Empirical Essays on the Economics of Divorce

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[1] For further information, I proudly refer to http://nl.wikipedia.org/wiki/Boerenbridge.

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1 Introduction

1.1 Introduction

Ever since the second World War, divorce rates have been steadily on the rise throughout the Western world. Because of the risen incidence of divorce, and its growing impact on various aspects of society, economists started paying systematic attention to "the family". Applying modelling and econometric techniques closely related to the existing labour economics literature, family economics has become a well-established sub-domain in economics.

One of the pioneers of family economics is Nobel laureate Gary Becker. Becker's

seminal work in the Journal of Political Economy (Becker, 1973, 1974), followed by "*A Treatise on the Family*" (Becker, 1981, 1991) in which families are thought of in a utility maximizing framework leading to a market equilibrium paved the way for many scholars; economists, family sociologists and demographers. As Pollak (2003) puts it: "*Gary Becker's influence on the economics of the family has been pervasive. His ideas dominated research in the economics of the family, shaping the tools we use, the questions we ask, and the answers we give.*".

Though Becker's approach - as well as other non-conventional areas to which the economic approach was introduced to - was not without criticism (Lazear, 2000). A prime example is feminist economist Barbara Bergmann who wrote a fierce critique in the inaugural issue of the journal of Feminist Economics arguing that Becker's framework builds on doubtful assumptions which in turn lead to conclusions confirming and even justifying the status-quo in gender inequality (Bergmann, 1995). Ever since Becker's work, economists have been criticising and improving the economic modelling based on plenty of empirical research regarding the micro-foundations, instituting family economics as a mature discipline.

Divorce is naturally a hot topic within family (law and) economics. Because of the seemingly ever-rising divorce rates policy makers, as well as various opinion makers and pressure groups, have had heated debates about legislation concerning divorce and related. Unfortunately, these discussions remained rather shallow and pedantic since they are rarely based on hard empirical evidence. The main question which has therefore dominated the law and economics of divorce literature is: if divorce legislation is made more lenient, do divorce rates rise?

Though this question may sound quite easy to answer since macro data on divorce rates and legal changes are readily available, it poses several methodological ques-

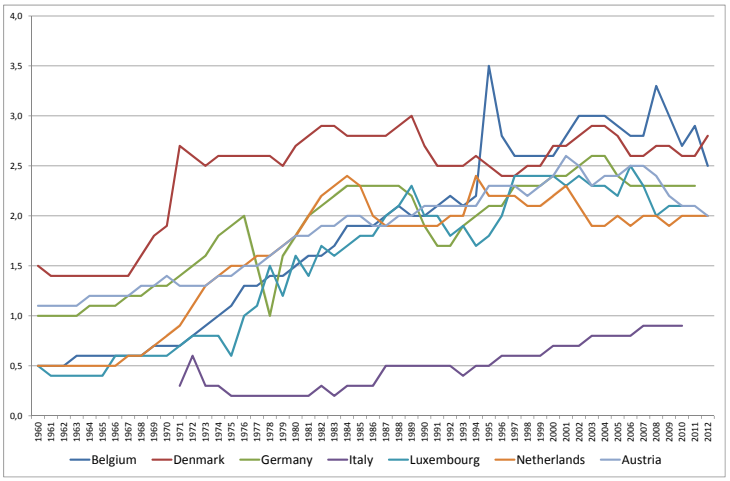

Figure 1.1: Crude Divorce Rates in Selected European Countries (Eurostat)

tions. Illustration of that being that this debate started in 1986 in the American Economic Review (Peters, 1986) and only recently a consensus on the topic was reached by Wolfers (2006). Though the discussion was long and hard-fought, it was a scientific debate precisely because the data were publicly available.

Another line of questions often posed is: how does divorce legislation influence family behaviour? These questions can be answered by modelling family behaviour à la Becker, or using contract theoretical reasoning as was done by Lloyd Cohen in his seminal work in the Journal of Legal Studies (Cohen, 1987). However, it goes without saying that to answer such questions properly - i.e. without just formalizing your a priori opinions - one needs high quality in-depth micro data. These data are, unfortunately, a little harder to come by.

1.2 Contribution of the Dissertation

With the support of the Institute for the Promotion of Innovation by Science and Technology in Flanders (IWT) the IPOS project was grounded. IPOS stands for "Interdisciplinary Project for the Optimization of Separation Trajectories". The project was a cooperation between psychologists, legal scholars and economists associated with either Ghent University or the Catholic University of Louvain, which aim was to study divorce trajectories in Belgium/Flanders. One of the main feats of IPOS was the creation of a unique data set. From March 2008 till March 2009 individuals going through divorce in 4 major Flemish courts were asked to participate in a survey. Though divorce can be a stressful and the courts are not a very common environment for most people, participation rates were surprisingly fair. Moreover, comparing to official statistics by the Directorate-general Statistics and Economic information (Statbel) demonstrates that the gathered population is very close on observables (presence of children, age, marital duration). We also see quite a nice distribution of pre-divorce conflict, indicating that IPOS managed to also represent high-conflict divorces in the survey. Respondents were also followed longitudinally during the first 2 years following divorce. This substantial effort provided us with the in-depth micro data needed to do proper empirical work on the economics of divorce.

1.2.1 Chapter 2: "*No-Fault Divorce and Rent-Seeking*"

In the **second chapter** of this dissertation I conduct empirical work on the so-called Cohen thesis concerning quasi rent appropriation and destruction through divorce. Cohen (1987, 2002) demonstrates the time-inconsistency which exist if function specialization occurs within a household, i.e. when one partner specializes in labour market production and the other on domestic production. The part-

ner specializing on the labour market will reap the benefits of the marriage at an early stage when he/she can focus solely on a career without having to care much about most importantly young children. The partner specializing on domestic production will only acquire the gains of the marriage at a later stage when the family as a whole has a higher socio-economic status and the amount of required domestic production typically goes down. A clear incentive therefore exist for the labour market specializer to engage in rent-seeking behaviour and try to appropriate the other's quasi rents. Quasi rents are defined as "*a return to one party to a contract, above what the party could receive if the contract could be dissolved at will at that moment*" (Cohen, 1987). Put differently: a quasi rent can be seen as a return on a sunk investment. If, however, the marital contract is broken the domestic production specializer's quasi rent will be appropriated by the other spouse who does not have to uphold his/her end of the contract of which the lion's share has to be provided at a later stage in life. Note that quasi rent destruction takes place whenever the marital contract is broken if there is function specialization; regardless of whether or not the contract is broken with the specific intention of appropriating the other's quasi rent.

Several opinion makers have argued that since (full) function specialization is rather a thing of the past, the Cohen thesis has become irrelevant. We test the empirical relevance in textitmodern times using the IPOS data set. Since September 2007 couples divorcing in Belgium have to choose between two divorce trajectories: a consensual trajectory and a no-fault (unilateral) trajectory. When before the introduction of the new law a spouse wanted to engage in rent-seeking à la Cohen, the choice was between either consensual or fault-based divorce. In a consensual trajectory where both spouses have to agree on the divorce and asset division the *cost* of rent-seeking may be fully internalized. When going through a fault-based divorce the requirement for spousal alimony was that the financially

weaker spouse could maintain the standard of living. Though this is a vague notion, the idea is clear that rent-seeking behaviour à la Cohen will be penalized by paying alimony. Now, by introducing the no-fault unilateral trajectory in 2007, divorce has become easier to obtain and marriage contracts have become less enforceable. Moreover, along with the trajectory also the requirements for alimony were altered by introducing the concept of neediness. It goes without saying that the combination of no-fault unilateral divorce and the reforms regarding spousal alimony opens the door wide for rent-seeking behaviour à la Cohen.

If the Cohen thesis is still relevant we would expect to find, ceteris paribus, couples with a larger inequality in the provision of domestic production in a no-fault trajectory rather than a consensual trajectory. We estimate the probability of following a no-fault trajectory using a binary choice model (probit). We find clear evidence that couples with more extensive function specialization are ceteris paribus indeed more likely to opt for a no-fault divorce.

Belgian legislators actually anticipated rent-seeking behaviour when introducing the no-fault divorce trajectory. Art. 301 §3, subsection 2 states that when determining the height of partner alimony the court should also take into account the decline of income of the spouses. To evaluate the magnitude of this decline, the law stipulates that the judge should take into account marriage duration, age of the spouses, and *their behaviour during marriage concerning the organization of the family's needs and care for the children*. Because the law leaves a lot of room for discretionary power of the courts, we test if we can econometrically ascertain a compensation for the domestic production specializer's quasi rent destruction. In other words, can we observe that in couples with a more extensive degree of function specialization higher spousal alimony is indeed paid.

We find, in line with legislation, that spousal alimony paid is higher if the inequal-

ity in the provision of domestic production is larger, ceteris paribus. Thus, the punishment mechanism for rent-seeking behaviour is indeed being used. The question now remains whether or not it is effective. If it would be effective - in equilibrium - no incentive would exists to engage in rent-seeking behaviour by opting for the no-fault trajectory. We shouldn't therefore - ceteris paribus - find a difference between the consensual and the no-fault trajectory vis-à-vis function specialization. Because we still find a difference one could argue that the punishment mechanism is less than effective. However, because the new law was relatively new and expected payoffs were still largely unknown, it could be that the equilibrium is simply not reached yet. Yet, anecdotal evidence of couples registering prenuptial agreements with regards to function specialization seems to suggest that it indeed less than effective. Follow-up research should re-evaluate this question after the law has been effect for a sufficient number of years.

1.2.2 Chapter 3: "*Making Divorce Easier: the Role of No-Fault and Unilateral Revisited*"

In the **third chapter** we contribute to the discussion on the impact of divorce legislation on divorce rates. In other words: if divorce is made easier to obtain, will the divorce rate go up? Since the 1980's the debate has been on-going whether or not the introduction of no-fault divorce in the USA during the 1960's and 1970's (the so-called no-fault revolution) contributed to the durable augmentation of the divorce rates. The debate basically evolved around three points of concern: endogeneity of the legal reforms, the durability of the impact and the classification of states. Wolfers (2006) was the latest to contribute to the debate. Wolfers performed an extensive revision of pervious work done and provided new evidence suggesting that indeed the introduction of no-fault divorce raised the divorce rates, but that the effect was indistinguishable after more than a decade.

In the literature States are classified as having introduced no-fault divorce and/or unilateral divorce by using dummies: either the legislation is introduced or not. This approach was mimicked by Gonzalez and Viitanen (2009) and applied to investigate the impact of the introduction of no-fault and unilateral divorce grounds in Western Europe. It goes without saying that the classification of states is even more troublesome in a trans-national environment such as Europe than in the United States where divorce legislation across states show great similarities. We argue that besides the purely legislative aspect of "*making divorce easier*" an important level of divorce legislation is overlooked when using a dummy-based approach: the procedural. We show using Belgium as a case study in a cointegration framework that relying solely on a dummy classification of no-fault or unilateral major significant legislative changes will be missed. More specifically, Belgium underwent a significant divorce legislation modification in the mid '90s which raised the trend level of the crude divorce rate with about 18%. However, the nature of this change was purely procedural and had therefore nothing to do with neither no-fault nor unilateral divorce grounds.

We also propose an alternative measure of easier obtainable divorce: the average duration of the legal process per divorce legislation cohort. Though undoubtedly imperfect, this measure has the advantage of at least capturing some of the variation in the underlying procedural framework. We find in the period between 1960 and 2009 that per month the average duration drops, the divorce rate rose with 1.4%. This is a quite sizeable coefficient given that the 1994 reform lowered the average duration of the legal process from 24.9 to 13.5 months.

1.2.3 Chapter 4: "*Gender Differences in the Probability of Post-Divorce Rematching and the Quality of the New Match*"

The **fourth chapter** of this dissertation deals with the topic of post-divorce rematching. Post-divorce rematching is of great importance because having a new partner does not only significantly up happiness of recently divorced persons, it also serves as an important strategy to cope with the financial consequences of divorce (Jansen et al., 2009). Early work on the subject has been performed by Becker et al. (1977). However, the evidence presented is quite selective and the selection of variables seems to only aim at confirming the traditional role pattern within families.

In more recent work, the effect of a vast number of variables on post-divorce repartnering has been tested. Nonetheless, because of data limitations the evidence presented in most papers remains fragmentary. Moreover, Becker et al. (1977) clearly demonstrate that a crucial variable is the length of separation prior to obtaining legal divorce if one wants to estimate a consistent timeline, given that search for a rematch does not necessarily postponed until the couple is legally divorced. Becker et al. (1977) show that when this variable is not included it may lead to severely biased results; in their case certain coefficients even change sign. Yet, not a single study - to our knowledge - includes this variable.

Using the longitudinal IPOS data set we estimate the probability to rematch after divorce for men and women in the first 2 years following divorce. Though a relatively short period, after 2 years about 52% of the respondents have a new partner and 30% cohabit with a new partner. In our sample men are about 5% more likely to both repartner and cohabit after divorce. More interesting are the characteristics that make men and women more likely to repartner. We find substantial differences in drivers of rematching for men and women.

For both men and women being a (second generation) immigrant substantially lowers repartnering odds. Also age reduces the probability to repartner, though this effect is much more pronounced for women. Both men and women who indicated that they initiated the divorce have higher repartnering odds. Note that this finding is robust even when respondents who already had a new match at the first contact point are excluded. For men having a higher education and being longer married previously also goes together with higher repartnering odds. For women we observe that women receiving alimony are less likely to repartner.

Besides the probability to rematch we also look at the type of new match and the difference with the old match. We find a severe decrease in homogamy in terms of age. Where divorced men were on average 2 years younger than their former spouses, repartnered men are on average 7 years older than their new partners. Women in contrast tend to be more homogenous the second time around. Both men and women become exhibit increased homogeny in terms of earnings, albeit for different reasons. For men their new partner has on average higher earnings then their former spouse, whereas for women their new partner earns less than their former partner. This is also reflected in the *quality* of the new partner as measured by a construct similar to the Hollingshead Social Position Index (Hollingshead, 1957). We can clearly see when comparing the distributions of the difference in quality of the new and old partner for men and women that men on average repartner *up* whereas women repartner *down*. Thus, where men and women are becoming more and more equal in terms of educational attainment and earnings, there still remains a large discrepancy in repartnering after divorce.

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2

No-Fault Unilateral Divorce and Rent-Seeking[1]

2.1 Introduction

In western society divorce has become widespread, with sometimes grave financial impact on personal finance. The past decades divorce laws have shifted from fault-based divorce to no-fault divorce all over Europe and the US. There exists a vast literature on this 'no-fault revolution', which has received extensive at-

[1]This chapter is the result of joint work with Koen Schoors and Gerd Verschelden.

tention in the law and economics literature (an overview can be found in Dnes and Rowthorn (2002)). The literature has mainly focused on the effect of no-fault unilateral divorce on the number of divorces (for an overview, see Mechoulan (2005)). Based on the Coase theorem (Coase, 1960), Becker et al. (1977) argue that the introduction of unilateral divorce should not have any effect on the number of divorces. Fella et al. (2004) and Chiappori et al. (2007) show micro-theoretically that this only holds under very specific assumptions on production and utility functions. This is confirmed empirically by Stevenson and Wolfers (2006)[2].

While comparing the effects of the no-fault revolution across countries yields many insights, this macro approach does not give the due attention to the individual characteristics of the couples going through a divorce and the institutional and legal details of the divorce process. The focus in the literature on more macro studies is largely driven by data limitations. While macro data on divorce legislation and divorce rates are readily available from multiple sources, reliable micro data on divorced couples is more difficult to obtain. Access to detailed micro data is one of the contributions of this paper. In this paper, we further investigate the thesis put forward by Cohen (1987) that when function specialization occurs, the financially stronger spouse has an incentive to engage in rent-seeking behaviour to try to acquire a larger share of the marital rent. As Brinig and Allen (2000) demonstrate this rent-seeking behaviour can manifest itself through divorce, or within an intact marriage by renegotiating the distribution of the marital rent. In the latter case, the financially weaker spouse may also have an incentive to file for divorce if the expected pay-offs in terms of alimony payments are larger than the share of

[2]The history of this debate goes back to Peters (1986), Allen (1992), Peters (1992), Friedberg (1998), Wolfers (2006) for the US, and recently Gonzalez and Viitanen (2009) and Kneip and Bauer (2009) for Europe.

the family income the financially weaker spouse can obtain after renegotiating the distribution of the marital rent.

We make use of unique data from Belgium, where no-fault unilateral divorce was only recently introduced. Prior to the introduction of no-fault unilateral divorce a heated debate took place in Belgium between legislators and various opinion makers. Many adversaries of introducing no-fault unilateral divorce feared that no-fault unilateral divorce would actually create an incentive to engage in rent-seeking behaviour à la Cohen. Whether or not the introduction of no-fault unilateral divorce indeed caused more couples to divorce with rent-seeking motives is beyond the scope of this paper since we do not have data on rent-seeking prior to the introduction of this legislation. The question we pose is whether indeed rent-seeking behaviour can be observed in fairly recent data. If rent-seeking behaviour à la Cohen is indeed an issue we would expect to find couples with larger discrepancy in domestic production and wages in a no-fault unilateral divorce trajectory, rather than a mutual consent divorce trajectory. If the rent-seeking aspect of divorce on the other hand is fully internalized (i.e. the financially weaker spouse if sufficiently compensated) we would expect to see no difference in trajectory choice with regards to function specialization.

We find indeed that couples with a more unequal division of domestic production are more likely to opt for the no-fault trajectory. However, law makers anticipated rent-seeking and provided a penalization mechanism in the form of spousal alimony. When looking at divorce settlement outcomes we find clear evidence that the penalization mechanism protecting the financially weaker spouse against rent-seeking is indeed being applied by judges, as prescribed by the new law. The remainder of this paper is structured as follows: section 2 presents a brief overview of the literature. In section 3 we explain in more detail which law changes took

place. Section 4 and 5 present the data and econometric analysis after which section 6 concludes.

2.2 Contract Theoretical Approach to Marriage and Divorce

This paper examines marital situations starting from a contract theoretical point view as in Cohen (1987, 2002). Cohen states that "*by far the most important gain from marriage is that it allows for investment in assets of peculiar value to this relationship...* ". First of all, both men and women have sex and procreation to offer. Moreover, it is suggested that men might value the former and women the latter more. Allen and Brinig (1998) show that differences in sex drives between spouses affect spousal bargaining strengths: the spouse having the lowest sex drive at any given point during marriage has the property right over whether or not sexual intercourse will occur, thus increasing his or her bargaining power. Secondly, and more relevant for this paper, there is physical protection and income, and homemaking and childrearing (or in Beckerian terms: labour market and domestic production).

Consider the traditional family as described in Becker (1991). In the traditional family, wives focus on domestic production whereas husbands focus on labour market production. Thus, as Cohen (1987) and Parkman (1992, 2002) point out, since the husband can focus on a career in the beginning of the marriage while caring less about e.g. childrearing the husband will enjoy more quasi rents from marriage. Quasi rents are defined as "*a return to one party to a contract, above what the party could receive if the contract could be dissolved at will at that moment*" (Cohen, 1987). The wife on the other hand will enjoy more quasi rents in a later stage of marriage when the children are more able to maintain themselves

and she can benefit from the larger family income and/or a higher social status. Thus a husband has a clear incentive to appropriate the wife's future quasi rents, by divorcing her unilaterally after having extracted most of his quasi rent from the marriage early on. This is called quasi rent destruction. Brinig and Allen (2000) argue that there are two different types of quasi rent destruction. Quasi rents may be appropriated within marriage through the renegotiation of the rent distribution (exploitation) or appropriated through divorce (appropriation). Renegotiation of the rent distribution within marriage may also lead to divorce if one of the spouses has too little bargaining power, which leads her or him to perceive divorce as a better alternative to being married and heavily 'exploited', that is if the expected pay-offs outside of marriage are sufficiently high. These expected pay-offs will depend on the expected probability of rematching and the governing divorce laws, more specifically laws regarding the distribution of assets and alimony payments upon divorce. It goes without saying that in a system of community property a partner undergoing exploitation will have a substantial incentive to file for divorce, and that this incentive will steadily grow year after year because the present value of expected future pay-offs within marriage keeps on decreasing. In other words, if family income is not pooled as in unitary models, the threat point for a financially weaker spouse in a system of community property will always be income pooling.

Throughout the rest of the paper we use spouses or partners, and not husbands or wives. Above we assumed for simplicity the Beckerian traditional family with function specialisation. Reality may however be less traditional. Firstly, women rather than men could specialize in labour market production if they have a comparative advantage. Secondly, the law and economics approach shows that divorce is driven by self-interest at the time of divorce. Individuals file for divorce when there are marital assets that may be appropriated through divorce, as e.g. in the

medical school syndrome[3], leaving after the educational investments have been made. This paper examines if this inequality in domestic production will translate itself to the choice of divorce trajectory; as predicted by Cohen (1987) and Parkman (1992, 2002).

