care arrangements or improvements in relative incomes: immediately following a divorce, mothers are still three times more likely than fathers to have children below 16 years cohabiting and they still show about 30% lower adjusted household incomes than they would if they had remained married. Judges shift towards "clean breaks" are likely to have contributed to this stability.

2 Introduction

Many studies of western countries have stressed the particularly vulnerable situation of mothers after divorce. With the divorce, mothers experience larger drops in needs-adjusted incomes (Aassve, Betti, Mazzuco, & Mencarini, 2007; Andreß, Borgloh, Bröckel, Giesselmann, & Hummelsheim, 2006; Andreß & Bröckel, 2007; De Vaus, Gray, Qu, & Stanton, 2015; Masia & Budowski, 2009; Smock, 1993; Peterson, 1996; Poortman, 2000) and higher increases in poverty risks than fathers (Aassve, Betti, Mazzuco, & Mencarini, 2009; Falter, 2009). These gender differentials are usually explained with the human capital losses that accompany women’s specialization in care-giving and housework during marriage (Becker, 1981), decreasing or ceasing transfers from ex husbands and post-separation inequalities in child care that hamper women’s labor market participation (Bröckel & Andreß, 2015; Smock, 1993; Poortman, 2000). Concerning the consequences of divorce, however, the heterogeneity of gender differences in divorce effects has been an important emphasis of recent research. This study examines two sources of variations in the magnitude mothers and fathers are differentially affected by family break-ups¹: *the domain specificity of divorce effects and changes of divorce effects over time*.

On one hand, the degree to which women are less well off than men depends upon the way well-being is assessed. For instance, when the economic consequences of divorce are operationalized with direct measures of living standards, gender differences are usually found to be smaller than when they are assessed with gross indicators such as adjusted household incomes (Aassve et al., 2009; Andreß & Bröckel, 2007; Jarvis & Jenkins, 1999; Leopold & Kalmijn, 2016; McManus & DiPrete, 2001). Also, when considering satisfaction with life in general or family life, men (Andreß & Bröckel, 2007; Leopold, 2016) and particularly fathers (Leopold & Kalmijn, 2016), fare worse than their female counterparts. On the other hand, research has sometimes found stronger disadvantages for women with respect to health outcomes in the divorce process (Monden, Metsä-Simola, Saarioja, & Martikainen, 2015), particularly when there are children (Dahl, Hansen, & Vignes, 2015). With respect to mental health outcomes, studies sometimes do (Aseltine & Kessler, 1993) and sometimes do not find gender differentials (Strohschein, McDonough, Monette, & Shao, 2005). The initial research question the present article poses is whether or not gender differences in the consequences of divorce for parents do, indeed, depend upon the measure of well-being. How, for instance, do gender gaps differ between objective and subjective indicators of economic well-being? And, is it true that the economic disadvantages of mothers also translate into greater negative effects

¹Marital break-up and divorce by couples of young children and family break-up are used as interchangeable expressions.

of divorce on immaterial well-being, or are fathers typically more affected in these well-being domains?

Referring to dynamic social contexts, on the other hand, research has come to account for the fact that the main mechanisms behind gender differentials in parents' adjustment to divorce are historically unstable over time (Mayer, 2004). Most importantly, specialization within marriage has decreased, which has lessened the impact of marriage and the birth of a child on women's economic independence (Goldscheider, Bernhardt, & Lappegård, 2015). Employment-targeted policies, such as facilitated access to child care arrangements, have been at the core of these developments. Meanwhile, Western welfare states have also come to more directly tackle single parent's poverty via income-related policies (Andrefß & Hummelsheim, 2009). Accordingly, research based on Anglo-Saxon data found that the consequences of divorce on mothers incomes have decreased (Tach & Eads, 2015; Jenkins, 2008). This trend could not be confirmed in Germany. Surprisingly, Bröckel and Andrefß (2015) found that, in general, German women have not come to fare better after divorce, and that, in fact, the risks associated with child care duties have actually increased. For Switzerland, developments in divorce law practice do not point towards a decrease in the gender differentials in the economic consequences of divorce either. Drastic decreases in the percentage of divorces that were coupled with maintenance payments as a result of the divorce law revision can be expected to have counteracted the effect of mothers' heightened economic independence (Büchler & Cottier, 2012). The second part of this article, therefore, investigates whether the gender gap has narrowed with respect to the consequences of divorce. It asks, has the relative economic disadvantage of Swiss mothers changed over time in divorce cohorts? Has there been a change in the immaterial consequences of divorce? And, if so, does it suggest diminishing gender gaps?

3 Theory and Hypotheses

3.1 Gender differentials concerning the consequences of, and adjustment to, family break-up

Divorce may be seen as a turning point in parent's life. To understand the ways and magnitude in which individuals are affected by a divorce, Amato (2000) proposed a stress-adjustment model. From this perspective, the successful adjustment to divorce depends upon the accumulation of stressors, the presence of resources and the subjective definitions of these settings (Wang & Amato, 2000). Hence, the starting point of this analytical framework is that the separation of the marital household is accompanied by a set of both financial and non-pecuniary changes that

are sources of stress to the individuals involved.

3.1.1 The effects of divorce on economic well-being

On the material side, first of all, establishing a new household eliminates the benefits of the economies of scale that a family maintaining a single household profits from. Taken as a whole, a family will face higher living costs once a household is separated (Sørensen, 1994).

The way these additional costs are distributed between ex-spouses is largely determined by the degree of specialization prior to the separation. In a marital context with a clear division of roles, there are several factors that put women at a higher risk of lowered household income after a family break-up (Andrefß et al., 2006). First, they are more likely to cohabit with their children and have primary financial responsibility for them. Hence, there are inequalities on the level of material needs. Second, these inequalities often coincide with unequal income levels. Mothers receive a lower share of their ex-partner's income. Ex-husbands often are either unable or unwilling to continue to support divorced wives on a pre-separation level (McManus & DiPrete, 2001). Divorced mothers must also simultaneously deal with several factors that hinder them in expanding their own employment to counteract these increases in living costs and reductions of received private transfers. Due to lower labor market integration during marriage and the corresponding lower levels of human capital, they often have limited earning capacities. In addition, depending on the accessibility of external child care arrangements, there may be time restrictions that limit the degree to which they are *able* to expand their employment (van Damme, Kalmijn, & Uunk, 2009).

As Masia and Budowski (2009) and De Vaus et al. (2015) have already shown for Swiss women in general, I expect mothers of young children, who are faced with particular human capital deficiencies and increases in living costs (Schober, 2013), to experience large drops in need-adjusted household income due to marital separation. For divorcing fathers, I expect the reverse: because they earn more, on average, than divorced mothers and are much more likely to not live together with children after divorce, they live in households with a higher income-to-needs ratio. Therefore, hypothesis 1a states:

H1a: The effect of divorce on adjusted household income is more negative for mothers than for fathers. Adjusted household income, as available in the present data, refers to gross incomes². It includes received private and public transfers, but it is measured prior to taxes and private transfers paid. Several studies have shown that gender gaps are considerably lower - and sometimes insignificant - when

²The household income measures used refer to all sources of income, before taxes and private transfers (see section "Data").

more direct measures of economic well-being are considered (e.g. Aassve et al., 2009; Bröckel & Andreß, 2015; De Vaus et al., 2015): since fathers are more likely to pay maintenance payments to wives and have higher tax burdens (McManus & DiPrete, 2001). Therefore, hypothesis 1b states that when measuring the effects with a subjective measure of financial well-being, fathers and mothers are more symmetrically affected by a divorce.

H1b: The effect of divorce on perceived financial well-being is more similar for mothers and fathers than the effect of divorce on adjusted household income.

3.1.2 The effects of divorce on immaterial well-being

Similarly, gender gaps are less clear with respect to immaterial well-being. On one hand, it can be expected that the economic difficulties that divorced mothers face, spill-over to other domains of life (Lucchini, Butti, Assi, Spini, & Bernardi, 2014). Low financial resources might heighten and prolong the negative emotional experiences of marital separation (Wang & Amato, 2000). This, again, may lead to greater increases in adverse mental health outcomes (R. Liu & Chen, 2006). Mothers might also disproportionately experience the emotional strain associated with simultaneously managing child care duties and employment. Also, the presence of children makes re-partnering more difficult (Ivanova, Kalmijn, & Uunk, 2013). Because fathers have their biological children cohabiting with them less often, they may thus more easily cope with the separation through faster re-partnering.

On the other hand, there are three reasons for why fathers would face particularly steep drops in immaterial well-being after divorce: First, several studies point to the importance of the fact that men are less likely to initiate divorces (Kalmijn & Poortman, 2006; Andreß & Bröckel, 2007). This can be related to gender differences in timing of the experience of emotional strain. While women suffer from the low quality of the marital relationship prior to the separation and thus more actively initiate the separation, men might be more surprised by the break-up and therefore suffer more strongly in the immediate aftermath of a divorce (Leopold, 2016). In line with this argument, women report to gain more from divorce when the marriage was particularly unsatisfying (Bourassa, Sbarra, & Whisman, 2015). The second argument refers to the resource model of marriage (Waite & Gallagher, 2001). There is evidence that men particularly benefit from spousal control and support (Bernard, 1982; Næss, Blekesaune, & Jakobsson, 2014), which are important mechanisms underlying the health advantages of the married against unmarried individuals (Carr & Springer, 2010). If this view holds, then fathers should also experience higher losses of health-related resources in the event of a separation. Thirdly, child-parent relationships can be significant with respect to the gender disparities concerning the immaterial consequences of divorce. Although children cause more financial strain

for the parent with whom they cohabit, they might also provide for this parent with social support and thereby constitute a source of well-being. As fathers less often have custody of their children after divorce, family break-ups therefore cause much more of a break in parent-child relations for fathers than for mothers (Graaf & Fokkema, 2007).

Evidence to date is insufficient to warrant a general conclusion on the gender differences in the immaterial well-being effects of divorce. While men seem to suffer more in terms of satisfaction with life in general, and family life in particular (Andreas & Bröckel, 2007; Leopold, 2016), negative physical and mental health outcomes seem to fall more heavily on mothers (Monden et al., 2015; Dahl et al., 2015). In sum, theoretical arguments and empirical evidence suggest that gender differentials in divorce effects are lower with respect to immaterial outcome dimensions than with respect to economic well-being.

H2: The effects of divorce on immaterial well-being are more similar for mothers and fathers than the effects of divorce on material well-being.

3.2 Changes in the effects of divorce and respective gender differentials

The second part of the study examines the arguments explaining why the effects of divorce have changed historically over time. The study thereby draws connections to studies that stress the influence of social contexts on the way individuals experience transitions in their lives (Mayer, 2004; Tamborini, Couch, & Reznik, 2015). This section brings together arguments addressing why the social constraints for recent cohorts of divorcees are not the same as for prior cohorts. It identifies four important contextual dimensions that are expected to have altered divorce effects and the comparative consequences for mothers and fathers: the economic independence of mothers, divorce law, social policy and the diffusion of divorce. While mothers' economic independence, changes in maintenance law and social policy arguably had the most significant impact on trends in the material consequences of divorce, the diffusion of divorce and custody law are more closely bound up with changes in the immaterial effects of divorce.

3.2.1 Changes in the economic well-being effects of divorce

One of the central motivational factors behind recent and ongoing studies on trends in the economic consequences of divorce are the fundamental changes that have taken place in married women's relation to the labor market (Goldscheider et al., 2015). In many contexts, marriage and having children now causes fewer women to retreat from the labor market and to suffer the human capital losses that are central

to gender differentials after divorce than was previously the case (Tamborini et al., 2015). Hence, due to married women's higher labor market earnings, a divorce may not mark the same turning point in women's careers as it did in past decades. At the same time, it has become much easier for women with children to reintegrate into the labor market after a divorce. Strong improvements in access to external child care facilities have made it possible for women to expand the range of their employment with greater ease, even if they had low levels of employment during marriage due to the presence of dependent children (van Damme et al., 2009). Women who went through a divorce in Switzerland essentially changed their degree of employment *prior* to separation: before 2000 they increased their employment rates from 60% 2 years prior to separation, to 77% one year after separation; and those in the new millennium increased from 75% to 84% (see Table 1).