Other authors point out that during marriage the sex ratio - the ratio of single women to single men per age cohort - evolves unfavourably over time for women (see Browning et al. (2008), Chapter 1; or Chiappori et al. (2002) who uses the evolution of the sex ratio to identify the distribution rule in the collective model), reducing the outside options for women, and thus further limiting their bargaining power. As Chiappori et al. (2002) point out: when there exists a relative abundance of women, bargaining power and therefore the gains from marriage will shift in favour of the husband. This may in turn affect the behaviour of the husband who might engage in exploitation or appropriation. In most Western countries the sex ratio rises steadily from the age of 40 indicating relatively more and more single women. In addition some authors claim that the decline of relative male sex drives with age may weaken the bargaining power of women that are married to older men (Allen and Brinig, 1998).

Thus concluding, there may exist several incentives for rent-seeking behaviour. When both parties have made considerable investments in their marriage they will be more reluctant to divorce because their cost of leaving the marriage, which encompasses the loss of all sunk investments, is more likely to exceed their benefit from another relationship. However, when one partner has made considerably more investments, the other partner might be tempted to take advantage. This

[3]The Anglo-Saxon literature often refers to the medical school syndrome (Borenstein and Courant, 1989), where one spouse helps to pay the other's tuition fees and is later abandoned once the other has finished school.

temptation may be further boosted by the fact that bargaining power within the marriage changes with sex ratios and relative sex drives. When looking at divorce settlements and divorce trajectory choice we will therefore have to control for this shift in bargaining power by including the sex ratio and age difference (as a proxy for difference in sex drives).

Though many papers have theorized that the bargaining power - and therefore the incentive to engage in rent-seeking behaviour - shifts substantially over time, in theory this is perfectly foreseeable and should therefore not necessarily lead to the termination of the marital contract. If potential spouse are fully rational, not myopic and perfect information exists, they could agree on a state-contingent contract which takes into account every possible state of the world. In this theoretical environment the Cohen-thesis would become irrelevant. If, however, an exogenous shock to divorce legislation occurs the equilibrium will be disturbed and the Cohen-thesis might become relevant for a specific set of couples. In practice, extensive forward-looking prenuptial agreements are rare. This does not necessarily mean that agents are myopic or bounded rational. Wanting such a prenup might signal distrust and future non-cooperative behaviour towards the other spouse which will lower the likelihood of the other spouse to agree to forming a partnership.

A wide range of studies have investigated rent-seeking behaviour through divorce, and it is within this specific strand of the law and economics literature that this paper should be situated. Brinig and Allen (2000) investigate why most divorce filers in the U.S. are women. They find that this is very consistent with the exploitation and appropriation theses stated above, the latter being the most relevant. They find that the main component of deciding who files for divorce is who gets the children. In other words, since U.S. divorce law has favoured women for custody, women

have had an incentive to file for divorce and thus appropriate the property rights over children. Another study based on Norwegian panel data by Tjotta and Vaage (2008) finds that the level of public transfers to divorced families has a significantly positive effect on divorce probability and that the distribution of transfers in favour of the wife increases this probability. Thus not only the type of divorce law matters (fault or no-fault), but also the details of these laws and the institutional framework surrounding them. Therefore we will give a detailed overview of the legal framework in Belgium in section 3.

This paper not only looks for the determinants of divorce trajectory choice to test whether couples with a higher degree of function specialisation are more likely to opt for the no-fault trajectory, but also analyses the consequences of trajectory choice on the transfers upon divorce. Because of the lack of adequate micro-data, there is little empirical research on divorce transfers and their determinants, and linking these to divorce legislation changes. The most complete analysis was done by Weiss and Willis (1993). They follow a cohort of whites who graduated from high school from 1972 to 1985 and estimate the transfer as a function of current and permanent income, duration of marriage, variables indicating the quality of the match and juridical dummy variables. As transfers they consider child support payments, alimony payments, and the transfer of property. They find - in line with Teachman and Polonko (1990) and Del Boca and Ribero (1998) - that the transfer tends to increase with the husband's income and to decline with the wife's. Somewhat surprisingly, they find that both the level as well as the sensitivity of transfers to income are quite small.

Weiss and Willis also consider quality of match variables: differences in religion, ethnicity, and age. Weiss and Willis state that couples of similar traits are less likely to have conflicts within marriage and in divorce and should therefore be

considered as control variables. They find that ex-spouses with the same ethnicity and with a larger age difference have lower transfers, albeit only significant for couples without children. Another quality of match variable is marriage duration. Weiss and Willis cite Cohen (1987) who suggests that "*The loss that results from a bad realization of marriage quality is larger, the later it is revealed, since more marriage-specific capital will be accumulated. Therefore, a larger compensation for the wife will be required*". Even so, their results reported in the appendix surprisingly show that transfers fall with the duration of marriage.

When evaluating post-divorce transfers under different divorce trajectories, it is crucial to meticulously study the details of the family law and the surrounding institutional framework. In general we should be careful to distinguish between fault and no-fault divorce, and between consensual and unilateral divorce. Fault-based divorce means that one spouse has to prove fault of the other in order to acquire divorce. Consensual divorce is per definition no-fault, but unilateral divorce can be either fault of no-fault, depending on the legal framework.

2.3 Legal and Institutional Framework in Belgium

When dealing with changes in divorce legislation, any particular legal system can be classified along the lines of two characteristics: (1) Is fault a necessary ground for divorce? (2) Does divorce require consent of both spouses? The different combinations yield different legal systems, which are depicted in the figure below.

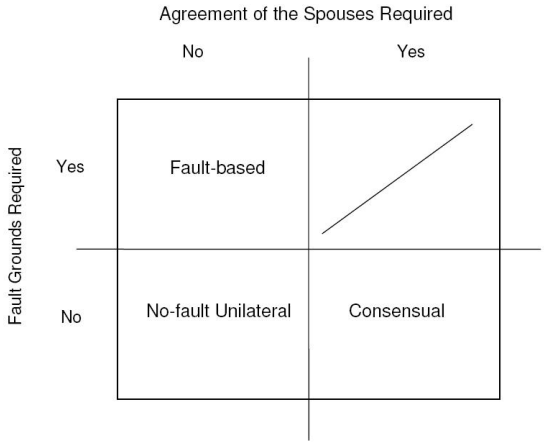

Figure 2.1: Possible Divorce Law Regimes

This paper will deal with the difference between spouses in a consensual trajectory (4th quadrant) and a no-fault unilateral trajectory (3rd quadrant, further referred to as no-fault) when both are available.

2.3.1 The No-Fault Unilateral Law of April 2007

After an intense debate in and out of the parliament, Belgian divorce legislation underwent a significant change in April 2007. Before, divorce was either possible on fault grounds or consensus of the spouses [4]. Fault grounds were adultery, violence, cruelty and severe insult[5]. The new law (Art. 229 of the Belgian civil code) rescinded these faults as separate grounds for divorce and made the conditions for consensual divorce more lenient. The radical change in the new law was the intro-

[4]In Dutch: *Echtscheiding door Onderlinge Toestemming* or EOT.

[5]Severe insults include insulting statements about the spouse, maintaining an insulting (non-sexual) relationship, refusal of sexuality, expressing homosexuality, neglecting the household or contributions to the marriage, alcohol or drug abuse, love declarations to a third party, religious fanaticism, but also desertion or abandonment with malicious content.

duction of divorce based on irretrievable breakdown of the marriage [6]. This is the so-called no-fault unilateral divorce[7]. Under the new No-Fault law, divorce can be obtained consensually or unilaterally. If both spouses agree on filing for divorce, they can immediately obtain a divorce judgment if they have lived apart for at least 6 months. In case they have filed the claim before this period of 6 months is reached, the divorce judgment can be pronounced after both parties appear before court a second time, maximally 3 months after their first appearance.

In case only one of the spouses wants to obtain divorce, there are two possibilities. First, a divorce judgment can be immediately obtained in case the spouses have lived apart for a period of at least 1 year. If this period has not yet been reached, the divorce judgment can be pronounced after the plaintiff appears before court a second time, maximally 1 year after his first appearance. When the other spouse decides to agree with the initial unilateral claim, the shorter terms of the consensual claim can be applied. Second, it is possible to immediately obtain a divorce judgment if proof is furnished of irretrievable breakdown. Here all former fault grounds still play an important role. This implies that the fastest way of obtaining a divorce is through a claim by mutual consent. When a unilateral claim is filed, the divorce proceeding can be quickened by reaching a consent between spouses. Indeed, spouses may/will pressure the other one to agree with divorce in order to

[6] In Dutch: *Echtscheiding op grond van Onherstelbare Ontwrichting van het huwelijk* or EOO.

[7] Gonzalez and Viitanen (2009) state that no-fault divorce in Belgium existed pre-1950 and unilateral divorce has existed since 1975 - with changes in the length of factual separation required in 1983 and 2000. No-fault divorce only existed in Belgium pre-1950 (already in the 19th century to be more precise) in the sense that consensual divorce does not require fault to be shown. As far as unilateral divorce is concerned, most fault-based divorce legislations have some form of unilateral divorce incorporated in case of serious fault such as domestic violence or desertion, but the possibility of unilateral divorce without such serious fault was only introduced in April 2007. This issue is dealt with in detail in Bracke (2012).

obtain a judgment more speedily.

One could argue that the old consensual divorce procedure and the consensual procedure of the new no-fault law are very comparable, since they both require both spouses to want a divorce. Yet, there are several crucial difference. The old consensual procedure requires that spouses reach an arrangement on all consequences of divorce (custody, alimony, property division, etc.). A no-fault procedure allows for divorce to be granted without having arranged anything. Partial arrangements (say on children or property division) can be ratified in court, and subjects not agreed upon are settled in court. Furthermore, ratified arrangements should still be considered as temporary, since they can always be changed in the final judgment by the court. Last but not least: consensual claims under the new no-fault law are in practise rare (about 2% of all cases)[8]. We will therefore from now designate this law as no-fault unilateral. Our results do not alter when excluding those people divorcing consensually under the new law.

2.3.2 Duty of Maintenance under the New Law and Enforceability

Under the old fault-based law, the 'not guilty' spouse was entitled to alimony. The amount was settled in court such that the receiver could maintain the same standard of life prior to divorce. Alimony was in principle perpetual. Under the new no-fault law, only those spouses who are in a state of *neediness* are entitled to alimony. The concept of neediness is defined rather vaguely in the law, and thus gives more discretionary power to the courts when determining who is and who is not entitled to alimony. Art. 301 §3 states that the courts should take into

[8]However, consensual divorce under the old mutual consent law still accounts for the lion's share of divorces in Belgium

account the income and potential income of the spouses. Moreover, the duration of alimony is on principle limited to the duration of marriage, but it is stipulated that: "*in case of extraordinary circumstances, such as a very long cohabitation prior to marriage, the duration of alimony can be extended ex post, if the receiver is still in a state of neediness because of circumstances out of his or her control*"[9]. This again increases the discretionary power of the courts. However, an upper bound for alimony remains: alimony payments may not exceed one third of the net income of the alimony payer. Finally, even though the new law is supposedly no-fault, the proof of certain faults[10] still can be called upon as ground for *not* having to pay alimony (Art. 301 §2).

Weiss and Willis (1993) also cite the problem of enforceability of post-divorce transfers. Belgian law is quite strict on the issue of compliance. Art. 301 §11 of the Belgian civil code states that if a spouse does not pay the sentenced alimony the other spouse can ask the court to take possession[11] of defaulter's income until the alimony payment is met. Moreover, according to Art. 391 of the penal code the defaulter can be sentenced to up to 6 months in prison and a fine up to €500 if the default is malicious. A second conviction within 5 years doubles these penalties.

[9]Translated from the Belgian Civil Code art. 301 §4.

[10]These are severe faults such as assault and battery or rape.

[11]A Royal Decree forbids taking possession if the income is lower than €944, and weakened the one third rule for incomes between €944 and €1224.

2.3.3 The New No-Fault Unilateral Law and Rent-Seeking Behaviour

In section 3 we discussed the relationship between legal regimes and rent-seeking behaviour and stated that incentives for rent-seeking behaviour may emerge if marriage contracts become less enforceable. When before the introduction of the new law a spouse wanted to engage in rent-seeking à la Cohen (thus when there exists discrepancy in function specialization), there were 2 options: either a consensual divorce or a fault-based divorce. It is reasonable to assume that within the consensual trajectory where both spouses have to agree on the divorce and asset division the *cost* of rent-seeking will be fully internalized. When going through a fault-based divorce the requirement for spousal alimony was that the financially weaker spouse could maintain the standard of living. Though this is a vague notion, the idea is clear that rent-seeking behaviour will be penalized by paying alimony. Now, by introducing the no-fault unilateral trajectory, divorce has become easier to obtain and marriage contracts have become less enforceable. As mentioned supra, along with the mere trajectory also the requirements for alimony were altered by introducing the concept of neediness. It goes without saying that the combination of no-fault unilateral divorce and the reforms regarding spousal alimony opens the door wide for rent-seeking behaviour à la Cohen.

However, it seems that the legislator has understood that this may indeed lead to rent-seeking and has anticipated rent-seeking by also enacting a mechanism to compensate the victims of rent-seeking for their losses. Specifically, art. 301 §3 subsection 2 states that when determining partner alimony the court should also take into account the decline of income of the spouses. To evaluate the magnitude of this decline, the law stipulates that the judge should take into account marriage duration, age of the spouses, and *their behaviour during marriage concerning*

the organization of the family's needs and care for the children. The question is whether this compensation will indeed be granted in reality. If the data indeed show that a compensation exists, then the net rent-seeking effect of the no-fault unilateral law is mitigated.

2.4 Data

2.4.1 Data Collection

The lack of empirical work on divorce transfers is mainly due to the lack of detailed micro-data. We use a unique Belgian data set collected by the IPOS project. The IPOS project is a cooperation between Ghent University and the Catholic University of Louvain, sponsored by the Institute for the Promotion of Innovation by Science and Technology in Flanders (IWT). IPOS stands for "Interdisciplinary Project for the Optimization of Separation Trajectories". The survey results from a cooperation of psychologists, lawyers and economists. Thus, apart from a psychological and juridical part, this survey also pays attention to the economic aspects of divorce and transfers. All spouses who divorced between March 2008 and March 2009 in the courts of 4 Flemish cities (Antwerp, Ghent, Kortrijk and Mechelen) were given a brochure in which was asked to participate in a study concerning divorce. If respondents replied favourably, they were contacted within 3 weeks to fill out an electronic questionnaire[12]. Because all people who divorce in Belgium have to go to court at least once, in our recruitment strategy all layers of the population are asked to participate in the survey, which is not the case when using a convenient sampling method.

[12]Respondents who did not master Dutch and/or did not have internet access at home were visited by the IPOS team at home.

Not all people contacted in court were willing to cooperate. Given that participation is voluntary and the stressful situation (most) soon to be ex-spouses find themselves in, one would expect a very low participation rate. Nevertheless, of the 8,896 distributed brochures 3924 (44%) responded favourably. There was an additional dropout after being contacted (not willing to participate anymore, wrong contact data or annulment of the divorce) leaving an overall participation rate of 20.8%. Though this is fairly low, the data seems to be representative on observables (cfr. infra), and also variables such as conflict and financial conflict exhibit a nice distribution meaning that IPOS was also able to capture high-conflict divorces. However, our data are self-reported data and should be interpreted with the needed care. Although the data-collection procedure has its drawbacks, it gives all divorcing people the same chance of participation and should thus be preferred over convenient sampling methods.

2.4.2 Descriptive Statistics

The IPOS data set contains 2,146 surveys of which 1,850 fully completed. However, when recruiting participants in court, both spouses had the opportunity to join the survey. Therefore, data on an ex-couple could be included twice in our regressions biasing standard errors downwards. To cope with this, if both spouses participated one entry was randomly deleted. This leaves us with N = 1,594 of which 709 men and 885 women with an average age of 45.57 and 42.25 respectively. The respondents, both men and women, were fairly high educated: about 41% had had some form of higher education.

Average relationship duration was about 16.5 years. Average marriage duration was about 14.5 years, with a median of 13.08 years, which is well consistent with the data of the Directorate-general Statistics and Economic information (Statbel)

[13] that stated a median duration of 13.00 years in 2007. Average age upon marriage was 29.40 for men and 26.26 for women. Again, this 3 years age difference is consistent with Statbel data.

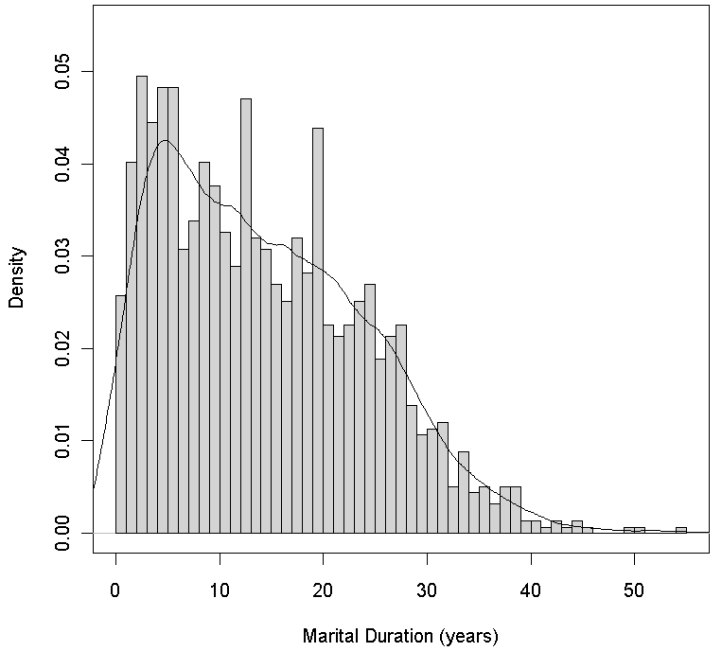

Figure 2.2: Years married upon Divorce

The histogram with an Epanechnikov kernel distribution below in figure 2.2 clearly indicates that the hazard of divorce reaches its peak in the first five years of marriage. This sample distribution is not statistically different from the population distribution of marital duration as reported by Statbel.

As control variables in our estimations we use different indicators of quality of the match, namely differences in education and age as well as the age of the youngest spouse. Combining this with marriage duration, we also control for the age at

[13] http://statbel.fgov.be/

marriage. (Weiss and Willis, 1993) suggest that couples who marry at later age and thus invested more time in screening possible mates have more stable relationships and are more likely to cooperate if the marriage breaks. Nonetheless, marriage duration is a crucial but ambiguous item. On the one hand a long marriage duration suggest a more stable relationship, so bargaining upon divorce might be more fluid. On the other hand, as mentioned before, the loss from a divorce is larger when more marriage-specific capital has been accumulated. The vast majority of people in the sample, 75.47%, report to have one child or more with their ex-spouse, which is almost identical to the population statistics provided by Statbel (75.8%).

Function Specialization

When function specialization occurs a spouse will not pursue a labour market career to focus on domestic production. It is therefore natural that this is highly correlated with wage difference between spouses. In other words, the difference in domestic production is jointly determined with the wage difference. Therefore wage difference is an indirect way to measure function specialization. In this paper we also investigate a more direct measure: we simply asked participants a series of questions on who did various household chores prior to divorce and constructed a scale. Our approach differs slightly from Bardasi and Taylor (2008) in the sense that we allow for more variation in household chores, and in the division of household chores.

More specifically, we construct the direct measure of function specialization based on 7 questions regarding household chores before divorce, namely staying at home when the children were ill, cleaning and washing, food and cooking, buying groceries, taking care of the children, leisure activities of the children (playing, transport), diverse chores in the house (garden maintenance, fixing things). Respon-

dents indicate on a 5-point Likert scale their share in these chores on average in the last year before filing. This 5-point scale, ranges from '*I did a lot more than my ex*' to '*My ex did a lot more than me*'.

Chore	Obs	Sign	Alpha
Washing and Cleaning	1594	+	0.83
Nourishment and Cooking	1594	+	0.84
Groceries	1594	+	0.85
Gardening and Reparations	1594	+	0.91
Staying at home when a child is Ill	1203	+	0.85
Child Care	1203	+	0.83
Leisure Activities of Child	1203	+	0.85
Test Scale			0.87

Table 2.1: Direct Measure of Function Specialization

Table 2.1 lists all household chores included in the survey as well Cronbach's alpha statistic for the scale formed by these items. The first four chores are general household chores, whereas the last three are child(ren) related. Since not all ex-couples have children, only 1203 observations out of a population of 1594 report child related chores. A Chronbach's alpha statistic of 0.87 allows us to conclude that our construct is internally consistent.