These changes in married women's economic capacities were paralleled by shifts in divorce law practice. To accommodate the recognition that ever more divorces also lead to financial losses for men, judicial practices and legal texts changed accordingly. In countries where spousal support payments had significantly mitigated the stronger economic consequences of divorce faced by women (Bröckel & Andreß, 2015), ever less divorcees were legally forced to support their ex-partners after separation. For instance, in 2008, Germany saw the introduction of a bill that limited the maximum duration of spousal maintenance payments. After the introduction of the new divorce law regime in Switzerland, the share of divorces in which ex-husbands were forced to make maintenance payments declined from 66% in 1995 to only 45% in 2001 (see Table 1³). These changes can be seen as the emergence of the principle of a "clean break" that fosters as-quick-as-possible economic independence of ex-spouses in divorce law (Büchler & Cottier, 2012, 192).

To account for the increasing number of divorcees, particularly among the lesser educated segments of the populations (cf. Härkönen & Dronkers, 2006; Kessler, 2016), social policy in many countries was rearranged to counteract respective poverty dynamics. In addition to employment-targeted measures, such as facilitated access to external child care, income-directed poverty policies, such as social assistance, also became more accessible (Andreß & Hummelsheim, 2009). Although income transfers hamper divorcing women's employment (van Damme et al., 2009), they do nevertheless seem more effective in buffering the economic effects of divorce (Uunk, 2004).

With respect to the economic outcomes of divorce, studies of the US (McKeever & Wolfinger, 2001; Tach & Eads, 2015; Tamborini et al., 2015) and UK (Jenkins, 2008) have identified a clear pattern of decreasing economic effects of divorce for women. However, although these authors primarily refer to the increasing economic

³Refers to legal statements for divorces in which minor children were involved.

capacities of married mothers in order to explain these trends (Tach & Eads, 2015; Tamborini et al., 2015), this decrease seems to depend upon the institutional context. For Germany, where the breadwinner model persists (Hummelsheim, 2009), the economic effects of divorce have not declined (Bröckel & Andreß, 2015). Given the marked shifts in divorce law and only moderate levels of divorce-targeted social policies (Stutz & Knupfer, 2012), I expect that there are still large gender disparities in the economic consequences of divorce - despite a consistent trend towards the higher labor market participation of women.

H3a: There are no changes in the effects of divorce on adjusted household income.

3.2.2 Changes in the effects of divorce on immaterial well-being

I expect that trends in the immaterial consequences of divorce were essentially influenced by a combination of the increase in the incidence of divorce and changes in custody law. The incidence of divorce can be seen as a proxy for two contextual features that lessen the effects of divorce on well-being. First, higher divorce rates coincide with lower social disapproval of divorce (Kalmijn, 2010; H. Liu, 2012). This association may move causally in both directions: just as low divorce rates may be the result of higher social disapproval of divorce, arguably coupled with a strong religious embedding of marriage and institutional barriers to divorce, the diffusion of divorce may also lead to higher acceptance of divorce and a reduction of the institutional hurdles to divorce (Goode, 1962; McDermott, Fowler, & Christakis, 2013). Social disapproval may act upon individuals' well-being through feelings of shame and guilt or lower levels of social support (Kalmijn, 2010; Verbakel, 2012). Second, higher divorce rates have also altered the conditions of re-partnering markets. When there are more divorcees, finding a new partner becomes easier. This is reflected in the increasing rates of divorcees who have moved into new cohabitation (de Graaf & Kalmijn, 2003) (see Table 1).

An important part of the divorce law revision was the fundamental change in custody law. While before 2000, in about 9 of 10 cases mothers received sole legal custody for children after divorce, after 2000, there was a steep increase in shared legal custody. By 2010, half of the cases of divorce involving children resulted in mothers having sole legal custody and the other resulted in legal custody being shared equally between both parents. If this change was accompanied by respective improvements in the relationships between divorcing fathers and their children, fathers should have seen particular decreases in the negative well-being effects of divorce (see Table 1).

To date two US-studies have investigated the trends in the immaterial consequences of divorce. Comparing observation cohorts in cross-sectional surveys, H. Liu and Umberson (2008) show that, contrary to the hypothesis that the negative ef-

fects of divorce on well-being have decreased, the subjective health advantage of the married over the divorced have actually increased. This finding has been replicated in a study of consecutive birth cohorts (H. Liu, 2012). Nevertheless, due to the weight of the arguments in support of the decreasing effects of divorce on immaterial well-being in Switzerland, this article tests the validity of a corresponding time trend.

H3b: The negative immaterial well-being effects of divorce have decreased.

Table 1: Changes in contexts to and characteristics of divorcees

	1990	1995	2000	2005	2010
Labor force participation^a, %					
Men, before separation		91		95	
Men, after separation		93		93	
Women, before separation		60		74	
Women, after separation		77		83	
Activity levels, avg. %					
Men, before separation		92		93	
Men, after separation		91		93	
Women, before separation		75		71	
Women, after separation		77		72	
Legal custody^b, %					
Legal custody, only Mother	88	89	79	67	51
Legal custody, Both	0	0	15	27	46
Maintenance payments, %					
Share receiving without minor children	37	37	21	24	
Share receiving with minor children	66	66	43	45	
Share more than 4 years, without minor children	62	63	67	57	
Share more than 4 years, with minor children	76	75	79	72	
Re-partnering^c, %					
Men, cohabiting, 9 to 13 years after sep.		68		74	
Women, cohabiting, 9 to 13 years after sep.		43		56	
Norms on marriage^d, %					
Disagrees: 'Marriage is an outdated institution'		73		59	

^aLabor force participation and activity levels: refers to all divorcees that terminated a marriage before 2000 and after 2000: before separation = 2 years before, after separation = 1 year after, Source: biographical data FFS and Swiss Household Panel.

^bLegal custody and maintenance payments: based on administrative registers of legal statements, own calculations, data by Swiss Federal Statistical Office (BFS, 2012, 2015b)

^cRefers to all divorcees below 50 years that terminated a marriage in the 1990ies vs. 2013, see section 'Sample'.

^dRefers to all respondents in the FFS (1994/1995) and the EFG (2013) below 50 years, see section 'Sample'.