We construct a measure of the inequality of distribution of household chores. Ex-couples without children received a score of 3 on child related questions, equivalent to '*We both did just as much*'. We sum the answers on these 7 chores to arrive at a sum between 7 and 35. We then normalize this variable by the following formula:

$$\text{Difference Chores}_{i,j} = \left| \left(\frac{\sum \text{Chores} - 21}{14} \right) \right|. \tag{2.1}$$

Let us clarify the intuition behind this approach with three pronounced examples. (A) A spouse reports on all questions that she/he did a lot more than the ex-spouse, i.e. a score of 1 on each of the 7 questions. Using the formula above the difference in the chores construct will therefore be 1, being the maximum score possible. (B) A spouse reports on all questions that her/his ex did a lot more, i.e. a score of 5 on each of the 7 questions. The difference in chores will therefore also be 1. (C) A spouse reports on all questions that she/he did just as much as the ex-spouse, i.e. a score of 3 on each of the 7 questions. Applying the formula, the difference in our construct will be 0, the minimum score. The chores score of a couple i, j therefore ranges from 0 (completely equal distribution of chores) to 1 (completely unequal distribution of scores).

An issue with such a measure is of course that couples are self-reporting their own share in household duties and might tend to overestimate their personal share. This tendency to overreport might lead to biased results in our estimations. We extensively address this problem in detail in Appendix 1, and show that it does not alter our results.

Divorce Trajectory and Divorce Transfers

Divorce transfers essentially consist of three different elements. There is a property transfer, a child support payment, and an alimony payment. Weiss and Willis (1993) consider these elements in an aggregated approach. They calculate the total transfer upon divorce as the sum of the three and use this total transfer as dependent variable. However, even if legislation leaves room for interpretation there is no reason why one should have anything to do with the other. Both univariate

and multivariate statistical analysis indeed show that the correlation between alimony and child support payments is low and statistically not significant. Child support payments are expected to depend on custody and residence arrangements, and spousal income. For example, if the parents agree on shared custody, and the child resides according to a week-week arrangement, both parents will contribute the same percentage of their labour income. Thus, the parent with a higher income will contribute more. If the child stays longer with one parent, the other parent will contribute more, etc. It is therefore not surprising that the labour income average income of the spouse paying child support is €264 higher than the spouse receiving child support[14]. Child support payments will therefore not be dealt with in detail this paper, but are reported briefly in appendix 3.

Property transfers are a different issue altogether. We argue that most property transfers as considered by Weiss and Willis (1993) are, as a matter of fact, not transfers. Suppose two ex-spouses own a house together. Upon divorce it is decided that the wife gets the house and pays her ex-husband half of the value of the house. Can we therefore conclude that there was a transfer of property to the wife? And was there a cash transfer to the wife? Clearly not. Only if shares of property are sold among ex-spouses at a price that differs from the market value (or if the property stays in mutual possession but only one has the right of use and enjoyment) one can speak of a transfer by means of property. It goes without saying that the analysis of property settlements requires fair market values on houses. Since these data are not available to us, property will not be considered in our analysis.

Also important for property division is the marital property regime. In Belgium, the vast majority of couples marry under the legal default property regime which

[14]Data on labour income was winsorised to the 99th percentile; 382 missing data were imputed. Results do not alter when those observations are not included and are available on request.

is community property. In a system of community property the assets acquired during marriage - such as a house - are considered to be common property and have to be divided accordingly. In our data we observe that little over 15% of the spouses going through consensual divorce did not have the legal default system. Excluding these couples from the analysis does not alter any results. Only standard errors increase marginally.

Alimony payments are usually, but not necessarily, monthly payments. In order to cope with (the few) lump sum payments, we calculate the monthly equivalent of lump sum payments assuming that people are indifferent between a monthly payment or its lump sum equivalent. The new law, introduced in April 2007 and effective since September 2007, stipulates that the duration of alimony is limited to marriage duration. We therefore calculate the equivalent expected monthly alimony payments, using a yearly discount rate of 4%, as the sum of a geometric series with limited number of periods namely the months married. We use the following formula:

$$Y_{i,j}\frac{\delta/1+\delta}{1-(\frac{1}{1+\delta})^{n_{i,j}}}. \tag{2.2}$$

where $Y_{i,j}$ denotes the transfer from individual i to j and δ is the monthly discount rate. $n_{i,j}$ denotes the years of marriage of the couple i, j. For alimony payments, N = 1405. The average monthly alimony payment was €76.07. This low number results from the large number of zero-observations (1149). In our sample we find that alimony is paid in 10.6% of the cases (N = 169)[15]. The average monthly al-

[15]Bastaits et al. (2011) find in a relatively small sample of divorcees in Flanders that alimony is paid in only 6.6% of all cases. The higher probability of alimony payments might be due to our data collection technique in which we went to the court and surveyed divorcing couples physically present in court. On the other hand, Hemelsoen and Schoors (2010) find in a random sample of

imony payment given a non-zero payment was €593.24. A large number of zero-observations require the appropriate estimation techniques, discussed in section 5.2.

As for divorce trajectories, the vast majority (1,159 people) opted for the consensual divorce trajectory, 327 people opted for the new no-fault trajectory, and 108 people opted for consensual divorce but switched to a no-fault procedure. As mentioned above, three procedures can be followed within the no-fault trajectory. Of the 435 people following a no-fault procedure, merely 35 (8.05%) indicated that divorce was by joint request. The vast majority indicated that they followed the unilateral no-fault trajectory. Because only a small percentage followed the no-fault consensual trajectory, these couples will not be considered separately in the remainder of this paper. Table 2.2 presents summary statistics and definitions of those variables used in this paper.

over 1000 mutual consent divorce agreements that in roughly 8% of all cases alimony is paid which is very comparable to our sample (8.79%).

Table 2.2: Summary Statistics and Definition

Variable	Mean	Std. Dev.	Min.	Max.	N	Definition
No-Fault Trajectory (dum)	0.273	0.446	0	1	1594	1 if the No-Fault (Unilateral) trajectory was followed
Wage (diff)	0.893	0.824	0	5.5	1594	The absolute value of the monthly wage difference 1 year prior to divorce
Chores (diff)	0.462	0.325	0	1	1594	The difference in domestic production 1 year prior to divorce
Alimony	76.068	311.602	0	6000	1318	The monthly amount of alimony paid
Alimony (dum)	0.106	0.308	0	1	1594	1 if alimony is paid
Alimony (if > 0)	593.242	672.703	0.728	6000	169	the monthly amount of alimony paid if alimony is paid
SexRatio	0.918	0.169	0.809	3.201	1594	The ratio of single women over single men per age category of the husband
FamInc	3.212	1.193	0.8	9	1594	The sum of the monthly wages of both spouses
Kids (dum)	0.754	0.431	0	1	1594	1 if the ex-couple had children together
Kids	1.585	1.245	0	8	1594	The number of children the ex-couple had together
Age (diff)	4.001	4.585	0	55	1594	The absolute value of the age difference of the spouses
AgeMan	36.045	11.899	15	77	1594	The age of the husband
YoungChild	13.423	8.407	1	48	1203	The age of the youngest child
Educ (diff)	0.906	0.942	0	4	1594	The difference in education level which is coded on a five-point scale
MarDur	14.417	9.716	0	54.667	1594	Marital duration in years
Agree (dum)	0.197	0.398	0	1	1594	1 if indicated ‘we both wanted a divorce’ to the question ‘Who wanted divorce the most’
Conf	3.232	1.297	1	5	1594	Frequency of conflict prior to divorce on five-point scale
FinConf	2.413	1.379	1	5	1594	Frequency of financial conflict prior to divorce on five-point scale
Residence (dum)	0.825	0.38	0	1	1594	1 if the child(ren) don’t reside 50/50
Child Support	239.27	252.212	0	2000	799	The amount of child support monthly paid
Child Support (if > 0)	317.57	244.038	1	2000	602	The monthly amount of child support paid if child support is paid
WagePayer	2.018	0.996	0	5.5	602	The monthly wage of the payer of child support

2.5 Empirical Methodology and Results

Because of the specific characteristics of the data, estimating the choice of divorce trajectory and partner alimony requires a specific methodological approach which we will discuss in the following paragraphs.

2.5.1 Divorce Trajectory Choice

The choice of divorce trajectory is dichotomous: one either chooses the no-fault unilateral or the consensual trajectory. Consequently, a binary outcome model is required. Using a standard probit model we estimate the probability of ending up in the no-fault trajectory.

As explanatory variables we use a series of variables which indicate a discrepancy in bargaining power, control variables that give an indication on the quality of the match and variables indicating conflict prior to divorce. *Wage* is the difference in monthly net labour income expressed in thousands of Euros, *Chores* is the inequality in domestic production, *SexRatio* is the ratio of single women over single men per age category of the husband[16]. *FamInc* is the monthly family income (net labour income and capital gains) expressed in thousands of Euros. As quality of match variables we include the presence of children, the age difference, the age of the man, the difference in highest attained diploma and the duration of the marriage. As conflict variables we include the frequency of conflict and financial conflict prior to divorce as well as a dummy indicating whether or not both spouses agreed to divorce. This dummy will be zero when one of the spouses preferred to stay married.

If couples with more extensive function specialization are ceteris paribus more

[16]Considering the sex ratio per 5 year cohort does not alter any result reported in this paper.

likely to fall victim to rent-seeking we expect that they are more likely to opt for the no-fault trajectory and hence that both the coefficients for *Wage* and *Chores* are greater than zero. Furthermore, one could reasonably expect that if spouses disagree on getting divorced and if prior to divorce there was more conflict, the chances of a unilateral no-fault divorce are larger. The sex ratio indicates possible imbalances in the marriage market per age cohort. A sex ratio larger than one indicates a relative shortage of men and therefore reduces the outside options for women, whereas a sex ratio smaller than one indicates a relative shortage of women. Family income is a more ambiguous variable. On the one hand the higher the family income the more there is to lose when disagreeing. On the other hand, it is not worth fighting about the share of the pie, if the pie is too small. Moreover, wealthier
The estimations should indicate which effect dominates.

Since we have no data before the introduction of the no-fault divorce, we cannot analyse the consequences of introducing no-fault divorce. It is nonetheless an asset that the no-fault trajectory was introduced just months before the survey. Our data window is very short and starts precisely after the introduction of the no-fault trajectory, and the legislator left the judges with quite some discretionary power regarding alimony payment in this new trajectory. Whether a possible penalty in terms of alimony would be attributed by judges and how high this penalty would be was therefore largely unknown. At best, legal representatives could make an educated guess. Because of this uncertainty around the height of alimony payments one would expect to see rent-seeking behaviour à la Cohen in its purest form, that is unhindered by the threat of a high future alimony payments.

Table 2.3 reports summary statistics by divorce trajectory, the same variables can be found in table 2.4 which reports the marginal effects (dy/dx) of a probit re-

gression estimating the chance of choosing the no-fault unilateral trajectory.

Variable	(1)	(2)	(3)	(4)	(5)	(6)
Wage (diff)	0.044***	0.039***	0.070***	0.071***	0.068***	0.062***
	(0.013)	(0.013)	(0.015)	(0.015)	(0.015)	(0.015)
Chores (diff)	0.157***	0.180***	0.180***	0.158***	0.173***	0.138***
	(0.034)	(0.035)	(0.032)	(0.037)	(0.042)	(0.042)
SexRatio		0.303***	0.285***	0.280***	0.274***	0.273***
		(0.068)	(0.068)	(0.067)	(0.092)	(0.093)
FamInc			-0.050***	-0.052***	-0.050***	-0.039***
			(0.010)	(0.011)	(0.011)	(0.011)
Kids (dum)				0.048*	0.075**	0.066**
				(0.028)	(0.029)	(0.030)
Age (diff)					0.003	0.002
					(0.003)	(0.003)
AgeMan					0.001	0.001
					(0.001)	(0.001)
Educ (diff)					0.010	0.009
					(0.012)	(0.012)
MarrDur					-0.002*	-0.002
					(0.001)	(0.001)
Conf						0.025***
						(0.009)
FinConf						0.030***
						(0.008)
Agree (dum)						-0.098***
						(0.026)
Pseudo-R^2	0.019	0.030	0.043	0.044	0.049	0.070

Significance levels : $*$: 10% $**$: 5% $***$: 1%

Table 2.4: Choice of Divorce Trajectory (N = 1,594)

The coefficients in the table above should be interpreted in terms of the change in

Variable	**Mean Consensual Trajectory**	**Mean Unilateral Trajectory**	**F**	**Prob > F**
Wage (diff)	0.845	1.024	15.03	0.0001
	(0.769)	(0.946)		
Chores (diff)	0.437	0.528	24.95	0.0000
	(0.315)	(0.339)		
SexRatio	0.907	0.948	19.18	0.0000
	(0.130)	(0.242)		
FamInc	3.265	3.072	8.31	0.0040
	(1.140)	(1.316)		
Kids (dum)	0.735	0.805	8.22	0.0042
	(0.441)	(0.397)		
Age (diff)	3.819	4.486	6.71	0.0097
	(4.269)	(5.313)		
AgeMan	35.745	36.844	2.70	0.1007
	(11.392)	(13.135)		
Educ (diff)	0.881	0.970	2.80	0.0947
	(0.924)	(0.988)		
MarrDur	14.296	14.739	0.66	0.4178
	(9.659)	(9.871)		
Conf	3.13	3.503	26.64	0.0000
	(1.277)	(1.312)		
FinConf	2.287	2.747	35.99	0.0000
	(1.338)	(1.431)		
Agree (dum)	0.222	0.131	16.54	0.0000
	(0.415)	(0.338)		
N	1159	435		

Table 2.3: Summary Statistics by Divorce Trajectory

probability a couple opts for the no-fault trajectory caused by a change of one unit of the explanatory variable. We find that both wage and chores difference have a positive coefficient which is statistically different from zero, in line with our rent-seeking hypothesis. In the most complete specification (controlling for the quality of match both indirectly and directly) a couple with a complete inegalitarian division of domestic production has a 13.8% higher probability of opting for the no-fault trajectory than a couple with a complete egalitarian division. An additional wage difference of €1000 raises the probability with 6.2%. The sex ratio is also strongly related with the no-fault trajectory, which is in line with the thesis that the availability of more outside options (i.e. decreased search costs) raises the incentive for rent-seeking behaviour.

Also the children dummy has a positive statistically significant coefficient: the presence of children increases the likelihood of opting for the no-fault trajectory with 6.6%. As expected, couples in the no-fault unilateral trajectory reported higher conflicts and disagreement on the decision to divorce. Subjects with a higher family income (expressed in thousands of Euros) prior to divorce are less likely to opt for the no-fault trajectory, indicating that the first effect - the higher the family income the more there is to lose by failing to consent - outweighs the other.

Our results for the no-fault trajectory are in line with the thesis that the partner who specialized on the labour market and has the highest labour income appropriates the future quasi rents of the partner who specialized on domestic production and has the lowest labour income. We do not know whether the partner who specialized in labour market production is in fact the one who files for divorce and, in doing so, chooses the legal trajectory, but filing information may not reveal the identity of the instigator of divorce. As Fella et al. (2004) correctly point out: the

choice couples face upon divorce is not between divorce and staying happily married, but rather between divorce and continuing a rather uncooperative form of marriage. The financially stronger spouse could be more reluctant to share his/her labour income. This is what we supra called exploitation. Moreover, many practitioners pointed out that the marital contract can also be breached while remaining nominally married, thus forcing the other spouse to start the no-fault procedure in order to get some compensation. Indeed, under the new no-fault law of 2007, living apart for at least 6 months is an important condition to obtain an immediate divorce judgment (see higher). The true instigator of divorce is therefore not necessarily the plaintiff. The question remains how this rent-seeking behaviour will impact the transfers upon divorce.

2.5.2 Divorce Trajectory Choice: The Role of Innate Selfishness

When performing the analysis above we make the implicit assumption that there are a priori no differences between couples with regards to function specialization and wage differences in both trajectories. Put differently, we assume that there is no a priori selection on unobservables. We therefore also have to consider the possibility that unobservable selection is driving our results. More specifically, it may be the case that more innate selfish or disagreeable people tend to marry into marriages with larger wage and specialization differences and also more likely to divorce unilaterally. It is not unimaginable that people who are innate selfish would be less inclined to do many household chores - and thus have a higher degree of labour market production - and also more likely to file for divorce unilaterally.

Selection	No Kids	Kids	No Charity	Charity	Low Conf	High Conf	Low FinConf	High FinConf	Not Generous	Generous
N	628	966	1035	547	995	599	1066	528	527	1067
Wage (diff)	0.001	0.046***	0.043***	0.008	0.046***	-0.002	0.041***	0.001	0.001	0.057**
	(0.035)	(0.015)	(0.014)	(0.010)	(0.013)	(0.015)	(0.013)	(0.011)	(0.005)	(0.29)
Chores (diff)	0.232**	0.167***	0.123***	0.074***	0.093**	0.156***	0.111***	0.128***	0.033**	0.438***
	(0.095)	(0.042)	(0.041)	(0.045)	(0.037)	(0.048)	(0.036)	(0.049)	(0.022)	(0.077)
SexRatio	-0.028	0.008***	0.036	-0.035	0.053	-0.083	0.098	-0.025	-0.016	0.223
	(0.154)	(0.114)	(0.100)	(0.040)	(0.082)	(0.149)	(0.086)	(0.121)	(0.35)	(0.224)
FamInc	-0.057**	-0.028***	-0.028***	-0.011*	-0.013	-0.032***	-0.024***	-0.015*	0.005	-0.091***
	(0.024)	(0.011)	(0.010)	(0.009)	(0.009)	(0.011)	(0.009)	(0.010)	(0.004)	(0.020)
Kids (dum)			0.061**	-0.089**	0.035	-0.045	0.047*	-0.289***	0.006	-0.097*
			(0.021)	(0.087)	(0.021)	(0.043)	(0.020)	(0.169)	(0.006)	(0.056)
Age (diff)	0.001	0.003	0.004***	0.004***	-0.001	0.004*	0.003	-0.005**	-0.001	0.008
	(0.004)	(0.003)	(0.002)	(0.002)	(0.002)	(0.003)	(0.002)	(0.002)	(0.002)	(0.005)
AgeMan	0.006**	0.004***	0.005***	0.003	0.003***	0.002	0.002*	0.001	0.001*	0.007***
	(0.003)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)	(0.001)	(0.001)	(0.003)
Educ (diff)	0.044**	0.30***	0.031***	0.009	0.027***	0.025**	0.030***	0.001	0.008**	0.069***
	(0.022)	(0.011)	(0.011)	(0.007)	(0.009)	(0.011)	(0.010)	(0.008)	(0.006)	(0.021))
MarrDur	-0.007*	-0.001	-0.002	0.001	0.000	-0.002	-0.000	-0.002	-0.000	-0.002
	(0.004)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.000)	(0.003)
Conf	0.052***	0.010	0.015*	(0.005)	-0.003		0.15*	0.018**	-0.002	0.080***
	(0.017)	(0.009)	(0.009)	(0.005)	(0.009)		(0.008)	(0.009)	(0.003)	(0.017)
FinConf	0.049***	0.008	0.007	0.012***	0.011	0.015**	-0.006		0.004	0.072***
	(0.015)	(0.008)	(0.008)	(0.007)	(0.007)	(0.008)	(0.009)		(0.003)	(0.015)
Agree (dum)	-0.0384***	-0.199***	-0.200***		-0.161***	-0.112**	-0.202***	0.017	-0.111***	-0.222***
	(0.148)	(0.030)	(0.027)		(0.027)	(0.072)	(0.026)	(0.008)	(0.069)	(0.062)

Significance levels : $*$: 10% $**$: 5% $***$: 1%

Table 2.5: Choice of Divorce Trajectory: Robustness checks

To check whether our estimates are not driven by an underlying unobserved characteristic, we condition our data on certain subsamples which could be considered a proxy for innate selfishness. More specifically we condition our sample on: (a) the presence of kids (b) whether or not the respondent did voluntary work on a regular basis (c) the level of conflict[17] (d) the level of financial conflict[18] (e) whether the respondent is considered to be a generous person[19]. Although the coefficient of the difference in function specialization does vary substantially between sub-

[17]Conditioning on conflict being indicated as 5 on a 1-5 Likert scale.

[18]Conditioning on financial conflict being indicated as 5 on a 1-5 Likert scale.

[19]Conditioning on respondents indicating 3 or less on the question 'People would describe me as a generous person, prepared to spend my time with others' on a Likert scale from 1 - 6, ranging from fully disagree to fully agree

samples, it always remains positive and significantly different from zero. We can thus conclude that although selection is clearly present, it is not the driver of our results.

2.5.3 Partner Alimony

The descriptive statistics showed that for a vast majority of the couples in the dataset no partner alimony was paid. If the people who have a positive transfer are not randomly selected from the total dataset population, a selection bias might exist. However, when estimating a Tobit type II (Heckman) model nor the full ML estimation nor the more robust two-step approach provides evidence for the presence of selection on observables: a likelihood ratio test of independent equations after a full ML estimation yields a p-value of 0.39 and the Mills' ratio in the two-step approach is highly insignificant (p-value of 0.88). We therefore continue using a two-part (hurdle) model. In the first step we estimate a probit model on the binary fact: is alimony paid or not. The second step is a linear regression of natural logarithm of alimony conditional on alimony being paid in that couple. Of course heteroskedasticity and non-normality of the error terms could be present, but unlike the tobit MLE estimator, neither is required for consistency of the estimator. Since the hurdle model does not eliminate the problem of heteroskedasticity and tests reject a constant variance we use the White-estimator to obtain heteroskedasticity-robust errors. Data on partner alimony will be structured such that the monthly partner alimony payment will be a positive number.

The first step estimates the probability that within the couple alimony is paid. In our probit estimation and include a series of variables indicating a discrepancy in bargaining power, control variables indicating the quality of the match and the level of conflict prior to divorce. In the second step we estimate robust OLS esti-

mates of the height of the spousal alimony, conditional on the fact that alimony is paid within the couple.

In section 3.2 we discussed the duty of maintenance under the new no-fault law. According to the law only an ex-spouse who finds himself/herself in a state of neediness is entitled to spousal alimony. Thus we expect that both wage difference (+) and family income (-) matter. The law also states that when setting the amount of alimony the courts should take into account the decline in income by taking into account marriage duration, age of the spouses, and their behaviour concerning domestic production. How marriage duration should be taken into account is not specified in the law. On the one hand the later a bad match is revealed the greater the damages. On the other hand the new no-fault law stipulates that the duration of alimony payments is limited to the duration of the marriage. Which effect will dominate is a priori unclear.

Table 2.6 reports marginal effects of a probit regression estimating the first part of the hurdle model. As expected, the state of neediness is important: if the wage difference rises with €1000 the probability of setting a non-zero alimony transfer rises with 6.8% and per €1000 more of monthly family income, the probability decreases with 1.8%. Also the mere fact of following the no-fault trajectory raises the probability of a non-zero alimony transfer with 4.6%. For marriage duration we find a positive sign: if the bad quality of a match is revealed later, the damage will be larger and hence the likelihood of compensation rises.

Table 2.7 reports the second part of the hurdle model. We find that partner alimony increases with the wage difference. The size of the coefficient is quite sizable: an additional wage difference of €1000 raises the alimony with 39.1%. Alimony payments also rise with the age of the man and the duration of the marriage. Both variables are related to wealth gathered during marriage.

Art. 301 §3 subsection 2 stipulates that the judge should take into account the former spouses' behaviour during marriage with regard to the organization of the family's needs and care for the children when determining the amount of alimony. We see this as a compensation for victims of rent-seeking. We indeed find that the difference in household production (*Chores*) matters considerably for alimony payments. Couples with a complete unequal distribution of household chores have between 39.5% and 77.2% higher alimony payments than couples with a complete egalitarian distribution of household chores. Judges seem to implement the compensation mechanism rather consistently. Moreover, controlling for all other factors, the alimony payments are a whopping 48.9% higher if couples divorce under the no-fault law. We think of this as a penalty to discourage rent-seeking behaviour. Therefore the long run equilibrium effect of the no-fault law on rent-seeking may be rather limited. Once partners, that seek divorce for the purpose of rent-seeking, and their legal representatives fully understand they risk being penalized for the appropriation of quasi rents in the form of higher alimony, the net incentive effect of the no-fault divorce on rent-seeking may become rather dim.

It is important to note that here we ignored the fact that the chance of ending up in no-fault trajectory is influenced by other independent variables such as the difference in the distribution of household chores. The variables therefore exhibit a significant degree of collinearity. A way to cope with this is to orthogonalise the trajectory choice with respect to the variables given in table 2.3 and 2.4. Results are qualitatively similar, though the coefficients differ slightly. Detailed estimation results are presented in appendix 2.

First Step: Binary Outcome Model (N = 1,594)						
Variable	(1)	(2)	(3)	(4)	(5)	(6)
Wage (diff)	0.064***	0.063***	0.074***	0.074***	0.068***	0.068***
	(0.008)	(0.008)	(0.009)	(0.009)	(0.009)	(0.009)
No-Fault (dum)	0.053***	0.048***	0.042***	0.038**	0.046***	0.046***
	(0.018)	(0.018)	(0.018)	(0.017)	(0.017)	(0.017)
Chores (diff)	-0.013	-0.005	-0.003	-0.025	-0.022	-0.022
	(0.022)	(0.023)	(0.022)	(0.023)	(0.026)	(0.026)
SexRatio		0.085**	0.079**	0.079**	-0.042	-0.043
		(0.036)	(0.036)	(0.035)	(0.049)	(0.049)
FamInc			-0.017**	-0.019***	-0.018***	-0.018***
			(0.007)	(0.007)	(0.006)	(0.006)
Kids (dum)				0.052***	0.015	0.015
				(0.015)	(0.019)	(0.019)
Age (diff)					-0.000	-0.000
					(0.002)	(0.002)
AgeMan					0.001	0.001
					(0.001)	(0.001)
Educ (diff)					0.011	0.011
					(0.007)	(0.007)
MarDurr					0.004***	0.004***
					(0.001)	(0.001)
Conf						0.002
						(0.006)
FinConf						-0.001
						(0.005)
Agree (dum)						0.004
						(0.018)
Pseudo-R^2	0.081	0.086	0.092	0.101	0.132	0.132

Significance levels : $*$: 10% $**$: 5% $***$: 1%

Table 2.6: Partner Alimony Transfers: Two-Part (Hurdle) Model

Second Step: Linear (Robust) Regression (N = 169)						
Variable	(1)	(2)	(3)	(4)	(5)	(6)
Wage(diff)	0.549***	0.533***	0.442***	0.442***	0.384***	0.391***
	(0.070)	(0.069)	(0.080)	(0.080)	(0.078)	(0.083)
No-Fault (dum)	0.356**	0.333**	0.342**	0.328**	0.502***	0.489***
	(0.158)	(0.157)	(0.155)	(0.151)	(0.150)	(0.151)
Chores (diff)	0.395*	0.516**	0.455*	0.425*	0.735**	0.772**
	(0.232)	(0.245)	(0.245)	(0.237)	(0.317)	(0.331)
SexRatio		0.453***	0.479***	0.493***	-0.645	-0.675*
		(0.157)	(0.167)	(0.171)	(0.400)	(0.397)
FamInc			0.111**	0.108**	0.106**	0.095*
			(0.050)	(0.052)	(0.051)	(0.053)
Kids (dum)				0.121	-0.171	-0.211
				(0.294)	(0.268)	(0.280)
Age (diff)					0.002	0.003
					(0.013)	(0.013)
AgeMan					0.029**	0.029**
					(0.013)	(0.013)
Educ (diff)					0.067	0.63
					(0.74)	(0.075)
MarrDur					0.030***	0.031***
					(0.009)	(0.010)
Conf						0.035
						(0.057)
FinConf						-0.027
						(0.059)
Agree (dum)						0.198
						(0.158)
Intercept	4.752***	4.287***	4.046***	3.961***	3.401***	3.402***
	(0.251)	(0.340)	(0.369)	(0.461)	(0.617)	(0.684)
R^2	0.293	0.306	0.316	0.318	0.391	0.396

Significance levels : * : 10% ** : 5% *** : 1%

Table 2.7: Partner Alimony Transfers: Two-Part (Hurdle) Model

2.6 Conclusion

In this paper we analyse whether function specialization during marriage, i.e. substituting domestic production for labour market production, is related to rent-seeking behaviour during divorce. According to Cohen (1987, 2002) and Parkman (1992) the spouse sacrificing most of his/her labour market career to focus on domestic production is expected to receive quasi rents from marriage in a later stage of marriage. Cohen (1987, 2002) describes that this gives the spouse specialized in labour market production an incentive to maximize his/her rent by filing unilaterally for divorce after his or her quasi rents from marriage were extracted in an early stage of marriage, in this way appropriating the future quasi rents of his/her former spouse. However, rent-seeking behaviour by the financially stronger spouse might also occur within marriage. In this case the financially stronger spouse will appropriating the marital rent by being more reluctant to share his or her labour income. In this case the incentive to file for no-fault unilateral divorce in order to obtain some compensation will lie with the financially weaker spouse.

In Belgium no-fault unilateral divorce was only recently introduced after years of discussions between supporters and opponents of the new law, in which the opponents often made reference to rent-seeking à la Cohen as possible negative consequence of the law. If a spouse wanted to engage in rent-seeking à la Cohen Before the introduction of the new law, the choice was between either a consensual divorce or a fault-based divorce. Within the consensual trajectory where both spouses have to agree on the divorce and asset division the *cost* of rent-seeking may be fully internalized. When going through a fault-based divorce spousal alimony was awarded such that the financially weaker spouse could maintain the standard of living. Thus, rent-seeking à la Cohen was penalized by paying alimony. Now, when introducing the no-fault unilateral divorce trajectory also the

requirements for alimony were altered by introducing the concept of neediness instead of standard of living. This combination of no-fault unilateral divorce and the reforms regarding spousal alimony potentially facilitates rent-seeking behaviour à la Cohen.

If the rent-seeking hypothesis holds we expect couples with a more extensive degree of function specialization to find themselves in the no-fault unilateral divorce - trajectory rather than divorcing under mutual consent. We analyse this conjecture by means of unique Belgian data, where no-fault unilateral divorce was only recently introduced. Using a standard probit model we indeed find that couples with a higher inequality of domestic production, measured both directly through the distribution of household chores and indirectly through wage discrepancies, are more likely to divorce under the no-fault divorce trajectory than under the consensual divorce trajectory.

Interestingly, the legislator anticipated this rent-seeking behaviour and introduced a paragraph in the new law on no-fault divorce, which stipulates literally that partner alimony transfers should take into account the age of the spouses, marriage duration and the degree of function specialization. By means of a two-part (hurdle) model we find that partner alimony transfers are more likely for no-fault divorces. We also find that alimony transfers are higher for divorces characterized by more pronounced function specialization, both if measured indirectly by the wage difference between spouses (the easiest and most observable measure of function specialization available to judges) and directly through our measure of unequal distribution of household chores. Furthermore, we find that there is an additional heavy penalty for no-fault unilateral divorces in terms of higher alimony. In this sense the legislator seems to have succeeded in at least mitigating the amount of rent-extraction through the introduction of no fault unilateral divorce.

The question now remains if the penalty mechanism will suffice to fully dissipate the benefit of rent-seeking (keeping in mind that only the height of spousal alimony is influenced by function specialization and not the probability to receive alimony which is still based on the neediness concept). One could argue that the mechanism is less than fully effective since couples with a large wage difference and a more pronounced function specialization - and hence couples in which rent-destruction is more probable to be an issue - are still more likely to divorce under unilateral divorce. However, since the no-fault unilateral law was only introduced a couple of months before our sampling period, it cannot be excluded that divorcing agents may reach the new equilibrium only over time after the precise size of the rent-seeking penalty has been revealed by precedents. In other words, we might just be observing transition effects of the newly introduced legislation. Because of the increased uncertainty that came along with introducing the new law, agents may be temporarily overoptimistic about their chances when going through a no-fault unilateral divorce rather than settling via a consensual divorce. If so, we would in the long run equilibrium no longer expect to find that differences in wages and in function specialization determine trajectory choice. However, anecdotal evidence that couples are starting to include clauses about function specialization and compensation for function specialization in new marriage contracts seems to suggest that, at least to some extent, uncertainty about alimony compensation was too high to fully offset rent-seeking incentives and behaviour. Thus even in equilibrium we may still observe that rent-seeking prone couples show up in the unilateral divorce track.

2.7 Appendix 1: Possible Biases in Self-Reported Function Specialization and Robustness

In the paper we use two measures of function specialization: wage difference and the self-reported division of household chores. It is not unthinkable that the latter might be biased because people tend to overestimate their own share in domestic production. As explained in section 5.2, if both spouses of a divorcing couple filled out the questionnaire we discarded at random data from one spouse to avoid biasing standard errors downwards. However, these data on both couples (N = 508) come very useful to test if there is in fact a significant overreporting of the own share in domestic production. Remember respondents indicated on a 5-point Likert scale (ranging from '*I did a lot more than my ex*' to '*My ex did a lot more than me*') their share in 7 household chores in the last year before filing. If there is no overreporting the sum over all chores of both couples would be 42 (e.g. if both spouses reported that household chores were divided equally they would both score 21). Any score over 42 can be considered as overreporting. The percentage deviation of 42 is plotted in the histogram below.

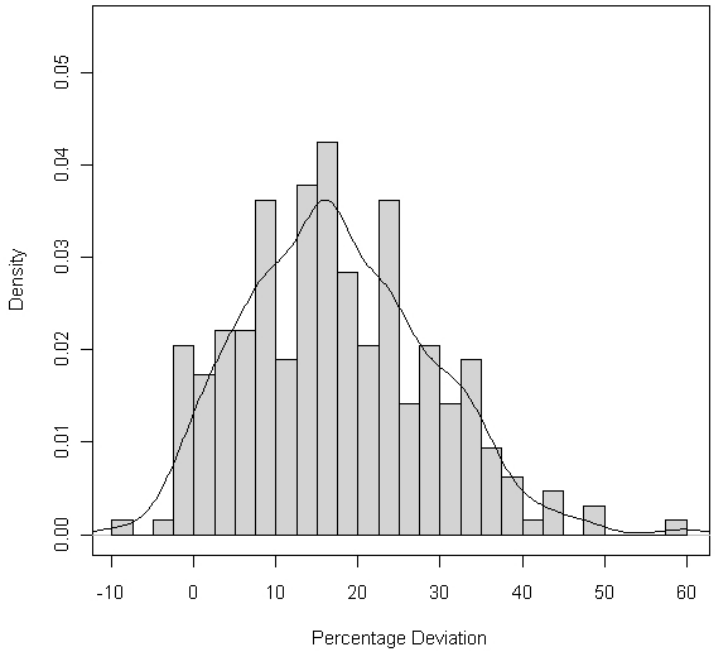

Figure 2.3: Deviation from Perfect Reporting

The question now remains is this overreporting systematic? In other words, is overreporting linked to other variables such as e.g. the level of pre-divorce conflict? To test this we take the percentage deviation from 42 as independent variable and use the level of function specialization (on a 0 to 1 scale), age difference, divorce trajectory, pre-divorce conflict and financial conflict as explanatory variables. We do find evidence that the bias is positively linked to the level of function specialization, divorce trajectory, pre-divorce conflict and financial conflict, though the explanatory power of the regression is quite small. We then have to check if this would alter our results. Making the extreme assumption that *everyone overreports*, we take the coefficients obtained in our regression model back to our original data set and correct for the bias in reported domestic production.

We then truncate our chores construct from below since it is not possible to have a value of chores below zero and rerun all regressions. We find that our results barely alter. Only the coefficient of chores reported in table 2.7 seems to be somewhat different (e.g. in Table 2.7 column 6 we now find a coefficient of 0.933 instead of 0.771). Thus the results obtained in this paper are robust to a self-reporting bias on household chores. Further results are available on request.

2.8 Appendix 2: Estimating Alimony Transfers with Orthgonalized Divorce Trajectory

First Step: Binary Outcome Model (N = 1,594)						
Variable	(1)	(2)	(3)	(4)	(5)	(6)
Wage (diff)	0.066***	0.064***	0.076***	0.076***	0.070***	0.070***
	(0.008)	(0.008)	(0.009)	(0.009)	(0.008)	(0.009)
No-Fault (dum)	0.019***	0.018***	0.018***	0.017**	0.018***	0.018***
	(0.007)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
Chores (diff)	-0.008	0.001	0.002	-0.021	-0.016	-0.017
	(0.022)	(0.023)	(0.022)	(0.023)	(0.025)	(0.026)
SexRatio		0.096***	0.088**	0.087**	-0.032	-0.033
		(0.036)	(0.036)	(0.035)	(0.048)	(0.048)
FamInc			-0.018**	-0.021***	-0.020***	-0.019***
			(0.007)	(0.006)	(0.006)	(0.006)
Kids (dum)				0.053***	0.018	0.017
				(0.015)	(0.018)	(0.018)
Age (diff)					-0.000	-0.000
					(0.002)	(0.002)
AgeMan					0.001	0.001
					(0.001)	(0.001)
Educ (diff)					0.011	0.011
					(0.007)	(0.007)
MarDurr					0.004***	0.004***
					(0.001)	(0.001)
Conf						0.003
						(0.006)
FinConf						0.001
						(0.005)
Agree (dum)						0.000
						(0.018)
Pseudo-R^2	0.079	0.085	0.093	0.102	0.132	0.133

Significance levels : $*$: 10% $**$: 5% $***$: 1%

Table 2.8: Partner Alimony Transfers: Two-Part (Hurdle) Model

Second Step: Linear (Robust) Regression (N = 169)						
Variable	(1)	(2)	(3)	(4)	(5)	(6)
Wage(diff)	0.560***	0.544***	0.464***	0.463***	0.412***	0.416***
	(0.071)	(0.069)	(0.084)	(0.084)	(0.080)	(0.085)
No-Fault (dum)	0.156**	0.160**	0.155**	0.150**	0.207***	0.201***
	(0.062)	(0.062)	(0.062)	(0.060)	(0.060)	(0.063)
Chores (diff)	0.426*	0.566**	0.512**	0.478**	0.803**	0.830**
	(0.235)	(0.250)	(0.251)	(0.241)	(0.326)	(0.339)
SexRatio		0.518***	0.541***	0.553***	-0.532	-0.572
		(0.162)	(0.170)	(0.173)	(0.392)	(0.389)
FamInc			0.087*	0.094*	0.086*	0.095*
			(0.051)	(0.053)	(0.051)	(0.053)
Kids (dum)				0.125	-0.141	-0.183
				(0.292)	(0.267)	(0.280)
Age (diff)					0.004	0.004
					(0.013)	(0.013)
AgeMan					0.029**	0.029**
					(0.013)	(0.013)
Educ (diff)					0.069	0.66
					(0.74)	(0.075)
MarrDur					0.029***	0.030***
					(0.009)	(0.010)
Conf						0.045
						(0.057)
FinConf						-0.015
						(0.060)
Agree (dum)						0.154
						(0.158)
Intercept	4.849***	4.303***	4.099***	4.009***	3.477***	3.401***
	(0.228)	(0.340)	(0.360)	(0.454)	(0.605)	(0.685)
R^2	0.296	0.313	0.320	0.322	0.392	0.396

Significance levels : * : 10% ** : 5% *** : 1%

Table 2.9: Partner Alimony Transfers: Two-Part (Hurdle) Model

2.9 Appendix 3: Child Support Transfers

Because data on child support transfers are $\in \Re^+$ often - and wrongfully - a tobit setup is used. However, a tobit setup is only justified when observations are censored (i.e. observations are zero, but could be less than zero). One could also argue that there is a possible selection effect in couples who set a zero transfer and a non-zero transfer. As mentioned in the section 4.2, child support payments in general are not and should not be as subjective to relative bargaining power as partner alimony. Not surprisingly, when using a selection model we do not find evidence of selection. To cope with the 197 zero-observations and in the absence of selection we use a two-part model or the hurdle model, as we did for partner alimony. In the first step we estimate a probit model on dY. The second step is a linear regression of $\ln(Y)$ conditional on $Y > 0$.

As bargaining variables we include the same ones as we used when estimating the trajectory choice plus the monthly wage of the payer of the child support and a series of variables related to children. The children-related variables are a dummy indicating whether or not the child(ren) reside equally with both parents, the number of children and the age of the youngest child. The estimated model also contains a dummy variable indicating a non-zero spousal alimony transfer and the trajectory.