4 Data, Measures and Methods

4.1 Data and Sample

Analyses draw on a synthetic dataset that combines observations from five cross-sectional surveys, with information on material and immaterial well-being and retrospective partnership histories. The Family and Fertility Survey (henceforth FFS, surveyed in 1994/1995), the Swiss Labor Market Survey (SAMS, 1998) and the first wave of the Swiss Household Panel (SHPI, 1999) represent the situation of divorcees in the 1990ies before the divorce law revision. The 14th wave of the Swiss Household Panel (SHPIII, 2013) and the Inquiry on Families and Generations (EFG, 2013) provide data on divorcees under the new divorce law regime (BFS, 2015a; Diekmann et al., 1998; FORS, 2015; Voorpostel et al., 2014).

Family break-up is defined as the divorce of a first marriage when the divorcee reported to have at least one child under 16 years of age during the year he or she separated from his or her spouse. 2682 family break-ups were identified in the data. Cases that were missing information on central variables⁴ and cases that reported a divorce under the (own) age of 15 were excluded. The remaining analytical sample consists of 2636 first-marriage divorcees⁵. For the calculations of counterfactual samples (see below), I made use of 18,586 respondents who were still married and in their first marriage at the moment they were surveyed. Due to the age restriction in the FFS, the comparative part of the analyses is restricted to cases of subjects 49 years old and younger, such that divorcees observed in 2013 have the same age distribution as divorcees in the 1990ies. This reduces the total sample to 542 parents who divorced after 1999 and 859 who divorced during the old regime.

The effects of divorce on *economic well-being* are investigated using adjusted household income and a subjective evaluation of the financial situation of the household. In the EFG, SHP and SAMS household income was assessed with an open question. In the FFS, only categorical information was available. I recoded the FFS into a continuous variable that treats category means as actual values. Need-adjustment was performed by dividing household income by the number of household members to the power of .5, which assumes moderate economies of scale in households (cf. Bröckel & Andreß, 2015). In the pooled sample, the variable has 18% missing values. Due to strong information limitations of a potential imputation model, cases were deleted listwise. Subjective measures of financial well-being have been surveyed in the SHP and the EFG. Both studies inquire into the general manageability of the financial situation. The EFG scale has been adjusted to the

⁴Birthyear, year of marriage, education, parental separation, number and birthyear of children

⁵In the pooled sample, surveys are distributed as follows: EFG: 48%; SHP: 30%; FFS: 17%, SAMS 5%.

SHP scale that ranges from 0 ("with great difficulty") to 10 ("very easily").

The data allows for the measurement of the *immaterial well-being* effects of divorce with three health outcomes. The first is interpreted as mental well-being. Lowest values indicate that the respondent is "unhappy" (FFS), "never feels happy" (EFG) and experiences continual "Depression, blues, anxiety" (SHP). Highest values indicate that the respondent is "happy" (FFS), "always feels happy" (EFG) or never experiences "Depression, blues, anxiety" (SHP). Due to the absence of a happiness measure in the SAMS, the pooled sample has missing information in 23% of the cases. These were deleted listwise. The second measure, included in the EFG and SHP, is a subjective evaluation of the general health status that, in both datasets, ranges from 1 ("very well") to 5 ("not well at all"). It is interpreted as a measure for subjectively perceived health problems. The third health measure is a binary indicator of whether or not the person has permanent health problems. This measure is restricted to cases from the SHP and EFG as well, which too much limits case numbers for a comparison of divorce effects before and after the divorce law revision.

The central independent variable is the *duration since the separation* from the first spouse. For the first part of the analyses, which pools all divorcees together, four duration groups are used: those that separated up to 3 years prior to the moment they were surveyed, those that separated 4 to 8 years before, those that separated 9 to 13 years before and those for whom the separation was more than 13 years before the date of the interview. In the comparative part of the article, I restrict the analyses to the first three duration categories, such that the earliest separations of the post-revision cohort were in 2000.

For the construction of the counterfactual samples (see the section "Analyses"), the analyses make use of information on the *year of entry into cohabitation with the spouse, the number and age of children at observation, whether or not the respondents have experienced a parental separation and their highest level of education*. Education is measured by years of schooling according to a 1997 scale of equivalence (Jann & Engelhardt, 2008).

Table 2 reports characteristics of all divorcees in the sample by gender and time since separation. Average ages reflect that divorcees are distributed around middle ages, with, of course, those for whom the separation is longer away having higher ages and men being on average about two years older than women (a reflection of gender differences in age at marriage). Highly determining for the consequences of divorce is the fact that women are nearly three times as likely (90% vs. 30%) to cohabit with young children after divorce. In addition to restricted employment and activity levels and correspondingly lower median adjusted household incomes, this might also be the cause of the gender disparities in happiness levels. Only just after divorce and for subjectively perceived health problems, fathers always fare better

than mothers with respect to other measures of immaterial well-being.

Table 2: Characteristics of divorcees, with child under 16 in year of separation, all cases pooled, by years since separation and gender, weighted results

	Women				Men			
	0 to 3	4 to 8	9 to 13	more	0 to 3	4 to 8	9 to 13	more
Age, avg.	38	41	46	57	40	44	49	59
Year of formation, avg.	1994	1990	1987	1975	1993	1990	1988	1976
Child <16, cohabiting at observ. %	90	74	60	25	30	42	39	24
Years of schooling, avg.	11.76	11.98	11.76	11.54	12.27	12.54	12.38	12.34
Experienced parental separation	20	19	13	16	17	16	12	11
Employed, %	72	72	77	57	95	92	90	65
Activity level, avg.	61.94	69.12	74.68	72.99	91.9	92.69	92.37	91.94
Cohabiting, %	32	47	59	62	32	66	68	80
Adjusted household income, median, CHF	2983	3180	4000	4464	4732	4958	4827	5164
Happiness, avg.	3.6	3.61	3.76	3.82	3.74	3.86	3.75	3.89
Subjective health problems, avg.	1.93	2.17	2.23	2.33	2.02	2.03	2.12	2.2
Permanent health problems, %	26	35	38	45	20	33	37	35
N	244	340	288	706	150	187	201	520

4.2 Analyses

Divorce effect analysis aim to identify the causal effect of divorce. In the words of the Rubin Causal Model (Imbens & Rubin, 2010; Holland, 1986), it poses the question: what is the difference between divorcees' observed outcome $E[Y^1]$ and a counterfactual situation if divorcees had remained married in their first marriage $E[Y^0]$? The standard method to analyze the effects of divorce is to make comparisons between individual situations before and after divorce (Amato, 2010). Hence, longitudinal studies identify $E[Y^0]$ with divorcees' situation prior to the divorce and $E[Y^1]$ with the situation after the divorce.