The Belgian law stipulates that when it comes to child support payments "*parents should contribute proportionate to their resources*[20]". Although this is a vague concept since it is not clearly defined what these resources are, we expect the wage difference to be positively related to child support transfers. Furthermore, it is logical that the more children and the more unequal the child's residence with both parents is, the higher the amount of child support. Conflict variables on the

[20]Translation of the Belgian Civil Code Art. 203 §1.

other hand should not matter. As mentioned before, in an univariate setting we found no statistically significant correlation between partner alimony and child support. This is tested here in a multivariate setting by including a dummy which is one if partner alimony is greater than zero. Also, a quadratic term of marriage duration was included to cope with possible non-linearities.

The estimates in table 2.10 present the results from the second step of the two-part hurdle model.

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Wage (diff)	0.053	0.053	0.064	0.061	0.049	0.053	0.048	0.048	0.048
	(0.040)	(0.040)	(0.041)	(0.041)	(0.038)	(0.037)	(0.037)	(0.037)	(0.038)
WagePayer	0.303***	0.296***	0.242***	0.250***	0.198***	0.201***	0.199***	0.199***	0.194***
	(0.036)	(0.036)	(0.058)	(0.058)	(0.054)	(0.053)	(0.053)	(0.053)	(0.054)
Chores (diff)	-0.070	-0.030	-0.026	-0.060	-0.079	-0.101	-0.018	-0.028	-0.024
	(0.078)	(0.079)	(0.080)	(0.080)	(0.074)	(0.073)	(0.086)	(0.087)	(0.088)
SexRatio		0.654**	0.623**	0.581**	0.166	-0.216	-0.456	-0.474	-0.469
		(0.290)	(0.292)	(0.290)	(0.271)	(0.289)	(0.350)	(0.351)	(0.351)
FamInc			0.046	0.045	0.065	0.049	0.036	0.038	0.041
			(0.039)	(0.038)	(0.036)	(0.036)	(0.035)	(0.036)	(0.036)
Residence (dum)				0.226***	0.209***	0.206***	0.237***	0.238***	0.245***
				(0.079)	(0.073)	(0.072)	(0.072)	(0.073)	(0.075)
Kids					0.255***	0.246***	0.226***	0.227***	0.229***
					(0.025)	(0.025)	(0.028)	(0.028)	(0.028)
YoungChild						0.016***	0.010	0.010	0.011
						(0.004)	(0.006)	(0.007)	(0.007)
Age(diff)							0.004	0.004	0.005
							(0.006)	(0.006)	(0.006)
AgeMan							0.006*	0.006*	0.006*
							(0.003)	(0.003)	(0.003)
Educ (diff)							-0.015	-0.016	-0.017
							(0.026)	(0.026)	(0.026)
MarrDur							0.054***	0.055***	0.054***
							(0.013)	(0.013)	(0.013)
$MarrDur^2$							-0.002***	-0.002***	-0.002***
							(0.000)	(0.000)	(0.000)
Conf								0.012	0.013
								(0.021)	(0.021)
FinConf								0.005	0.005
								(0.019)	(0.019)
Agree (dum)								0.029	0.025
								(0.059)	(0.059)
No-Fault (dum)									-0.036
									(0.057)
Partneralimony (dum)									0.039
									(0.069)
Intercept	4.889***	4.294***	4.260***	4.113***	4.026***	4.270***	3.988***	3.938***	3.931***
	(0.071)	(0.274)	(0.275)	(0.2787)	(0.257)	(0.264)	(0.290)	(0.297)	(0.298)
R^2	0.213	0.220	0.222	0.232	0.347	0.357	0.357	0.381	0.382

Significance levels : $*$: 10% $**$: 5% $***$: 1%

Table 2.10: Child Support Payments (N = 602)

Since we take the natural logarithm of child support payments as dependent variable the coefficients in table 2.10 can be readily interpreted as elasticities. Belgian law is rather vague on child support transfers and only stipulates that ex-spouses should pay according to their respective means. Surprisingly we find that not so much wage difference but the level of the wage of the payer[21] is relevant for child support payments: if the wage of the payer rises with €1000 monthly child support will be 19.4% higher. Payments also increase with the number of children and if the child does not reside an equal time with both parents. The older the youngest child, the higher the amount of the monthly child support payment. The sex ratio is statistically significant in columns (2) to (4). However, this result is spurious. The sex ratio is attributed based on the age of the man. There exists therefore a high correlation with age of the man and other variables such as number of children, age of the child and marriage duration. We also find that marital duration is positively (though concavely) influencing the magnitude of child support transfers. A possible explanation for this is that the longer a marriage last, the more compassion has grown between the spouses and the more spouses will agree on what is best for the children because they can more correctly estimate the true cost of children. Conflict before divorce does not have an impact on child support payments. So, neither the followed divorce trajectory nor the function specialization scale seem not to have an impact on child support payments. Also the conflict variables are not significant.

[21] Since both wage difference and wage of the payer are used in our specification, wage difference actually proxies the wage of the receiver. Nonetheless our findings remain unaltered, namely that the wage of the payer is the pre-dominant explanatory factor.

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3

Making Divorce Easier: the Role of No-Fault and Unilateral Revisited

3.1 Introduction

In the past decades scholars in family law and economics have spent a great deal of attention on the so-called no-fault revolution, i.e. the introduction of no-fault divorce in multiple States in the US. Since no-fault laws were introduced in 28 States in different years, the US provides an excellent setting to investigate the effect of the introduction of no-fault divorce on the divorce rates using a panel data

set-up. The debate[1] started in the American Economic Review with Peters (1986), followed by a comment from Allen (1992), and a reply from Peters (1992) herself and continued with Friedberg (1998). Three main issues could be discerned. First of all there is the problem of endogeneity of legal reform and higher divorce rates, since there may be pre-existing state trends. States with higher divorce rates may be more open to the concept of divorce and therefore more likely to introduce no-fault divorce. Secondly there is the problem of classification of States. This point was one of the main critiques raised in Allen (1992). But also how to deal with the requirement of separation prior to divorce is crucial as demonstrated in Gruber (2004). A third hotly debated question is whether or not the effects found are durable. Put differently, long-run should be clearly discerned from short-run effects.

Wolfers (2006) came up with a nice analysis which seemed to parry all the main issues summed up above. Stressing the importance of the dynamics of the divorce rates after a legal change, Wolfers finds that there was indeed an immediate spike in the divorce rates, which seemed to vanish after more or less 10 years. Moreover, his results indicate that the divorce rate might be even lower than the original trend level after a decade, although these results are not robust to alternative specifications.

The European literature which focused on no-fault divorce has mimicked the US approach: countries were classified by the year in which they introduced no-fault and/or unilateral divorce grounds to analyse the impact of no-fault divorce in Europe. Using a panel of 18 European countries, and a timespan ranging from 1950 till 2003, Gonzalez and Viitanen (2009) find a significant effect of divorce law changes which facilitate divorce. Considering the introduction of no-fault divorce

[1] A nice overview of the no-fault debate can be found in Mechoulan (2005).

and unilateral divorce both separately and independently, they find that the crude divorce rate in their panel rose with about 0.6 per 1000 people with the bigger part this increase due to the introduction of no-fault divorce. In a parallel study, Kneip and Bauer (2009) used a similar framework to investigate the impact of de facto unilateral divorce laws. They find that indeed the introduction of *de facto* unilateral divorce laws did significantly and durably raise the crude divorce rate, but that, however, this was not the case for *de jure* unilateral divorce laws, i.e. explicitly unilateral divorce law on top of a de facto possibility.

In this paper we investigate the effect of various legal reforms on the crude divorce rate in Belgium from 1960 till 2009. Using Belgium as a case study, we demonstrate that solely relying on a classification based on a no-fault divorce dummy may lead to biased results, because important legal changes are overlooked. Moreover, the procedural level of legislation is entirely disregarded though it might be quite important. Djankov et al. (2003) show that procedural formalism significantly differs over countries, even when legislation is similar. We also propose an alternative proxy for '*making divorce easier*' namely the duration of the legal process. Though admittedly imperfect, duration has the main advantage of being objectively measurable and comparable across countries, regardless of the legal setting. Also changes at the procedural level with the aim of making divorce easier will be captured by this approach. The remainder of this paper is organised as follows: section 2 presents an overview of the divorce legislation changes in Belgium in the period from 1960 till present and situates these changes in an international context. Section 3 presents the methodology and results, whereas section 4 concludes.

3.2 The Case of Belgium

3.2.1 Divorce Legislation Changes in Belgium: 1960 - 2009

Belgian divorce legislation underwent several significant reforms since the 1960's[2]. Prior to 1974 divorce legislation in Belgium remained largely unchanged from the original divorce legislation which was incorporated in Napoleon's *Code Civil*[3]. The Code Civil of 1804 defines certain facts that provide legal grounds for divorce: the support of a mistress by the husband, adultery of the wife, violence, and cruelty. The Code Civil also kept the possibility of consensual divorce as introduced right after the French Revolution in 1789, but subjected it to very strict formalities. Thus, prior to 1974 divorce could be obtained either by demonstrating fault by the other spouse, or by consensual request.

The law of July 1974 allows for divorce to be obtained directly and against the will of the non-guilty spouse, if the couple was living separately for 10 years and this separation demonstrates the irretrievable breakdown of the marriage. Regardless the long required separation period, the law of July 1974 introduced no-fault unilateral divorce in Belgian law. In December 1982 this required separation period as ground for divorce was reduced from 10 to 5 years.

June 1994 marked an important change in divorce legislation at the procedural level. Prior to 1994 consensual divorce was a rather laborious and lengthy procedure, which stemmed directly from the Code Civil. The law of June 1994 shortened and simplified the procedure considerably. Also, the number of court appearances spouses had to make was reduced from 3 to 2. The grounds for divorce,

[2]For an extensive overview, see Verschelden (2010)

[3]A minor legal reform did take place in July 1962. This change, however, only dealt with very specific cases and is therefore of no importance to this paper.

however, remained unaltered.

Similar to the changes in 1974 and 1982, the law of April 2000 once more lowered the required separation period as ground for divorce from 5 to 2 years. The last legal change in the considered period took place in April 2007. This reform was again substantial changing both the procedure and the grounds for divorce. The law of April 2007 allowed for unilateral no-fault divorce which can be obtained after 1 year of separation, even if the other spouse does not agree on divorcing. If, however, spouses both file for no-fault divorce, divorce can be obtained after 6 months. The consensual divorce procedure remained unchanged, with the exception of the separation period which was reduced to 6 months. It is important to note that a factual separation period of 6 months is not a requisite in the consensual trajectory. However, having been factually separated for at least 6 months reduces the number of personal appearances in court from 2 to 1. In other words: having been factually separated for at least 6 months shortens the divorce procedure. Although consensual divorce and consensual no-fault divorce are very similar, a crucial difference remains that in the old consensual procedure spouses are required to have an agreement on all their legal affairs (residence, child support, alimony, personal effects); whereas this is not required in the no-fault procedure. Put differently: in the old consensual procedure negotiations on asset division are held prior to divorce, which is not necessarily the case in the new no-fault trajectory.

Law	In Effect	Nature of Change	Separation Period
July 1974	August 1974	Unilateral divorce based on factual separation	10 years
December 1982	December 1982	Reduced required separation period	5 years
June 1994	July 1994	Simplification and shortening of divorce procedures	5 years
April 2000	May 2000	Reduced required separation period	2 years
April 2007	September 2007	No-fault unilateral after reduced separation period	1 year or 6 months

Table 3.1: Divorce Legislation Changes in Belgium: 1960s - 2009

3.2.2 No-Fault and Unilateral Classification

As mentioned before, one of the main issues in the US based empirical literature was the classification of states. When studying European divorce legislation, it goes without saying that this issue becomes quite crucial. The classification of countries in Gonzalez and Viitanen (2009) depends on countries having introduced no-fault divorce and/or unilateral divorce. Now how to classify countries as no-fault or unilateral? As Gonzalez and Viitanen (2009) state: "*Under a 'fault' regime, a divorce can only be granted to the innocent party if he/she presents proof of fault in court*". A country is classified as unilateral when divorce is allowed on request of one of the spouses, without the other spouse necessarily consenting.

The Belgian case which is studied in this paper illustrates why this classification is problematic. Using this classification, as Gonzalez and Viitanen (2009) did, no-fault divorce was possible in Belgium prior to 1950. This is true in the sense that Belgian legislation - and many other legal systems based on Napoleon's Code Civil - allowed for consensual divorce, which does not require fault grounds. It cannot be excluded that the classification as no-fault by Gonzalez and Viitanen (2009) of countries which introduced divorce and simultaneously no-fault divorce after 1950 - namely Ireland, Italy, Portugal and Spain - drives their results. Only three other countries (France, Greece and the UK) who allowed for divorce pre-1950 introduced no-fault divorce at a later stage.

Also the classification of countries with regards to unilaterality raises several issues. In Belgium no-fault unilateral divorce was allowed in 1974. However, divorce was only obtainable against the will of the innocent spouse after a factual divorce of ten years, if this demonstrated the irretrievable breakdown of the marriage. Moreover, and more importantly, the spouse filing for divorce after 10 years

of factual separation was presumed to be the guilty spouse, thus bearing all undesirable consequences with regards to patrimonial proceedings. This presumption of guilt is a rebuttable presumption (*juris tantum*): the judge can decide otherwise if the plaintiff provides evidence that the factual separation is due to guilt of the other spouse (Gerlo, 2003). Besides the factual separation the plaintiff also had to prove the irretrievable breakdown of the marriage, and that divorce would not mean a significant deterioration of the material wellbeing of the children (see De Busschere (1990) for a detailed overview).

It is clear that these conditions are very restrictive. Divorce based on factual divorce was therefore only used if all other forms of divorce (divorce based on certain facts or consensual divorce) were not possible. Senaeve (1983) reports that between 1975 and 1981 about 1000 divorces per year were based on factual separation, which e.g. for 1979 amount to barely 7%. The presumption of guilt, and the other two conditions were only rescinded under the April 2007 reforms. We therefore argue that the 1974 legislation - and for that matter also the 1982 and 2000 legislation which shortened the requirement of factual separation - can simply not be thought of as *true* no-fault unilateral divorce.

The same point holds for the no-fault classification: even in the Code Napoleon consensual - and therefore by definition no-fault - divorce was allowed although it was extremely difficult to obtain. This, however, cannot be compared in any way to the no-fault revolution which occurred in previous decades throughout the United States. As Gonzalez and Viitanen (2009) repeatedly stress, what really matters is making divorce "easier". Using dummies classifying countries as unilateral or no-fault - albeit interesting for cross-national comparison - fails to provide an answer to the underlying question: if divorce legislation is altered such that divorce is easier to obtain, will divorce rates (durably) rise?

To answer this question properly all (major) divorce legislation changes should be taken into account, ideally combined with data on the average duration of the divorce process for this will truly give an idea whether or not divorce was de facto made easier for spouses. The 1994 reform which took in place, was in essence a reform on the procedural level. When relying on a no-fault and/or unilateral classification this important aspect of divorce legislation is overlooked. In this paper we will take Belgium as case study and use a cointegration approach, as used by Binner and Dnes (2001) and Coelho and Garoupa (2006), to estimate the effect of various types of divorce reforms with special attention to the duration of the entire legal process.

3.3 Data and Cointegration Analysis

When regressing two non-stationary series onto each other, regression results might be spurious. In other words, two independent variables might erroneously seem related because they both are trended. Regression results will therefore be biased. However, there is one exception, namely if both variables have a common stochastic trend, i.e. if both variables are cointegrated. If so, these variables will move closely together towards a common long-run equilibrium. A very nice illustration of the intuition behind cointegration can be found in Murray (1994) using the humorous example of '*a drunk and her dog*'. A drunk walking down the street will not be walking in a nice straight line. Neither will a dog walking down the street, sniffing out every possible scent in the street. They both are thus exhibiting a random walk process. But what if the dog is actually the drunkard's dog? The dog will wander off at times, but always return to the same path as the drunk since they both have a common goal, namely returning home. Put differently, they both have the same long-run equilibrium. Because there exists a common long-

run equilibrium, any deviations from this equilibrium path will be temporary and therefore stationary. Thus, to test whether cointegration is present one performs a Dickey-Fuller test which tests whether the residuals of a regression of one or more non-stationary variables are stationary.

If cointegration is present, the Ordinary Least Squares estimator (OLS) has some really interesting econometrical properties. First of all, there is the property of super consistency which makes it very suitable for small samples. When OLS is super consistent the estimated parameter $\hat{\beta}$ converges much faster to the true parameter β than with conventional asymptotics (when performing OLS on stationary data). Evidently this is a very useful property in our case study which deals with data from 1960-2009 (N=50). Another interesting property of cointegration is that it in fact provides a strong specification test of the empirical model. If one does not succeed in capturing the underlying trend of a non-stationary series, the residuals can never be stationary, i.e. integrated of order zero or I(0).

To investigate whether a cointegration relationship exists between our explanatory variables and the crude divorce rate, we first describe and analyse the stationarity of the data used[4]. The variables have to be integrated of the same order (e.g. both have to be linear or quadratic)for a cointegrating relationship to be possible. We then proceed with the estimation of our model and cointegration analysis. Apart from the crude divorce rate (number of divorces per 1000 population, *CRUDEDIV*) we also run the same analysis using the number of divorces per 1000 married population (*DIVPOPMAR*) as robustness check. As Rasul (2006) demonstrates, the marriage rate might also be affected by divorce law reforms, thus biasing results obtained by using the crude divorce rate. This is even more important for Belgium where crude marriage rates have steadily declined since

[4]All data used were gathered from EUROSTAT, unless explicitly mentioned otherwise.

the 1960's and are currently staggeringly close to the crude divorce rate. Nevertheless, both series exhibit similar characteristics as is shown in figure 3.1. The red vertical lines represent the years in which a major divorce reform took place.

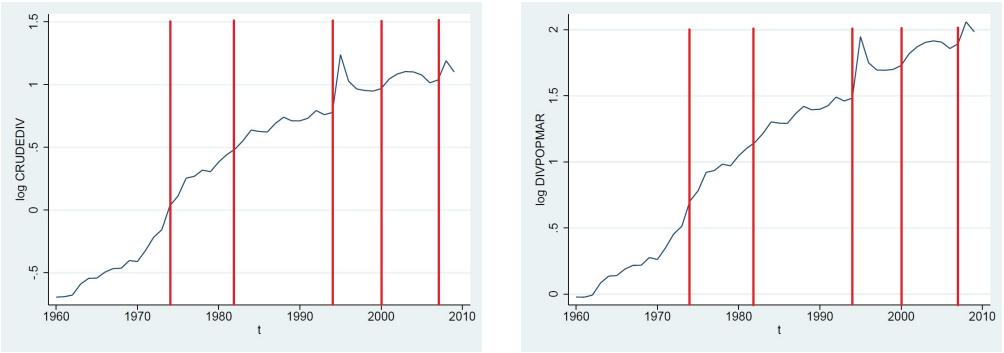

Figure 3.1: log *CRUDEDIV* and log *DIVPOPMAR*

Both the *CRUDEDIV* and the *DIVPOPMAR* series exhibit a clear upward trend. Both series also show an immense spike following the 1994 divorce legislation reform. A minor spike can also be observed after the latest 2007 reform. The other divorce reforms do not seem to have caused an immediate spike when looking at the series. This is somewhat surprising when considering the 1982 reform: the required factual separation time decreased from 10 to 5 years, and no transitional provisions were provided in the law (Senaeve, 1983), so a spouse "*waiting*" more than 5 years for the 10 years separation period to pass could obtain divorce instantly. Yet, as mentioned supra, divorce based on factual separation was still subject to quite strict conditions which made divorce based on fact a sort of last resort divorce. Last but not least, because the series are clearly non-stationary visually inspecting the series might be deceiving. It is therefore imperative to an in-depth econometric analysis.

3.3.1 Stationarity of the Time-Series

As explanatory variables for the baseline model we use quite standard variables, namely the business cycle (GDP[5]) and a proxy for social norms and values (the fertility rate, and the proportion of out of wedlock births). The fertility rate has steadily declined over the decades coming from 2.57 in 1960 (peaking at 2.71 in 1964), hovering around 1.5 from the mid '80s till mid 90's. In the early 2000's fertility rose again (albeit slightly) from 1.6 till 1.84 in 2009. The proportion of out of wedlock births on the other hand has been exponentially rising since the beginning of our sample period, coming from merely 2% in 1960 and climbing to 45.7% in 2009.

The table below presents Dickey-Fuller (DF) test statistics for a specification including a constant. The second column of the table also incorporates a trend in the underlying regression. All variables have been log-transformed. Our dependent variables, the crude divorce rate and the number of divorces per 1000 married population, as well as the fertility rate are clearly I(1). Both GDP and the out of wedlock birth rate show some evidence of I(1), albeit inconclusive. If these variables are not I(1) but in fact I(0) processes, cointegration is still possible. If, however, these variables are integrated of higher order, cointegration is no longer possible.