The main drawback of the data at hand is its cross-sectional character: the well-being domains of divorcees have been measured at only one point in time *after* they separated. Therefore, this study refers to the average situation of continuously married individuals as a proxy for Y^0 . As such, however, continuously married subjects cannot be compared with divorcees: by definition, divorcees are at a specific life stage, and thus show a certain age distribution. Selection differences in divorce refer to many other dimensions as well (e.g. Özcan & Breen, 2012). In the formulation of the causal inference framework: the expected unobserved counterfactual value of divorcees' ($D = 1$) outcome, $E[Y^0|D = 1]$, is thus different from the observed value of continuously married ($D = 0$), $E[Y^0|D = 0]$. Divorcees are a select group - which is why they have become a textbook case for the methodological challenges of causal analysis with observational data (Elwert & Winship, 2014).

To adjust for selection into divorce and to make the cross-sectional differences more valid estimates of causal effects, I make use of a sample preprocessing method. Specifically, I construct counterfactual samples of continuously married individuals by rebalancing them so that they resemble divorcees on a vector of characteristics, X , that is expected to jointly determine both, the probability of divorce and material and immaterial well-being. If X captures all selective differences between divorcees and continuously married that are relevant for the outcomes under examination, then, differences in outcome means between balanced samples reflect the average causal effect of divorce⁶.

Adjustment is performed using entropy balancing, a recently developed sample pre-processing method that allows one to calculate a vector of weights, ew_i , which balances two given samples on desired covariate moments (Hainmueller, 2012). Here, the method is used to construct counterfactual samples of continuously married individuals such that each group of divorcees (grouped by duration since the divorce, gender and observation period) has its corresponding non-treated group with an

⁶Referred to as the conditional independence assumption, $E[Y^0|D = 1, X] = E[Y^0|D = 0, X]$. If it is met, then $E[Y^1|D = 1, X] - E[Y^0|D = 0, X]$ is the causal effect of divorce (Angrist & Pischke, 2008).

identical sample size, as well as an identical average observation year, age, age at marriage, number and age of children, years of schooling and an identical share of individuals that experienced a parental separation⁷. In the literature on the antecedents of divorce and in that on the determinants of outcomes, these dimensions have been identified as important (Amato, 2010; Diekmann & Schmidheiny, 2013; Kahn, García-Manglano, & Bianchi, 2014; Kuperberg, 2014). The calculated weights are then plugged into simple bivariate OLS models with logarithmized outcome variables on divorcees of a given group and the rebalanced counterfactual sample of continuously married individuals. The model takes the following form:

$$\log(Y_i) = \beta_0 + \beta_D * D_i + \epsilon_i \quad (1)$$

The weights that are used when estimating the equation thus are 1 for divorcees and ew_i for counterfactuals. e^{β_D} describes the factor by which the average observed outcome level of a given group of divorcees is different from the average level of their counterfactuals, which is expressed by e^{β_0} .

Two major limitations of this method ought, however, to be noted. First, despite using the notion of "effects", the remaining uncertainty about unobserved selectivity strongly limits conclusions on the causal nature of the estimates. On one hand, data of the FFS and SHP that contain individual longitudinal information on employment and activity levels, suggest that selectivity is limited. Divorcees have significantly lower levels of employment than continuously married in the year they begin cohabitation with their spouses. However, these differences can be explained when statistically controlling for X . Also, divorcees and non-divorcees show no significant differences in activity levels in the year of entry into the marital relationship. On the other hand, whether or not the conditional independence assumption for the outcomes of interest is met by controlling for X remains an open question. With respect to long-term health outcomes of divorce, for instance, Couch, Tamborini, and Reznik (2015) find important differences between matched and unmatched estimators.

Unobserved selectivity matters in the present study because it potentially flaws both: interpretations of differences in divorce effects by time since separation and by observation period. Older cohorts of divorcees and divorcees observed at low durations since separations and entry into marriage might be particularly selective because they are compared to relatively large groups of continuously married. Among older cohorts where thresholds to divorce were high, only few couples divorced and many remained married. Similarly, divorcees observed at low durations since divorce and thus since marriage are compared to continuously married of which many might become divorcees only later in life. For more recent divorce cohorts and

⁷After applying sample weights.

for divorcees for whom the divorce and entry into marriage is more distant, the pool of counterfactuals becomes more restricted to individuals that remained married at times of higher divorce rates and individuals that remained married for longer durations, respectively. These differences in relative group sizes might be connected with different levels of selectivity by time since separation and by divorce cohort (Kalmijn, 2010; Liefbroer & Dourleijn, 2006). Because, however, rather than a correct estimation of causal effects, comparisons between mothers and fathers are at the heart of this study, it is left open in what directions these differences in selectivity would bias the estimates of causal effects.

Second, even if unobserved selectivity does not present a problem, interpretations of cross-sectional estimates have to be put into historical perspective. When comparing groups with different durations since the separation, intergroup differences by time since divorce reflect two potential mechanisms: adjustment to divorce and cohort differences in divorce effects. Later cohorts could show lower (or higher) differences to counterfactuals either because they adjusted to divorce (or experienced cumulative disadvantage), or because they have experienced weaker (or stronger) effects of divorce. Unlike unobserved selectivity, with the present design, this problem can be controlled. Comparisons of pre- and post-1999 cohorts in the second part of the analyses isolate historical effects from adjustment processes. The results of the second part will thus help to interpret the findings of the first part.

5 Results

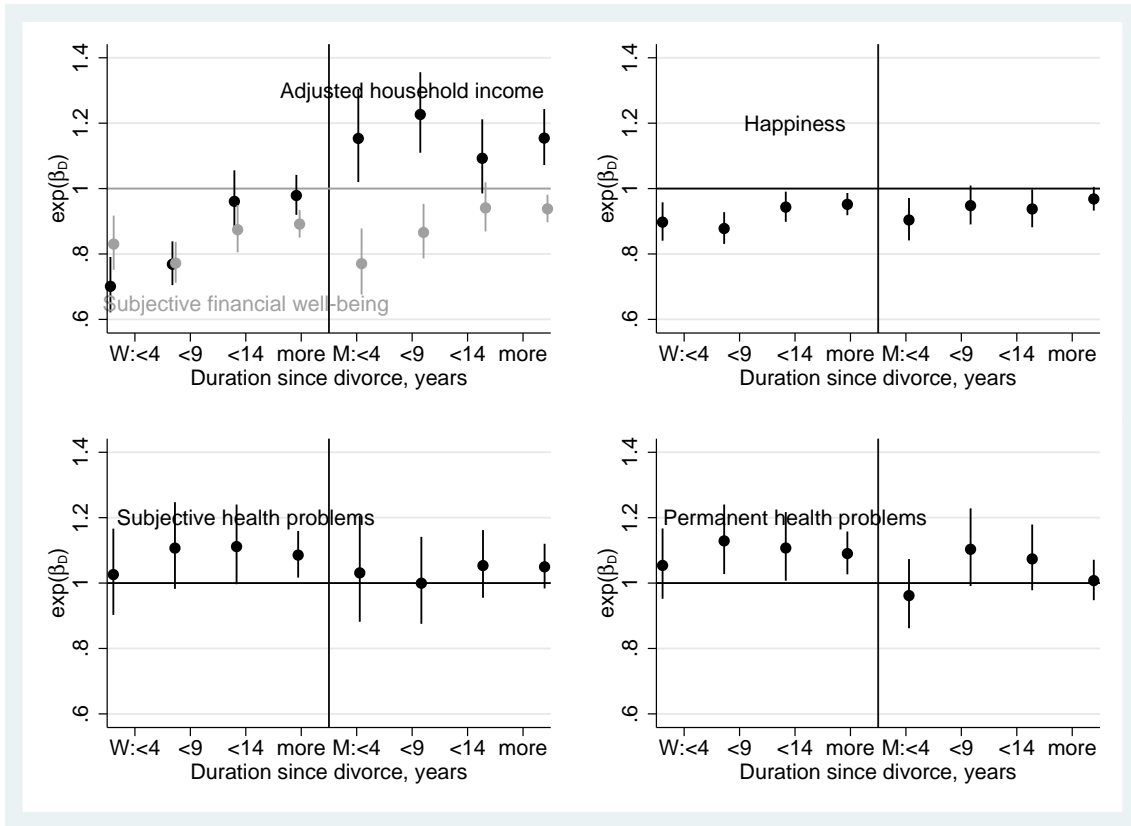
The following section first presents the results of the tests for H1a, H1b and H2 on divorce effects for fathers and mothers followed by the hypothesis tests for changes in divorce effects between the cohorts that separated before the divorce law revision and the cohorts that separated after the divorce law revision (H3a and H3b).

5.1 Gender differences by well-being domain

Figure 1 displays exponentiated point estimates and confidence intervals for divorce effects from bivariate OLS regression models. In the upper left panel, dark markers symbolize estimates for adjusted household income and grey markers symbolize estimates for subjective financial well-being. Immaterial well-being is shown in the upper right (mental well-being), lower left (subjectively perceived health problems) and lower right panels (permanent health problems).

Hypotheses can be judged on the basis of this evidence. First of all, divorced mothers have significantly lower adjusted household incomes than divorced fathers.

Figure 1: Factors by which divorcees differ in their material and immaterial well-being from counterfactuals, by time since divorce and gender (mothers left panel, fathers right panel), graphs created by coefplot (Jann, 2014)



While mothers 0 to 3 years⁸ and 4 to 8 years⁹ after divorce have about 30% ($p < .001$) and 23% ($p < .001$) lower adjusted household incomes, respectively, men have 15% ($p < .05$) and 23% ($p < .001$) higher adjusted household incomes, respectively, than their counterfactuals. Suggesting the presence of adjustment processes, these differences are no longer statistically significant for mothers for whom divorce is 9 to 13¹⁰ years or more than 13 years¹¹ removed. Men are significantly better off in terms of adjusted household income for all groups, except for those where the divorce occurred between 9 and 13 years before the moment of the interview.

Switching from the divorce effects on adjusted household income to the divorce effects on subjective measures of economic well-being markedly reduces gender differentials. Mothers and fathers show statistically significant, and nearly identical, counterfactual differences in subjective evaluations of their financial situations. Hence, when accounting for what is over at the end of the month, divorced fathers judge their situation equally worse than their counterfactuals to how mother judge theirs worse than their counterfactuals. H1b is strongly confirmed: suggesting an im-

⁸1.7 years on average.

⁹6 years on average.

¹⁰11.1 years on average.

¹¹24.5 years on average

portant role of taxes and private transfers, gender difference are nearly non-existent when comparing subjective evaluations of financial well-being. However, it has to be noted that men seem to recover somewhat faster to "normal" levels of subjective financial well-being.