[5]Purchasing power parity converted GDP per capita at current prices for Belgium was obtained from Alan Heston, Robert Summers and Bettina Aten, Penn World Table Version 7.0, Center for International Comparisons of Production, Income and Prices at the University of Pennsylvania, May 2011.

Variable	Dickey-Fuller Test Statistic	Dickey-Fuller Test Statistic
log *CRUDEDIV*	-1.604	-1.404
Δ log *CRUDEDIV*	-8.121***	-8.404***
log *DIVPOPMAR*	-1.136	-2.033
Δ log *DIVPOPMAR*	-8.398***	-8.448***
log *GDP*	-4.219***	0.910
Δ log *GDP*	-3.025**	-4.336***
log *FERTILITY*	-2.189	0.158
Δ log *FERTILITY*	-5.179***	-6.490***
log *BIRTHSOUTOFWED*	2.099	-2.641
Δ log *BIRTHSOUTOFWED*	-3.268**	-3.039
log *AVDURATION*	0.082	-2.365
Δ log *AVDURATION*	-7.295***	-7.402***
Constant included	Yes	Yes
Trend included	No	Yes

Significance levels : $*$: 10% $**$: 5% $***$: 1%

Table 3.2: Stationarity of the Series

We first estimate a simple version of the model to check whether there exists a common stochastic trend in these non-stationary series. As mentioned before, to test this we check if the residuals are I(0) and thus cointegration is present[6]. Table 3.3 reports the results of this estimation as well as the DF-test statistic. Because OLS by construction picks coefficients such that the residuals have the lowest possible variance, these residuals can appear more stationary than they actually are. Standard critical values, as provided by most econometric software, are therefore too low and may lead to type 2 errors. MacKinnon (2010) provides

[6]Estimations using DOLS to control for serial correlation in the cointegrating vectors yielded similar results and are available on request.

some critical values for cointegration tests and these critical values are used in most papers dealing with cointegration. However, to avoid biases because of the particularities of the data - i.e. relatively small sample sizes and a relatively high number of dummy variables - it is imperative that critical values are simulated for the specific data used. Simulated critical values for our various specifications are reported in appendix. We report results for both the crude divorce rate and divorces per 1000 married population as dependent variable.

We see that in both specifications cointegration can be found at the five percent level, meaning that some kind of long run equilibrium exists between the divorce rate and our explanatory variables. All the explanatory variables have the expected sign, but not all are significant. The DF-statistic indicates that the residuals are stationary and that we thus have established a good baseline to capture the trend in Belgian divorces. Note that cointegration is found, albeit at the 5 percent level. This may be due to the fact that possible alterations of the trend caused by legal changes are not taken in to account. If so, we would except to find stronger evidence of cointegration in our specification including dummies for legal regimes.

Variable	*CRUDEDIV*	*DIVPOPMAR*
log *GDP*	0.395***	0.508***
	(0.118)	(0.123)
log *FERTILITY*	-0.770***	-0.354
	(0.252)	(0.261)
log *BIRTHSOUTOFWED*	0.121	0.118
	(0.077)	(0.079)
Intercept	-3.050***	-3.638***
	(1.093)	(1.131)
DF-statistic	-4.989**	-4.577**

Significance levels : $*$: 10% $**$: 5% $***$: 1%

Table 3.3: Baseline Model

In line with Binner and Dnes (2001) and Coelho and Garoupa (2006) we now incorporate dummies to capture different legal regimes and see whether the trend in divorces has altered. As mentioned before in the period of analysis (1960-2009) Belgium underwent five major divorce law changes. We therefore constructed dummy variables which take the value of 0 in those years before the law was in effect, and 1 from the year the law has been in effect until 2009. Because we add five explanatory variables - and therefore lose some degrees of freedom - the critical values of the DF-test rise considerably. However, these dummies also contain a vast amount of information and therefore the DF-statistic also rises substantially. In this specification we find very strong proof of cointegration, and thus of correctly specifying our empirical model to capture the trend in the crude divorce rate and divorces per 1000 married.

Variable	*CRUDEDIV*	*DIVPOPMAR*
log *GDP*	0.514***	0.516***
	(0.158)	(0.157)
log *FERTILITY*	-0.197	-0.080
	(0.349)	(0.347)
log *BIRTHSOUTOFWED*	-0.106	-0.057
	(0.133)	(0.132)
1974 Legal Regime	0.202***	0.210***
	(0.065)	(0.064)
1982 Legal Regime	0.138**	0.112
	(0.068)	(0.067)
1994 Legal Regime	0.175***	0.183***
	(0.057)	(0.056)
2000 Legal Regime	0.020	0.059
	(0.050)	(0.050)
2007 Legal Regime	-0.014	0.031*
	(0.056)	(0.056)
Intercept	-4.314***	-3.806**
	(1.429)	(1.420)
DF-statistic	-7.579***	-7.576***

Significance levels : $*$: 10% $**$: 5% $***$: 1%

Table 3.4: Baseline with Legislation Dummies

Looking at the legal change dummies in table 3.4, we see that only the legal changes of 1974 and 1994 durably an unambiguously raised the trend level of divorces in Belgium, though spikes can be seen after each and every divorce law

reform. We also find weak evidence that the 2007 reform raised the trend level but only for the divorces per 1000 married population. This could be explained by the fact that the married population has steadily declined since the mid-nineties coming from nearly 5 million in 1995 dropping to less than 4.5 million in 2009. However, the result for the 2007 reform should be interpreted with the necessary caution since there are too few data points after the reform to conclude with certainty whether or not the trend level shifted.

When eyeballing both the crude divorce rate and the divorces per 1000 married series (see Figure 3.1) the peak after the 1994 legal change especially pops out. Indeed, when taking a more detailed look at the results we see that the 1994 dummy has a quite sizeable coefficient indicating a large deviance from the (previous) trend. Whereas the 1974, 1982 and 2000 reforms made (fault-based) unilateral divorce easier, and the 2007 reform introduced no-fault unilateral divorce, the 1994 reform simplified the procedure and did not change anything to no-fault or unilateral grounds. Put differently: if the 1994 divorce reform were to be ignored the trend level would be estimated about 18 percent too low, therefore biasing all results for subsequent periods. Thus, focusing merely on the concepts no-fault or unilateral may lead to erroneous conclusions.

To measure the effect of making divorce easier we suggest a straightforward proxy: the average duration of the legal process leading to divorce. Although this is still an imperfect proxy and captures one specific dimension - albeit a quite important dimension - of making divorce easier, it is without doubt an indicator which is objectively measurable across different legal regimes and countries. For Belgium these data are readily available in Bastaits et al. (2011). Bastaits et al. (2011) collected cohort data on Flemish divorced couples randomly drawn from the national register. They find that the duration of the legal process leading to

divorce has considerably dropped throughout our sample. The average duration of the legal process in the cohort divorcing prior to the 1982 legal change was 31.7 months. This average duration kept on dropping to respectively 24.9, 13.5, 12.7 and 7.6 months after the 1982, 1994, 2000 and 2007 legal change.

These significant declines in average duration of the legal process may also provide evidence that these divorce law changes were not simple exogenous political changes. According to Posner (1993) judges will - just like everybody else - to maximize their leisure time. Because a lengthy divorce procedure is not in their interest they may, once the caseload and/or backlog reaches a certain level, be inclined to lobby for reforms which speed up the process. This again stresses the added value of the procedural level, on top of the pure legislative level.

The advantages of incorporating data on duration as a proxy for making divorce easier are numerous. First of all, there is no need to classify legal regimes as no-fault, unilateral, or any other country specific classification[7]. Secondly, and in line with the first point, such an approach allows us to easily conduct cross-country analysis. Data on duration of the divorce process over divorce regime cohorts can easily be gathered across countries by incorporating them in existing cross-European cohort studies. And last but not least, by using duration data, we can draw clear-cut policy conclusions. Table 3.5 reports the results for our baseline specification including duration of the legal divorce process.

However, there is one potential drawback. When working solely with duration, no selection effects are taken into account. Suppose no unilateral divorce law exists and there are couples in which only 1 spouse wants divorce. If then some form of unilateral divorce is introduced, these couples will be selected into the sample.

[7]As mentioned supra, in the US literature the matter of classification of States was one of the main issues in the Peters-Allen-Friedberg discussion.

When a legal change makes more couples eligible for divorce, a selection bias might therefore arise in the coefficient of duration. Since in Belgium some form of (no-fault) unilateral divorce existed since 1974 this bias is not present here, since the coefficient of duration also remains quasi unaltered when excluding the pre-1974 (or even the pre-1982) period. Though the bias is not relevant in our case, it should be taken in consideration when looking at a panel of European countries. The importance of such a selection bias remains an open question. As Fella et al. (2004) explain, even when only consensual divorce is allowed, the choice is not between divorce and continuing to be happily married, but rather divorce and a very non-cooperative form of marriage. In other words, even if only consensual divorce is allowed for, the spouse least wanting divorce might very well be convinced to settle for consensual divorce when confronted with an extremely non-cooperative marriage. If so, the selection bias might be negligible.

Variable	*CRUDEDIV*	*DIVPOPMAR*
log *GDP*	0.488***	0.615***
	(0.116)	(0.117)
log *FERTILITY*	-0.694***	-0.267
	(0.237)	(0.241)
log *BIRTHSOUTOFWED*	-0.056	-0.085**
	(0.096)	(0.097)
Duration	-0.014***	-0.015***
	(0.005)	(0.005)
Intercept	-3.273***	-3.893***
	(1.024)	(1.040)
DF-statistic	-6.135***	-5.844***

Significance levels : $*$: 10% $**$: 5% $***$: 1%

Table 3.5: Baseline with Duration

The variable duration represents the duration of the legal process leading to divorce expressed in months per divorce law regime cohort. We find for the entire sample that when the duration of the legal process declined with one month, the equilibrium trend of the divorce rate rose with 1.4%. This is quite substantial given that the duration of the legal process fell from 24.9 to 13.5 months after the 1994 reform. Model comparison is a difficult endeavour when dealing with non-stationary data. Because of non-stationarity conventional goodness-of-fit measures such as R-squared are extremely high (above 99 percent) for both the model with dummies as well as the model with duration. Information criteria such as the Akaike's Information Criterion and (even more so) Schwarz's Bayesian Information Criterion evidently prefer the model with duration due to its com-

pactness. Figure 3.2 below plots the crude divorce and the fitted values of both model specifications. On the whole we can say that they perform quite similarly.

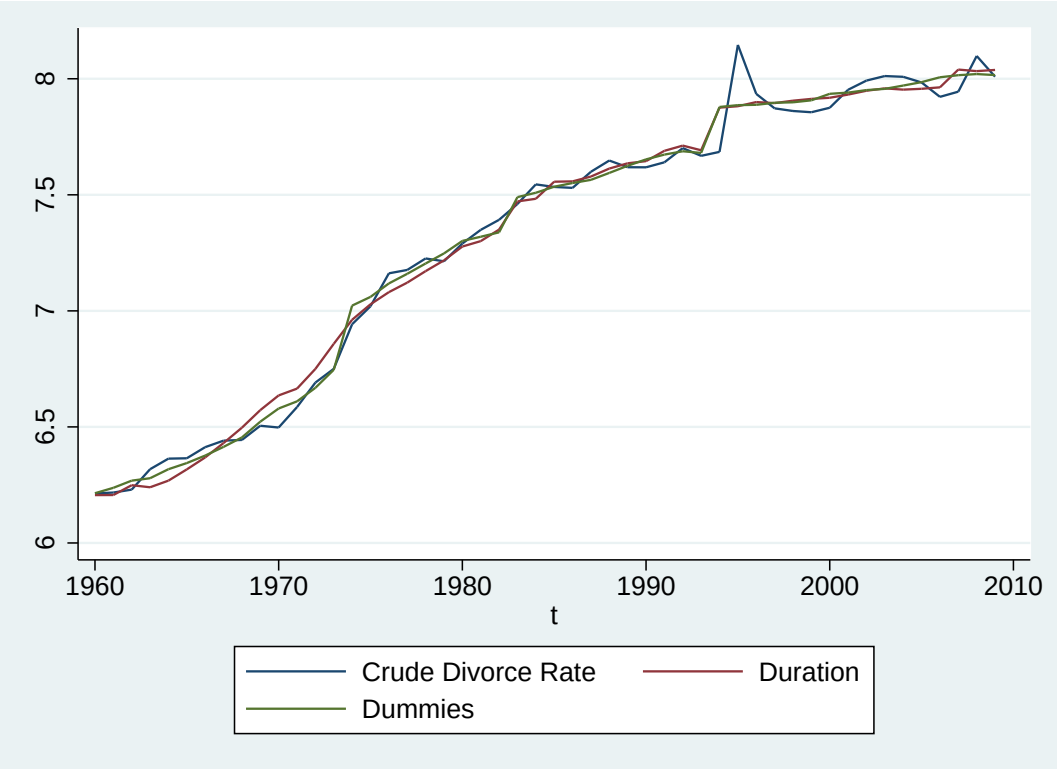

Figure 3.2: Model Comparison

3.3.2 Possible Endogeneity and Omitted Variable Bias

Another issue which needs to be addressed is the possible endogeneity of the duration of the legal process. In a standard stationary frame work if an explanatory variable x_t is endogenous to the dependent variable y_t than $E(x_t\varepsilon_t) \neq 0$. Because of that OLS will be biased and inconsistent. In a cointegration framework x_t will be a non-stationary say I(1) variable and the errors of an OLS regression ε_t will be stationary, i.e. I(0). Since - asymptotically - there can be no correlation between I(0) and I(1) variables endogeneity will therefore not cause OLS to be an

inconsistent estimator.

Though endogeneity can technically be ignored in a cointegration framework, there still remains a possible omitted variable issue. Translated back to our specific case: what if there is an omitted variable such as general mentality towards divorce which is influencing not only the divorce rates but also the duration of the legal process. The explanatory variables used in our estimation serve exactly the purpose of capturing these sort of variables. The variables "proportion of out of wedlock births" and "fertility" are both directly linked to, and therefore control for, progressive social norms in society. Similarly including GDP controls for the influence of increased computerization. We might also be worried about other less tangible omitted variables which may change the composition of the population and are linked to the duration of the legal process. If divorces have become less conflictual because people have become less *discordant* over time, this could drive down the duration of the legal process without any modifications to divorce legislation and therefore bias our interpretation of the duration of the legal process.

Fortunately, research on this topic was done by Bastaits et al. (2011b). In a representative sample of randomly drawn people from the national register (cfr. supra) they look at the level of conflict during divorce and compare these over divorce legislation cohorts. They find no statistical in- or decrease of the conflict level over time. Moreover, in all divorce legislation cohorts both the level and the distribution of conflict during divorce are found to be quasi identical.

3.4 Concluding Remarks

In this paper we discussed the practice in the existing literature where 'making divorce easier' is proxied by no-fault or unilateral divorce ground dummies. We demonstrate using the case of Belgium that this proxy is quite imperfect when investigating the relationship between easier obtainable divorce and the divorce rate. We show that significant legislative reforms might be overlooked. In Belgium, no-fault divorce already existed in the 19th century in the form of consensual divorce. Unilateral divorce was introduced in the 1974 divorce law (though no-fault unilateral divorce based on a factual separation of 10 years which has grave patrimonial consequences for the spouse filing for divorce can hardly be thought of as true unilateral divorce). The 1994 reform in Belgium, which was one of the most significant in the 1960-2009 period, did not change a single thing to the divorce grounds, but facilitated the entire process of divorce considerably. This was truly a legal change aimed at 'making divorce easier', but this legal change would be completely ignored when using no-fault or unilateral as proxy. In other words, in the literature the role of legislation is relatively overestimated compared to the role of the procedural.

We suggest an alternative approach in which legal reforms are not proxied by neither the nature of the legal change (no-fault or unilateral) nor altering divorce grounds or divorce procedures but rather by the real implications the legal change has in terms of duration of the legal proceedings for spouses going through divorce. Using this approach we find for Belgium that the mere lowering of the duration of the legal divorce process has had a considerable impact on the divorce rates. Per month the legal divorce process was shortened, the divorce rate rose with a staggering 1.4 percent. Moreover, this simple model performs quite well in capturing the overall divorce rate. It also captures divorce reforms which only

change the procedural aspect of divorce but are nevertheless, as demonstrated in the paper, of great importance.

A logical next step would be to repeat this analysis for a panel of countries to see if similar conclusions can be drawn within Europe, or a group of core Euro-countries. It is well documented that duration of legal procedures varies heavily both within and between a group of legal systems from similar origin. Djankov et al. (2003) show that the duration is significantly linked to the degree of procedural formalism. Therefore, it would advisable to compare countries with a similar degree of formalism. Djankov et al. (2003) show that this is indeed the case for a group of core Euro-countries, but that formalism is significantly higher for countries such as Italy, Portugal and Spain.

Though duration of the legal divorce process is not the only measure of how easy divorce is, it is one of the few which is objectively measurable, which is of great benefit when comparing internationally. The only thing still missing is information on duration in divorce cohorts at a country-level. These data, however, could be gathered at relatively low cost by national surveys based on random draws from the national registers or could be included in existing cohort studies. Ideally, future research would be able to use a true time series of duration in stead of an average over divorce legislation cohort. This suggested approach however is only useful if no selection is present, i.e. if already some form of unilateral divorce was present in the countries of interest prior to the various legal changes. If there are couples in which only one spouse wants divorce and the other refuses, divorce would not be obtainable for these couples if no unilateral divorce law exists. Therefore lowering the duration of the legal proceedings would have no effect on these couples. Vice versa, the introduction of unilateral divorce would select these couples into the divorce statistics, and therefore biasing the effect of altering the duration of

the legal process. Though theoretically relevant, this bias might be negligible for future work since countries where no form of unilateral divorce exists are rare.

3.5 Appendix: Dickey-Fuller Simulated Critical Values Applicable to the Sample

Specification	10%	5%	1%
Baseline	-3.975	-4.340	-5.061
Baseline + Dummies	-5.823	-6.206	-6.988
Baseline + Duration	-4.380	-4.733	-5.437

Note: critical values derived from Monte Carlo simulations for N = 50 with 250,000 iterations

Table 3.6: Dickey-Fuller Simulated Critical Values

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4

Gender Differences in the Probability of Post-Divorce Rematching and the Quality of the New Match[1]

4.1 Introduction

Divorce rates have been rising throughout Western Europe for the past four decades. Only recently this upward trend has started to show signs of mitigation, though

[1]This chapter is the result of joint work with Koen Schoors.

this is mainly due to the fact that marriage rates have steadily dropped the past ten to fifteen years. The principal motivation, besides the creation of emotional value, to form a union is the existence of scale effects. Forming a union allows the partners in the union to share various costs and pool their individual risks. One of the reasons why marriage rates have plummeted so drastically may be the increasing social acceptance of (factual or legal) cohabitation as an alternative to marriage as a cost and risk sharing institution.

Post-divorce psychological well-being - happiness - is naturally an important aspect. When comparing happiness of divorced persons with married persons it is obvious that on average married persons are happier (Sachs et al., 2012). However, this comparison is not a fair one. The true comparison is between divorced persons and married persons who were in similar critical relationships but did not divorce. Gardner and Oswald (2006) show that for divorced persons (men and women equally) self-reported well-being indeed increases after divorce. Moreover, Johnson and Wu (2002) show using data from the US that psychological distress is significantly lower for persons who remarry after divorce than for those who do not remarry.

Besides general happiness, repartnering may also serve as a way of coping with the financial consequences of divorce. It is a well-documented fact that divorce may have grave financial consequences for former spouses [2]. Census data in multiple countries point out that lone parent families have a significantly higher risk to live in poverty than other types of households. Chambaz (2001) reports that one in four European lone parent families is poor, but the variation across European countries is considerable. In countries where social transfers are generous, such as Denmark, poverty rates among lone parent families may even be slightly lower

[2] See e.g. Bianchi et al. (1999); McKeever and Wolfinger (2001).

than poverty rates among other types of households. More recent data from the EU Survey on Income and Living Conditions confirms the link between the status of lone parent and poverty and the variation in this link across European countries. A strict and enforceable framework regarding spousal alimony may serve to mitigate some of the negative financial consequences of divorce for former spouses, especially if there is pronounced pre-divorce income inequality between the former spouses. If on the other hand both former spouses are in a financially weak position, the welfare loss borne because of lost scale effects dominates any positive effects of post-divorce alimony. In this case, alimony transfers may force the spouse paying alimony into abject poverty without achieving much in improving the financial situation of the other former spouse. Former spouses who both find themselves at the lower end of the income distribution may therefore choose to address the unattractive prospect of post-divorce poverty by prompt repartnering (Jansen et al., 2009).