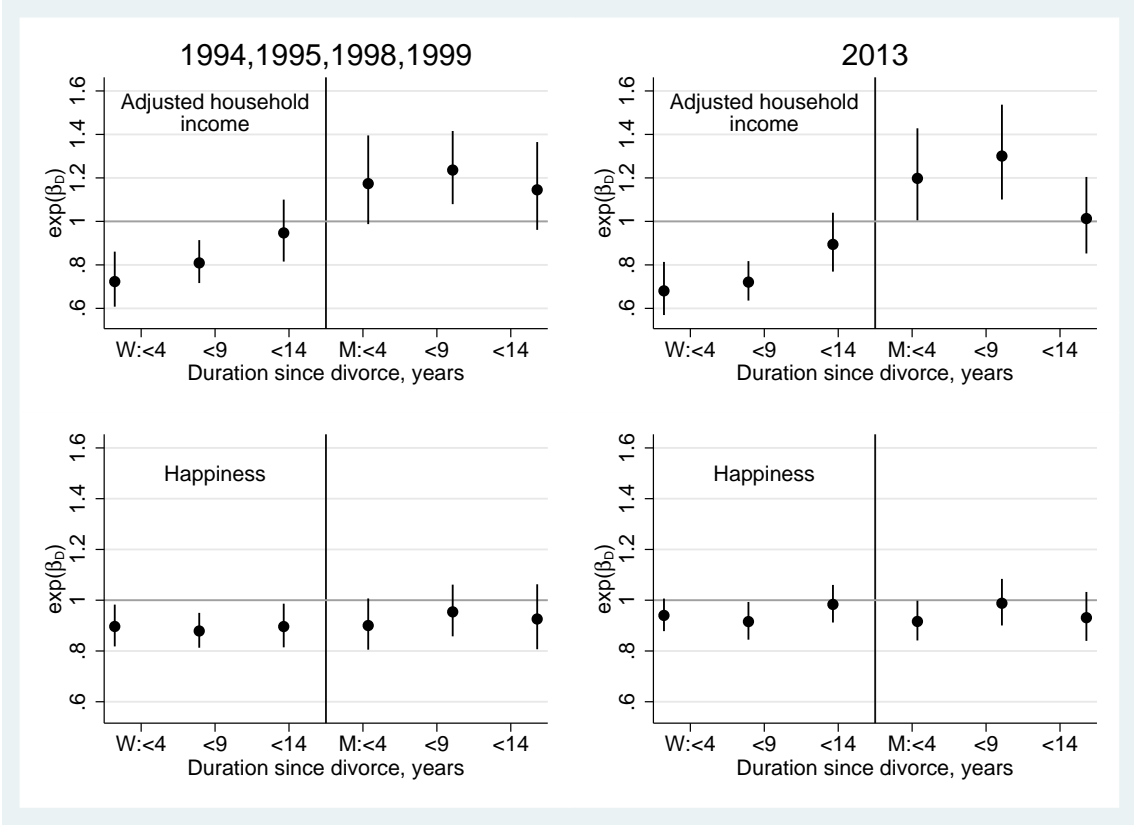
Hypothesis 2 can also be accepted: for measures of immaterial well-being (happiness, subjective and permanent health problems) fathers fare very similarly to mothers. Mothers do, however, apparently fare worst with respect to happiness 4 to 8 years (-12%, $p < .001$) after divorce, and there is no duration group in which they do not have significantly lower levels of happiness than their counterfactuals. Fathers, on the other hand, are only significantly worse off in terms of happiness (-10%, $p < .01$) than their counterfactuals in the immediate aftermath of divorce. The pattern showing a slight disadvantage of mothers is also reflected in other health outcomes. In contrast to differences in happiness, however, differences to counterfactuals only emerge for groups with greater temporal distances from the divorce.

5.2 Changes

Figure 2 reports the differences between divorcees' relative income and happiness for the observations of the 1990ies and the observations of 2013. Again, it has to be noted that these estimates refer to respondents below the age of 50 due to the sample restriction in the FFS (for a comparison of characteristics between the two cohorts see Table 3, Appendix). Most apparently, the data shows that the divorce effects on adjusted household income remained stable for the observed cohorts: in the 1990s, recently divorced women had 28% lower incomes than their counterfactuals. For 2013, the estimate was 32%. At 4 to 8 years after divorce, these differences were even higher (19% vs. 25%). For fathers in both periods, differences to counterfactuals are somewhat higher 4 to 8 years after divorce where they reach the conventional level of significance, as compared to just after divorce or 9 to 13 years after divorce. Hypothesis 3a can be accepted: the effects of divorce on adjusted household incomes have remained stable.

With respect to happiness, interpretations of the two observation periods differ qualitatively. In the 1990s, happiness differentials for women are significant ($p < .05$) for all three groups of duration since marital break-up. Differences were slightly lower for the middle group. For 2013, the unadjusted estimates are only significant for the middle "duration group" of 4 to 8 years since divorce. Hence, among the post-1999 cohorts, divorcees for whom the divorce was very recent and divorcees for whom the divorce was further in the past do not significantly differ from counterfactuals. For fathers, the changes have been inverse: while for the pre 2000 cohorts men have not had significantly lower levels of happiness than their counterfactuals, this

Figure 2: Factors by which divorcees differ in their material and immaterial well-being from counterfactuals, by time since divorce, gender (mothers left panel, fathers right panel) and observation period, graphs created by coefplot (Jann, 2014)



estimate was only significant at $p < .05$ after 1999.

To disentangle the importance of known and supposedly important changes in compositions of divorcees, Figure 3 (Appendix) reports estimates on the basis of the 2013 sample, which is adjusted to the 1990s samples' characteristics. Therefore, a double balancing strategy was applied. First, 2013 divorcees were adjusted to 1990ies divorcees' levels of re-partnering (triangles) and labor market attachment (crosses). Balancing with continuously married individuals was then performed on the adjusted characteristics of post-1999 divorcees. With respect to income, however, there is no consistent pattern by which estimates differ when adjusting for the characteristics of 1990s divorcees.

The adjusted estimates, however, do show that the improvement of divorced mothers' relative happiness is to some extent attributable to changes in the characteristics of divorcees. When adjusting for the level of re-partnering and employment, effect estimates for divorcees in 2013 reach a significant level for 0 to 3 years after divorce and are larger for the middle duration group. This suggests that for recently divorced mothers, changes in other characteristics or the social context did not lead to a facilitated adjustment to divorce. Only estimates for divorcees where the divorce is 8 to 13 in the past seem to be robust when adjusting to 1990s divorcees characteristics, suggesting that long-term immaterial adjustment to divorce by divorced mothers has improved. In sum, hypothesis 3b can be accepted: given that unobserved selection plays no role, the happiness effects of divorce have become weaker. However, despite the stable material effects of divorce for women, this decrease has been more important for women.

6 Discussion of results and conclusions

How much are mothers and fathers differentially affected by family break-up in monetary and non-monetary domains of well-being? And, how much has divorce adjustment and respective gender differences changed after the introduction of the new divorce law regime? This study has added to the thin Swiss research literature into the material and immaterial adjustment to divorce concerning a particularly vulnerable group: couples with dependent children at the moment of separation. Its analyses of the EFG, the FFS, the SHP and the SAMS - the only way these questions could be answered for the Swiss context - have made it possible to derive conclusions relevant to two main strands of divorce research.