It is therefore interesting and relevant to analyse what drives the probability of finding a new match after divorce and what drives the quality (in the Beckerian sense of the word), as measured by social position, of this new match. For a proper identification of the factors that drive the probability of rematching and the quality of the new match, in-depth micro data on divorcees are required. Unfortunately these data are often missing. In this paper we contribute to the literature by investigating the determinants of repartnering in a longitudinal sample of recently divorced men and women that contains detailed data on individual characteristics (the IPOS data set).

In more recent times, female educational attainment has been steadily rising and fertility has become more endogenous because of greater acceptance of contraceptives. Gender differences are therefore becoming less and less pronounced. Never-

theless, we find that both the probability to rematch and the characteristics of the individuals rematching differ substantially between the sexes. Marital homogamy in terms of earnings is found to be higher in the post-divorce match for both men and women, while age homogamy increases for women but decreases substantially for men. Men are specifically likely to repartner with younger women, while women are not likely to repartner with younger men. In a further analysis we estimate a construct for *quality* of the new found match similar to the Hollingshead Two-Factor Index of Social Position (Hollingshead, 1957) and look at the discrepancy between men and women.

The remainder of this paper is structured as follows: section 2 deals with the main literature relevant to the topic; section 3 presents a detailed description of the data collection. In section 4 we present our empirical work and section 5 concludes.

4.2 Rematching

The literature on rematching is scant and empirical results are ambiguous. The pioneering analysis of the propensity to remarry was provided by Becker et al. (1977). Becker et al. (1977) investigate those variables that affect marital gains, and hence make individuals more attractive on the (re)marriage market. They argue that in a context of function specialisation male earnings will raise the propensity to remarry, whereas female earnings will affect the propensity to remarry negatively. Their empirical results indicate that male earnings indeed raise the propensity to remarry, but they refrain from testing their prediction about the opposite effect of female earnings in remarriage propensity. Closely related to earnings is the level of education. Though higher educational attainment makes individuals without any doubt more attractive on the marriage market, Becker et

al. find no empirical evidence of this. In more recent work Chiswick and Lehrer (1990) only find that this positive effect of educational attainment on the propensity to remarry only holds for black women whereas Wu and Schimmele (2005) do find a significant positive impact of educational attainment for both men and women. Age at divorce on the other hand has a negative impact on the probability to remarry for men and even more so for women in Wu and Schimmele (2005). This is also confirmed by Chiswick and Lehrer (1990), de Jong Gierveld (2004), Wu and Schimmele (2005) and Skew et al. (2009). Closely related to age at divorce is marital duration. Becker et al. argue that the duration of the preceding marriage can serve as a proxy for the unobservable expected gains from marriage. If individuals have larger expected gains from marriage, more negative information has to be accumulated in order for those individuals to divorce. Hence, the duration of the previous marriage will be larger. Bumpass et al. (1990) considers the duration of marriage to be an indication of how "*marriage oriented*" individuals are. Because individuals who divorce after a long marriage are much more used to married life, it is harder for them to adapt to single life. This, however, is not the only interpretation of the significance of marital duration. In the literature on the male marriage wage premium being married in fact serves as a proxy for unobserved characteristics regarding productivity[3]. Thus, being married signals a higher productivity to employers. Following this reasoning, having previously been married for a longer time, might serve as a more convincing that these men are in fact better potential matches.

Empirically Becker et al. (1977) and Wu and Schimmele (2005) find a positive effect of the duration of the previous marriage on the propensity to remarry. Sweeney (1997) finds no effect at all.

[3]See e.g. Korenman and Neumark (1991), Hersch and Startton (2000) and Bardasi and Taylor (2008).

Another explanatory variable considered in the literature is the presence of (young) children. Becker et al. (1977) state that since women usually get child custody upon divorce, their shadow price of time is raised. It will therefore be much harder for women to engage in actively searching for a new mate. The negative effect for women of prior fertility on rematching is also confirmed empirically. The effect of prior fertility for men is not taken into consideration. It goes without saying that in present society, where joint custody of the children and sole custody for fathers is not uncommon, the presence of children from a previous should be taken into account for both men and women and should ideally be combined with data on residence of the child(ren). Results might be severely biased if information on post-divorce child residence is not included in the analysis. The fact that Wu and Schimmele (2005) find a positive (albeit not significantly different from zero in a statistical sense) impact of children on the male propensity to remarry may be due to the failure to control for the residence of their children.

When scrutinizing the propensity to remarry at any point in time, it is important to know how long individuals have been available on the remarriage market before that moment. Becker et al. (1977) therefore performs a robustness check on a subsample where the length of time separated before legal termination is included. The inclusion of this variable turns out to be quite important as results differ greatly. One result catching the eye is that estimated coefficient for the widow-dummy switches sign after controlling for the time since the previous relation was effectively ended (due to separation or death). Yet, due to the unavailability of data on individuals' legal proceedings in the surveys commonly used, not a single recent study accounts for this.

As mentioned before, Becker et al. (1977) did not investigate the effect of earnings for women because women in a *Beckerian* society with function special-

isation mainly perform household duties. Building on this Chiswick and Lehrer (1990) hypothesize theoretically that what should matter for women is transferable marriage-specific human capital. Marriage-specific or non-market human capital are any investments made in the household, such as getting to know the preferences of other household members, children and skills which enhance household labour efficiency. Part of the marriage specific capital (such as e.g. spouse-specific investments) is lost upon union dissolution. Another part is transferable. Chiswick and Lehrer (1990) argue that transferable marriage-specific human capital goes beyond traditional household chores such as cooking and cleaning. Though these tasks involve skill marriage-specific human capital also includes investments which higher household consumption efficiency. To empirically test the impact of transferable marriage-specific human capital, Chiswick and Lehrer (1990) propose to use the duration of marriage as proxy for the level of transferable marriage-specific skills, in the same way that years active on the labour market is used as a proxy for on-the-job training. Though in theory a good proxy, it might not be such a good idea to use it in practise given its collinearity with various other relevant variables such as the number of children, age, age of the children, etc. Only a direct measure of who does what proportion of household chores would allow us to properly capture the effect of transferable marriage-specific human capital.

4.3 Data Collection

We use unique Belgian longitudinal data collected by the IPOS project. The IPOS project was a cooperation between Ghent University and the Catholic University of Louvain, sponsored by the Institute for the Promotion of Innovation by Science and Technology in Flanders (IWT). IPOS stands for “Interdisciplinary Project for the Optimization of Separation Trajectories”. The survey resulted from a coopera-

tion of psychologists, lawyers and economists. All spouses who divorced between March 2008 and March 2009 in the courts of 4 Flemish cities (Antwerp, Ghent, Kortrijk and Mechelen) were asked in court to participate in a study. If respondents replied favourably, they were contacted within 3 weeks to fill out an electronic questionnaire. When respondents did not have internet access at home, or lacked the necessary computer skills to fill out the survey, they were visited at home by IPOS team members. Additionally, respondents who did not master Dutch sufficiently were visited at home by an IPOS team accompanied by an interpreter. Because all people who divorce in Belgium have to go to court at least once, our recruitment strategy minimises the bias of convenient sampling. Moreover, because recruitment took place in 4 relatively large cities, we oversample population subgroups which are usually hard to reach such as low-educated people and (first, second and third generation) immigrants. The survey contains detailed in-depth information on respondents' socio-economic background, self-rated quality of life and social network capital.

Given the stressful situation couples going through divorce are in when they appear in court and the fact that participation in the study is voluntary, one would expect very low response rates while recruiting in court. Nevertheless, 44 percent of the respondents responded favourably (3,924 of 8,896 respondents). An additional drop-out followed after being contacted (not willing to participate anymore, wrong contact data or annulment of the divorce) leaving N = 1,921 respondents who completed the survey (a participation rate of about 21.6 percent) of which 855 men and 1,066 women. Though this is fairly low, the data seem to be representative on observables and also variables such as conflict and financial conflict exhibit a wide distribution meaning that IPOS was also able to capture high-conflict divorces. A more detailed description of the cross-sectional data set, as well as the issue of representativity can be found in Bracke et al. (2011). After the initial sur-

vey, respondents were followed longitudinally. Participants in the first survey were contacted 6 (T2), 12 (T3) and 24 (T4) months after the first contact. As expected, response rates declined over time. In T2 we had 1,274 respondents completed the survey, in T3 878 respondents. The survey drew to a close in T4 with 988 respondents.

When dealing with longitudinal data acquired by a survey in which participation is voluntary, it is imperative to closely examine possible sample selection biases caused by attrition. Using a probit framework estimating the probability to be included at either T2, T3 or T4 a series of observable respondent characteristics were tested. We limit our report to the most relevant results. We find that for both men and women education matters: per unit higher on five-point education scale the probability of still being included in the sample rises between 4 percent in T2 and 6 percent in T4 for women and between 3 percent in T2 and 4.3 percent T4 for men. Weaker evidence is found for the age of women: per 10 years the female respondent is older the probability of still being included in the sample rises between 4.2 percent and 6.6 percent, though this is not apparent in T2. For men there exists no statistically significant relationship between sample inclusion and age. Higher drop-out rates might also be expected for respondents who were in high conflict situations prior to divorce, or respondents who find themselves in dire financial straits. However, for both men and women neither of these variables are statistically significant.

Given the significant higher probability of having higher educated and older women as well higher educated men in the sample, all estimations will have to control for age and education of the respondent. Moreover, all results will have to be interpreted with the needed care, taking into account possible sample selection effects, no matter how small they are.

4.4 The Probability of Post-Divorce Rematching

4.4.1 Methodology and Data

The social acceptance of living apart together relations and of unmarried cohabitation has grown starkly. Therefore we will not analyse the propensity to remarry, but the probability of rematching of repartnering. These terms are used interchangeably in the remainder of this paper. We use two measures of rematching. First we asked at every time T whether or not respondents had a new partner. Though without any doubt a rematch was made if respondents replied favourable, it is possible that this match is highly unstable. In other words, the respondent might still be going through some sort of *tâtonnement* process on the way to a stable equilibrium match. To deal with this issue we also consider a second measure of rematching, namely having a new partner with whom they are cohabiting. This cohabiting can be factual cohabiting, legal cohabiting or even being remarried. Table 4.1 shows summary statistics of the proportion of rematched respondents in our sample. Two years after appearing in court more than half of the respondents have rematched and almost 30 percent of the respondents are cohabiting with their new partner. Table 4.1 also shows the proportion rematched split by sex of the respondent. It is clear to see that in our sample men are more likely to both have a new partner and cohabit with a new partner. Put differently, while men and women are becoming more and more equal in terms of education attainment and labour force participation to cope with the financial consequences of divorce, there still remains a large gap in terms of post-divorce rematching probability. Also remarkable is the quite high rematching rate for respondents when first completing the survey (T1), that is a couple of weeks after being contacted in court. This is mainly because the search process of post-divorce rematching may

already kick-off while still being *nominally* married. It will therefore be crucial to take into account the period of factual separation prior to divorce as a control variable in our estimations.

Period	New Partner		Cohabiting Partner	
T1	41.49%		17.96%	
T2	48.02%		23.06%	
T3	52.10%		26.50%	
T4	52.10%		29.79%	
	Male	Female	Male	Female
T1	45.61%	38.18%	20.47%	15.95%
T2	50.72%	45.89%	24.10%	22.24%
T3	54.40%	50.51%	27.47%	25.76%
T4	55.73%	49.17%	32.57%	27.54%

Table 4.1: Rematching Statistics

Though the proportion of post-divorce rematches might be interesting to some it does not shed much light on the process of rematching. In what follows we analyse what drives the probability of finding a new match. We employ proportional-hazard models à la Cox (1972) to model the probability to rematch and the probability to cohabit with a new partner, as is common in the literature. We estimate these models separately for men and women.

The standard Cox proportional hazard model estimates the hazard for individual i to repartner in time t to be:

$$h(t|x_i) = h_0(t)\exp(x_i\beta_x) \tag{4.1}$$

where β_x are the regression coefficients estimated for the data. The underlying assumption is that all explanatory variables shift the baseline hazard function multiplicatively, hence the name proportional hazard model. If however, tests indicate that the proportional hazard assumption is violated a possible solution is to use a stratified Cox estimation. In a stratified Cox estimation the baseline hazard $h_0(t)$ is allowed to differ by group:

$$h(t|x_i) = h_n(t)\exp(x_i\beta_x), \text{ if individual } i \text{ is in group n} \tag{4.2}$$

Another extension of the model is the shared frailty model. Shared frailty is actually survival analysis jargon for random effects as used in a panel data setting (Cleves et al., 2010). In a shared frailty model a latent random effect enters multiplicatively on the hazard function:

$$h(t|x_i) = h_0(t)\exp(x_i\beta_x + \nu_i) \tag{4.3}$$

For more detailed information on Cox models we refer to Cleves et al. (2010) for an excellent overview.

As mentioned supra, in our model empirical analysis we have 4 observation points. Our first observation point (T1) is 2-3 weeks later after respondents indicated in court that they were willing to participate in a survey concerning divorce. Naturally these respondents may have been de facto separated for a longer time. It is therefore imperative to control for the period of factual separation prior to divorce in all our regressions to have a consistent timeline. Respondents were then recontacted after 6 (T2), 12 (T3) and 24 (T4) months. As all duration analyses a

bias may occur when the outcome variable varies more than once between observation points. These changes will go unobserved and the outcome variable will therefore appear more stable than it truly is. In our specific case it could happen that a respondent is observed to have neither repartnered at T1 nor T2, but that repartnering effectively took place between the two observation points. However, as mentioned before, we are in fact only interested in *stable* new matches. Repartnering which lasts less than 6 months can hardly considered to be a new match. Furthermore, to check whether unstable matches drive our results we also look at post-divorce cohabiting which is by nature more stable.

Previous empirical literature on repartnering and remarriage finds educational attainment to be positively related to the probability to rematch (de Jong Gierveld, 2004; Wu and Schimmele, 2005) though this not always unambiguously (Becker et al., 1977; Chiswick and Lehrer, 1990; Sweeney, 1997). Data on earnings in combination with repartnering statistics are quite hard to come by. One of the consequences of this lack of data availability earnings are usually not controlled for, with the notable exception of Becker et al. (1977), albeit only for men. The effect of age at divorce is well documented in the literature and consistently found to be negative (Chiswick and Lehrer, 1990; Sweeney, 1997; Wu and Schimmele, 2005; de Jong Gierveld, 2004; Skew et al., 2009). Only Becker et al. (1977) finds a positive effect, but this is probably due to the inclusion of both age and age at divorce in the estimation specification. The literature using Anglo-Saxon data often include dummies to control for racial differences (white non-Hispanics are found to have significant higher remarriage rates). In our specifications we use a dummy variable indicating that the respondent is a first or second generation immigrant in Belgium. This is a much broader notion than race, since it also includes EU-citizens in the category of immigrants. As mentioned before the length of time separated before legal termination - and even more so the length of time

separated before initiating the legal process - is a clear-cut measure of how long a divorced individual has been available on the repartnering market and therefore a crucial variable. Becker et al. (1977) clearly demonstrate that when the length of separation before legal termination is not controlled for, it biases all other results. As far as the duration of the previous marriage is concerned Becker et al. (1977) and Wu and Schimmele (2005) find a clear positive effect for both men and women. Chiswick and Lehrer (1990) on the other hand only finds a positive effect for white non-Hispanic women and no effect for black women whereas Sweeney (1997) finds no effect at all. Perhaps one of the most obvious variables which requires analysis is the presence of children. Even so, not all studies control for the presence of children, e.g. de Jong Gierveld (2004) and Skew et al. (2009). For women the empirical literature finds a clear negative influence of having children on the probability to rematch (Becker et al., 1977; Sweeney, 1997); for men the effect is less clear. Wu and Schimmele (2005) even finds a positive coefficient for men, but the effect is not significant.

The ambiguous impact of having children on repartnering probabilities of men is not surprising since no study takes into account the custody arrangements for and the residence of the children concerned. Thus, in a situation where men do not get custody, a dummy indicating that there a man has a child from his prior marriage will actually be a dummy that no child resides with him. Hence, in our estimations we also include a dummy which is equal to one if the individual has a child below the age of 6 which resides often with the individual.

As mentioned supra Chiswick and Lehrer (1990) analyse the role of transferable marriage-specific human capital on repartnering. Though their proxy for transferable marriage-specific human capital is open to question, we should control for a possible learning-by-doing effect in domestic production. In our specifications we

include a direct measure of transferable marriage-specific human capital, namely the division of household chores within a family. Last but not least, a matching analysis - and a fortiori every analysis which is not a random experiment - suffers from a possible unobserved heterogeneity bias. Therefore, besides fitting Cox proportional-hazard models with shared frailty - as described in equation (3) - as robustness check, we will also include the level of conflict prior to divorce as explanatory variable as an attempt to capture some of the unobserved heterogeneity.

Table 4.2 and table 4.3 below present some summary statistics of the determinants employed in the probability of rematching models. They are presented separately for men and women and at the initial contact point (T1), two to three weeks after first appearing in court. Education is coded on a five-point scale ranging from none or elementary education (1), vocational or part-time vocational training (2), art, technical and general secondary education (3), one cycle higher education or bachelor (4), to long type (two cycle) higher education or master (5). Data on earnings are presented in thousands of euros and were winsorised at the 99th percentile in order to cope with extremely high incomes. The length of time separated before starting legal proceedings is expressed in months. Though some individuals report quite high separation times, the median separation time is for both men and women is as low as 3 months, and about 90% of all respondents started the legal procedure after less than 2 years of living separated[4]. The variable chores indicates on a scale from 7 to 35 how large a share of several household chores was performed by the respondent prior to divorce. A score of 7 indicates the respondent did the largest share, whereas a score of 21 indicates an egalitarian distribution. A score of 35 indicates that the respondents former spouse was the main supplier of

[4]Reducing the sample by trimming the top 5% separation times does not significantly alter the results. Only the coefficient of the variable separation - somewhat surprisingly - becomes larger, though sometimes borderline significantly different from zero.

domestic production[5]. Unlike the separation time marital duration is expressed in years. The residing child dummy takes the value of 1 if a respondent has a child below the age of 6 which resides mostly with the respondent. Conflict is standard construct on a 1 to 5 scale that measures the presence of conflict between the spouses prior to divorce. A value of 1 indicates low conflict, while a value of 5 indicates very severe conflict before divorce. The dummy Alimony indicates whether or not spousal alimony is paid within the former couple. The initiator indicates whether the respondent responded that she or he wanted divorce most (dummy = 1) or rather responded either that they both wanted divorce, or that his or her former spouse wanted divorce the most (dummy = 0).

Variable	**Mean**	**Std. Dev.**	**Min.**	**Max.**	**N**
Educ	3.405	1.148	1	5	855
Earnings	2.222	1.068	0	7.500	855
Age	44.488	9.172	23	76	855
Immigrant	0.106	0.309	0	1	855
Separation	10.646	22.984	0	218	855
Chores	20.950	4.858	7	35	855
MarrDurr	14.648	9.588	0.083	54.667	855
Residing Child	0.014	0.118	0	1	855
Conflict	3.013	1.231	1	5	855
Alimony	0.127	0.334	0	1	855
Initiator	0.340	0.474	0	1	855

Table 4.2: Summary Statistics at T1 (Men)

[5]For more details on this construct see Bracke et al. (2011).