On one hand, it connects to literature on the economic consequences of divorce. The adjusted household income of divorced mothers was the one most strongly affected by divorce of all dimensions studied. In line with previous research (Smock, 1993; Andreß et al., 2006), in the immediate aftermath of divorce, mothers have

about 30% lower adjusted household incomes than would they have if they remained married. This figure is somewhat higher than the most recent longitudinal estimate for Switzerland (about 18%), which can be explained by the fact that the present study excluded women without young children and did not correct for the age of household members when adjusting the income measures for needs (De Vaus et al., 2015). These differences in samples and measurement concepts also potentially explain why men, according to the measure used here, seem to be better off on average in terms of adjusted household income after divorce.

The first striking finding is that, after divorce, fathers fare very similarly to mothers with respect to the subjective evaluation of the financial situation. This is surprising because although private transfers and tax systems usually considerably moderate gender differentials in the economic consequences of divorce, they have never been found to completely eliminate them (Leopold & Kalmijn, 2016). This absence of gender differences is also in conflict with studies using German (Andrefß & Bröckel, 2007; Leopold, 2016) and UK (Jarvis & Jenkins, 1999) panel data that found more consistent results between objective and subjective measures of economic well-being. This either points to the particularly high importance of private and public transfers as well as of the tax system for the moderation of the economic effects of divorce in Switzerland or to particularities in the subjective measure used here.

The second important finding is that there were no changes in the effects of divorce on adjusted household income. This does not imply that between those who divorced in the 1990 and those who divorced after the divorce law revision in 2000 there were no changes in the conditions they faced. After 1999, considerably higher percentages of divorcing women were already employed before they separated. Given the data at hand, two reasons seem account for the stability in mothers' economic losses following family break-up. First, although for all divorced women, private transfers make up, on average, only 11 percent of household incomes (De Vaus et al., 2015), the decrease in maintenance payments may still have increased financial difficulties for divorced mothers. Second, most of the increase in employment was in the form of part-time employment. This decrease in average activity levels - which could not be found for divorcing men (see Table 1) - might be related to the consistent gender differences in child care arrangements after divorce. Just like before 2000, after 1999, women who had a school-aged child in the year of separation were three times (see Table 3, Appendix) as likely as fathers to have a cohabiting school-aged child 0 to 3 years after separation.

These inequalities in child care arrangements also seem highly relevant for explanations of gender differentials in the immaterial well-being effects of divorce. In the pooled sample, mothers are more protractedly affected in their mental well-being

than men, reporting significantly lower levels of happiness than their counterfactuals for a longer time following divorce. Besides the less frequent strains of simultaneous employment and child care duties, fathers might also be better able to return to "normal" levels of happiness by means of their more frequent re-partnering. Albeit on a moderate level, mothers more problematic experiences also seem to translate into highly persistent general health disadvantages. While fathers, on average, do not show significant health differences to their counterfactuals, mothers for whom the divorce was more than three years away at the time they were surveyed, showed significant higher levels of permanent health problems than their counterfactuals. This is in line with previous research pointing to increasing functional limitations as time since separation increases (cf. Hughes & Waite, 2009).

However, the analysis of change in the immaterial effects of divorce revealed that these relatively negative outcomes for older divorced mothers in the pooled sample might also be a reflection of stronger immaterial effects for mothers among older cohorts. At identical temporal distances since separation, mothers in the 1990s showed more severe mental well-being disadvantages in comparison to their counterfactuals after divorce than divorced mothers in 2013¹². Fathers relative happiness, in contrast, remained more or less stable over time. Although the data at hand does not allow for conclusions to be drawn as for whether this change in the divorce effects is due to changes in selection (cf. Kalmijn, 2010) or causation, it clearly suggests that the relative immaterial experience of divorced mothers has improved. This also means that the emotional consequences of family break-up have become more equal for fathers and mothers.

Future research should aim to follow the methodology of Bröckel and Andreß (2015) by using individual longitudinal data spanning several cohorts to soundly tackle the question of whether selection or causation changed well-being differentials between divorcees and continuously married individuals. This would allow for improved knowledge about the extent to which contextual influences mediate the strenuous transitions entailed by family break-up (Elder, 1981; Mayer, 2004). Taking a comparative perspective, it should also study under which policy developments the burdens of financial hardship and time pressure after divorce - which are detrimental to immaterial well-being - decreased most.

¹²Due to data limitations, changes in divorce effects on subjectively perceived or permanent health problems could not be investigated.

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7 Appendix

Table 3: Characteristics of divorcees, with child under 16 in year of separation, all cases pooled, by years since separation, gender and observation period

	Before 2000						After 2000					
	Women			Men			Women			Men		
	0 to 3	4 to 8	9 to 13	0 to 3	4 to 8	9 to 13	0 to 3	4 to 8	9 to 13	0 to 3	4 to 8	9 to 13
Age, avg.	36	38	41	37	40	42	38	41	44	40	42	44
Year of formation, avg.	1985	1982	1977	1985	1982	1978	2001	1998	1994	2002	1998	1995
Child <16, cohabiting at observ. %	94	71	63	32	47	55	89	82	70	29	43	42
Years of schooling, avg.	11.25	11.15	10.72	12.33	11.88	11.67	12.18	12.65	12.1	12.16	12.87	12.36
Experienced parental separation	14	20	11	9	8	12	27	20	17	28	21	15
Employed, %	61	67	68	96	94	98	81	77	80	93	98	92
Activity level, avg.	63.15	72.3	73.94	91.75	89.25	90.61	60.81	67.34	70.94	94.09	93.27	95.81
Cohabiting, %	33	45	62	30	66	77	33	55	74	38	79	68
Adjusted household income, median, CHF	2887	3029	3500	4500	4250	4041	3118	3250	4062	5030	4932	4590
Happiness, avg.	3.81	3.83	3.95	4.06	4.19	4.02	3.49	3.57	3.74	3.45	3.87	3.6
N	132	170	100	77	68	50	102	138	111	63	65	64

Figure 3: Effects of divorce on adjusted household income and happiness, by time since divorce, gender and observation period, below age 50, adjusted for re-partnering and employment of the 1990ies