Variable	Mean	Std. Dev.	Min.	Max.	N
Educ	3.341	1.145	1	5	1066
Earnings	1.560	0.661	0	7.500	1066
Age	41.137	9.283	21	69	1066
Immigrant	0.113	0.316	0	1	1066
Separation	10.679	23.015	0	360	1066
Chores	12.475	4.649	7	32	1066
MarrDurr	14.33	9.661	0.083	49.333	1066
Residing Child	0.247	0.431	0	1	1066
Conflict	3.372	1.321	1	5	1066
Alimony	0.085	0.280	0	1	1066
Initiator	0.596	0.491	0	1	1066

Table 4.3: Summary Statistics at T1 (Women)

4.4.2 Results

The tables below present estimation results of the proportional-hazard[6] to repartner after divorce for men (Table 4.4) and women (Table 4.5) as well as the proportional-hazard to repartner and cohabit after divorce, again for men (Table 4.6) and women (Table 4.7). Each table contains 6 columns. Column 1 presents a reduced model containing individual characteristics. Column 2 adds explanatory variables related to the individuals former marriage. Column 3 adds the alimony and initiator dummy. The estimates in all three columns are obtained using the robust variance estimator (Lin and Wei, 1989), with an adjustment for clustering on the individual

[6]Estimates using the Poisson regression technique yields similar results and are available on request.

level. Columns 5, 6 and 7 again present the baseline and the extended specification for a Cox proportional-hazard model with shared frailty on the individual level, i.e. a latent random effect that enters multiplicatively on the individual's hazard function (Cleves et al., 2010). In addition, in columns 1,2 and 3 of Table 4.5 and 4.7, the estimation was stratified on the level of conflict prior to divorce in order to not violate the proportional-hazard assumption. In other words, as shown in equation (2), the baseline hazard for women is allowed to differ by level of conflict prior to divorce. This might be an indication that conflict prior to divorce indeed manages to capture some of the unobserved heterogeneity in the data. Since the proportional-hazard is reported, the interpretation of the coefficients is straightforward. If, for instance a variable has a coefficient of 1.100 this means that a 1 unit increase in the variable raises the hazard of rematching by 10%. If, on the other hand a variable has a coefficient of 0.900 this implies that a 1 unit increase in the variable lowers the hazard of rematching by 10%. Furthermore, in appendix we perform additional robustness checks. In a first exercise we repeat the analysis limiting our sample to those respondents who did not have a partner yet at the first contact point (T1). In a second part, we only look at "*first spells*". Put differently, we only consider post-divorce rematching and do not allow for a second post-divorce rematch (rematching after post-divorce rematching). Detailed estimation results are provided in appendix.

As far as repartnering after divorce for men is concerned (Table 4.4) several variables are found to be statistically and economically significant. Being a first or second generation immigrant in Belgium lowers the probability of post-divorce repartnering between 34.1 percent and 37.8 percent. Divorced men with a young child that mostly resides with them see their probability of finding a new partner lowered by more than 46 percent. Educational attainment and current earnings both have the expected positive sign and are statistically significant. Age and

marital duration are naturally highly correlated ($\rho = 62\%$ for men and $\rho = 72\%$ for women), yet their sign are opposite. Per 10 years that men grow older their chances of repartnering drop with 12 to 13 percent, ceteris paribus. Per ten years that men are married, their chances of repartnering after divorce rise with about 20 percent. Somewhat surprising is the sign of conflict prior to divorce. Our results seem to suggest that men with a higher conflict prior to divorce are actually more likely to repartner. Whether or not spousal alimony is paid has no effect on repartnering for men. Men who initiated divorce on the other hand have a substantial higher probability to repartner (about 40 percent).

Our model of the probability of repartnering after divorce for women (Table 4.5) looks different in some respects. Being a first or second generation immigrant in Belgium lowers the probability of post-divorce repartnering also considerably for women. The effect of age is also negative, but substantially larger for women than for men. Per 10 years that women grow older, their chances of repartnering drop with a whopping 27 percent, again all other things equal. Whereas Table 4.4 showed that men with a young child that mostly resides with them have a significantly lower probability of finding a new match, we find no such effect for women. Despite the hypotheses of Becker et al. (1977) the effect of earnings on rematching is positive rather than negative for women, though not statistically different from 1. We do find however a significant negative influence of alimony. This is not all too surprising. As mentioned supra, Jansen et al. (2009) consider two strategies for individuals to cope with the financial consequences of divorce: repartnering and (re)employment. They find that for most women repartnering is a more beneficial strategy than (re)entering the labour force or increasing hours worked. If women, however, receive spousal alimony payments the necessity to employ either coping strategy may be severely reduced. Consistent with this conjecture, we find in our sample that women receiving alimony have a reduced probability to

repartner of about 25 percent. Another important reason may be that the duty to pay spousal alimony may be revoked by the judge if a new (durable) partnership is formed. Article 301 §10 part 2 of the Belgian civil code states that the duty to pay spousal alimony peremptorily ends when the receiver remarries or signs a declaration of legal cohabitation, unless agreed otherwise. In addition, article 301 §10 part 3 states that the judge can revoke the duty to pay alimony if the receiver is (factually) cohabiting with another person, *as if they were married*. When divorcing in a consensual trajectory, spouses are in principle free to choose what the content of their divorce agreement is. However, most consensual agreements include a standard clause making alimony conditional on not being remarried or legal/factual cohabiting.

As for men we also find a strong significant effect of the initiator dummy: women that indicate they initiated divorce are much more likely to repartner later.

Variable	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Educ	1.105***	1.094***	1.095***	1.104**	1.096**	1.096**
	(0.039)	(0.037)	(0.036)	(0.044)	(0.041)	(0.041)
Earnings	1.071**	1.068**	1.048	1.079*	1.074*	1.058
	(0.036)	(0.035)	(0.035)	(0.044)	(0.041)	(0.040)
Age	1.004	0.988**	0.988**	1.004	0.987**	0.987**
	(0.004)	(0.005)	(0.005)	(0.005)	(0.006)	(0.005)
Immigrant	0.622***	0.659***	0.643***	0.623***	0.655***	0.643***
	(0.095)	(0.096)	(0.094)	(0.088)	(0.088)	(0.086)
Separation	1.041***	1.034**	1.033**	1.042**	1.034*	1.033*
	(0.015)	(0.015)	(0.015)	(0.021)	(0.019)	(0.018)
Chores		0.994	0.996		0.994	0.996
		(0.008)	(0.007)		(0.008)	(0.008)
MarrDurr		1.019***	1.018***		1.020***	1.019***
		(0.005)	(0.005)		(0.005)	(0.005)
Residing Child		0.534*	0.529*		0.533*	0.540
		(0.196)	(0.205)		(0.212)	(0.213)
Conflict		1.053*	1.028		1.057*	1.034
		(0.030)	(0.029)		(0.032)	(0.031)
Alimony			1.030			1.019
			(0.100)			(0.109)
Initiator			1.398***			1.397***
			(0.099)			(0.105)
Model (χ^2)	52.85***	66.47***	99.07***	39.65***	53.09***	74.65***
Frailty	No	No	No	Yes	Yes	Yes

Significance levels : $*$: 10% $**$: 5% $***$: 1%

Table 4.4: Proportional-Hazard of Repartnering after Divorce (Men)

Variable	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Educ	1.005	0.998	0.993	1.023	1.004	0.999
	(0.033)	(0.033)	(0.033)	(0.040)	(0.038)	(0.038)
Earnings	1.027	1.025	1.011	1.061	1.045	1.023
	(0.056)	(0.055)	(0.054)	(0.071)	(0.067)	(0.065)
Age	0.972***	0.974***	0.977***	0.973***	0.972***	0.975***
	(0.004)	(0.006)	(0.006)	(0.004)	(0.006)	(0.006)
Immigrant	0.639***	0.632***	0.649***	0.614***	0.644***	0.0659***
	(0.079)	(0.078)	(0.079)	(0.082)	(0.084)	(0.086)
Separation	1.023	1.025	1.030*	1.040*	1.031	1.035*
	(0.019)	(0.019)	(0.019)	(0.021)	(0.020)	(0.020
Chores		1.006	1.006		1.008	1.008
		(0.008)	(0.008)		(0.009)	(0.009)
MarrDurr		0.997	0.997		0.999	0.999
		(0.006)	(0.006)		(0.006)	(0.006)
Residing Child		1.005	1.027		1.002	1.022
		(0.083)	(0.085)		(0.092)	(0.093)
Conflict		2.374	1.310		0.978	0.961
					(0.029)	(0.029)
Alimony			0.752*			0.763*
			(0.122)			(0.117)
Initiator			1.312***			1.289***
			(0.102)			(0.102)
Model (χ^2)	63.66***	69.05***	81.06***	48.86***	57.78***	71.83***
Frailty	No	No	No	Yes	Yes	Yes

Significance levels : $*$: 10% $**$: 5% $***$: 1%

Table 4.5: Proportional-Hazard of Repartnering after Divorce (Women)

As mentioned before because post-divorce rematches may be only temporary matches, we also look at post-divorce cohabitation. For men (Table 4.6), we find similar results as for repartnering. Significance is lost on variables which are usually considered when looking at assortative mating, namely education attainment and earnings. Also the coefficient of age and conflict prior to divorce becomes insignificant, though both variables keep their sign. In fact most coefficients are very much alike, but the standard errors rise due to the smaller sample size. The negative effect of the immigrant and residing child dummies seems more severe for cohabiting after divorce than for repartnering. As for repartnering we find that the longer men were married the more likely they are to engage in post-divorce cohabitation. This is in line with the Bumpass et al. (1990) hypothesis about long married men being more marriage-oriented. They state that the longer men have been married, the more difficult it is for them to adapt to single life, and therefore the more likely they are to actively look to cohabit with a new partner.

For women the results for post-divorce cohabitation are similar to those for post-divorce repartnering. The effect of age is even larger: per 10 years older women get, their chances of cohabiting after divorce drop with a whopping 40%. Also the coefficient for the immigrant dummy is sizeable and indicates that female first or second generation immigrants are even less likely than their male peers to cohabit with a new partner after divorce. Table 4.7 also shows some evidence of a substantial negative effect of the presence of a young child residing with the mother, which was not the case in table 4.5.

The coefficient for alimony reported in table 4.7 is significantly smaller than the coefficient reported in table 4.5. This implies that for women, the negative effect of receiving alimony on cohabiting after divorce - be it in the form of factual or legal cohabiting, or even divorce - is larger than the negative effect on finding a

new partner. This evidence is line with the thesis that women receiving alimony take into account that cohabiting may lead to the abolition of their alimony.

None of the results we obtained provide any support of the thesis put forward by Chiswick and Lehrer (1990) that marriage-specific human capital is an important asset on the repartnering market. Though their reasoning makes sense theoretically in a society where there exist full function specialization within households, it fails to provide a convincing argument when full function specialization is rather an exception than the standard. As Sweeney and Cancian (2004) formulate it, the value men attach to women's labour market potential has risen over time. Press (2004) interprets the evidence provided by Sweeney and Cancian (2004) in a different way. She argues that it is not men who attach more importance to their potential spouses' labour market potential, but rather women that, because of their risen status in the labour market, attach less value to labour market potential of men. Irrespective of what actually drives the change in valuation of labour market potential for screening possible spouses, in our results we cannot find evidence that either men or women attach importance to domestic production potential. We do find some evidence that women attach weight to men's earnings, but do not find such evidence for men.

Variable	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Educ	1.052	1.045	1.045	1.052	1.044	1.044
	(0.059)	(0.058)	(0.57)	(0.070)	(0.068)	(0.668)
Earnings	1.071	1.074	1.042	1.064	1.076	1.049
	(0.056)	(0.056)	(0.055)	(0.071)	(0.071)	(0.069)
Age	1.006	0.993	0.993	1.006	0.992	0.993
	(0.007)	(0.008)	(0.008)	(0.007)	(0.009)	(0.009)
Immigrant	0.610**	0.630**	0.607**	0.613**	0.629**	0.599**
	(0.149)	(0.150)	(0.143)	(0.137)	(0.141)	(0.133)
Separation	1.073***	1.067***	1.065***	1.076**	1.068**	1.066**
	(0.020)	(0.020)	(0.019)	(0.035)	(0.032)	(0.032)
Chores		0.984	0.987		0.983	0.991
		(0.012)	(0.011)		(0.013)	(0.013)
MarrDurr		1.015**	1.014**		1.017**	1.014*
		(0.007)	(0.007)		(0.009)	(0.009)
Residing Child		0.258	0.256		0.255*	0.274*
		(0.248)	(0.251)		(0.206)	(0.221)
Conflict		1.039	0.996		1.042	1.015
		(0.049)	(0.047)		(0.054)	(0.052)
Alimony			1.027			1.014
			(0.166)			(0.189)
Initiator			1.796***			1.779*
			(0.216)			(0.227)
Model (χ^2)	35.82***	39.30***	72.21***	16.82***	21.55***	42.43***
Frailty	No	No	No	Yes	Yes	Yes

Significance levels : $*$: 10% $**$: 5% $***$: 1%

Table 4.6: Proportional-Hazard of Cohabitation after Divorce (Men)

Variable	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Educ	1.002	0.994	0.986	1.019	0.993	0.978
	(0.055)	(0.055)	(0.055)	(0.067)	(0.065)	(0.063)
Earnings	0.932	0.929	0.901	0.971	0.950	0.908
	(0.113)	(0.109)	(0.111)	(0.105)	(0.101)	(0.096)
Age	0.959***	0.965***	0.968***	0.961***	0.963***	0.968***
	(0.007)	(0.010)	(0.010)	(0.004)	(0.010)	(0.010)
Immigrant	0.530***	0.513***	0.545***	0.519***	0.540***	0.563***
	(0.109)	(0.106)	(0.111)	(0.117)	(0.121)	(0.126)
Separation	1.043	1.040	1.048*	1.078**	1.060*	1.069**
	(0.030)	(0.029)	(0.029)	(0.038)	(0.037)	(0.036)
Chores		1.003	1.003		1.007	1.010
		(0.013)	(0.013)		(0.015)	(0.015)
MarrDurr		0.988	0.989		0.990	0.990
		(0.010)	(0.010)		(0.010)	(0.010)
Residing Child		0.800*	0.825		0.800	0.831
		(0.113)	(0.117)		(0.129)	(0.133)
Conflict		4.181	1.180		0.950	0.924
					(0.049)	(0.048)
Alimony			0.450**			0.468***
			(0.122)			(0.139)
Initiator			1.460***			1.495***
			(0.186)			(0.202)
Model (χ^2)	47.45***	59.05***	71.39***	36.93***	45.78***	60.44***
Frailty	No	No	No	Yes	Yes	Yes

Significance levels : $*$: 10% $**$: 5% $***$: 1%

Table 4.7: Proportional-Hazard of Cohabitation after Divorce (Women)

4.4.3 Quality of the Rematch

Besides the probability to rematch after divorce, we also look at the quality (in the Beckerian sense of the word, proxied by social position) of the partner in the new match made and compare this to the quality of the previous partner in the - now defunct - match. We start by analysing whether there is a significant difference in homogamy between the divorced couple and the new couple. in a next step we then estimate a simple index of match quality and verify whether respondents tend to repartner with a partner of higher quality than their previous partner or not. This type of analysis is not common in the literature, since it does not only require detailed information on a respondent's former partner, but also detailed information about the respondent's new partner. Some data on marital homogamy can be found in Dean and Gurak (1978) and Garfinkel et al. (2002). Using the 1995 National Survey of Family Growth (NSFG) Garfinkel et al. (2002) present data on marital homogamy regarding age, education and race/ethnicity for married and divorced partners. They investigate the thesis by Becker (1991) that negative assortative mating is optimal in terms of wages and positive assortative mating in terms of education, age and race. Garfinkel et al. (2002) indeed find weak evidence that (intact) married couples are less heterogeneous in terms of education in comparison to divorced couples. However, they also find that divorced couples are *more* homogenous in terms of age. For race/ethnicity no significant differences are found. The NSFG does unfortunately not allow them to test homogamy in terms of earnings. Furthermore, Garfinkel et al. (2002) present these statistics also for first and current partners and show that the mean age difference and education difference is higher for first partners than for current partners. Put differently, marital homogamy in terms of age and education seems to be higher for repartnered couples than for intact married couples. However, no formal mean comparison test is

provided. Dean and Gurak (1978) analyses women's marital homogamy and find that remarried women exhibit lower degrees of homogamy in terms of age, education and religion in both their first and second marriage, in comparison to once wed women.

Table 4.8 presents the means of those respondents who indicated to have a new partner in T1. We consider respondents in T1 because T1 also contains information on age of the new partners whereas respondents in T2, T3 and T4 were not asked to provide this information. Results for education and earnings are very comparable in the other T's. Besides the means, Table 4.8 also shows standard errors in parenthesis and indicates whether these means for the former and new partner are statistically different. We see that men were on average almost 2 years younger than their former spouse, whereas on average they are about 7 years older than their new spouse. In other words, we see a strong decrease in the homogamy of age. For women on the other hand, homogamy has significantly increased. As far as educational homogamy is concerned we find weak evidence that it has increased for men, but find no evidence whatsoever for women. For both men and women we find a clear increase in homogamy in terms of earnings.

	Men		Women	
Variable	Former Parnter	New Partner	Former Parnter	New Partner
Δ Age	-1.994***	7.074***	2.704***	-0.355***
	(0.330)	(0.536)	(0.387)	(0.520)
Δ Earnings	1.274***	0.942***	-0.518**	-0.303**
	(0.101)	(0.090)	(0.090)	(0.061)
Δ Education	0.131*	0.041*	0.042	0.040
	(0.068)	(0.060)	(0.059)	(0.060)

Table 4.8: Marital Homogamy among Divorced and New-Formed Couples

The data presented above clearly demonstrate more homogamy in terms of earnings. However, the question remains whether this is due to a shift in the respondents earnings or a shift in the new partner's earnings in comparison to the former partner. Because the *quality* of a partner goes beyond solely income we use a principal-component analysis to construct a proxy for quality of the new and former partner (the first principal component). This construct is very comparable to the Hollingshead Two Factor Index of Social Position (Hollingshead, 1957). The more commonly used Hollingshead Four Factor Index of Social Status (Hollingshead, 1975) combines education, occupation, sex, and marital status into one construct. We are dealing with men and women separately, so we cannot include sex in the index. Marital status does not vary at T1 (no one was remarried yet), so it is also excluded. We focus therefore on education and occupational status, replacing occupational status by the more detailed data we have on earnings. For men the difference in earnings between current and former partner is significantly positive. On average a new partner earns about 262 euros more. Figure 4.1 below shows the Epanechnikov kernel density distributions of earnings of the for-

mer spouse and of the current partner of male respondents in our sample. At first sight it is clear that the distribution of the earnings of new partners shifted to the right in comparison to the former partner. For women, current partners earn about 144 euros less in comparison to their former husbands, though the difference is statistically barely significant. The Epanechnikov kernel density distributions of earnings of the former spouse and of the current partner of female respondents in our sample are presented in Figure 4.2. Though the mean differs quite a bit, Figure 4.2 shows no apparent difference in distributions between new and former partner with the exception of the right tail.

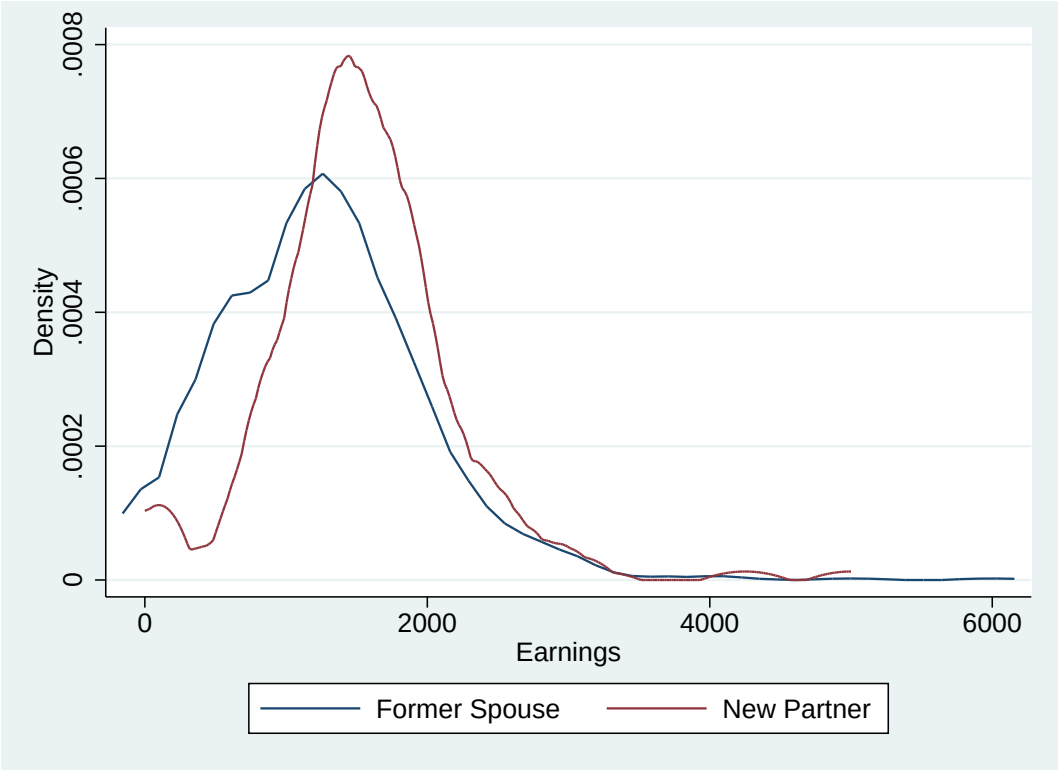

Figure 4.1: Earnings Distributions Men

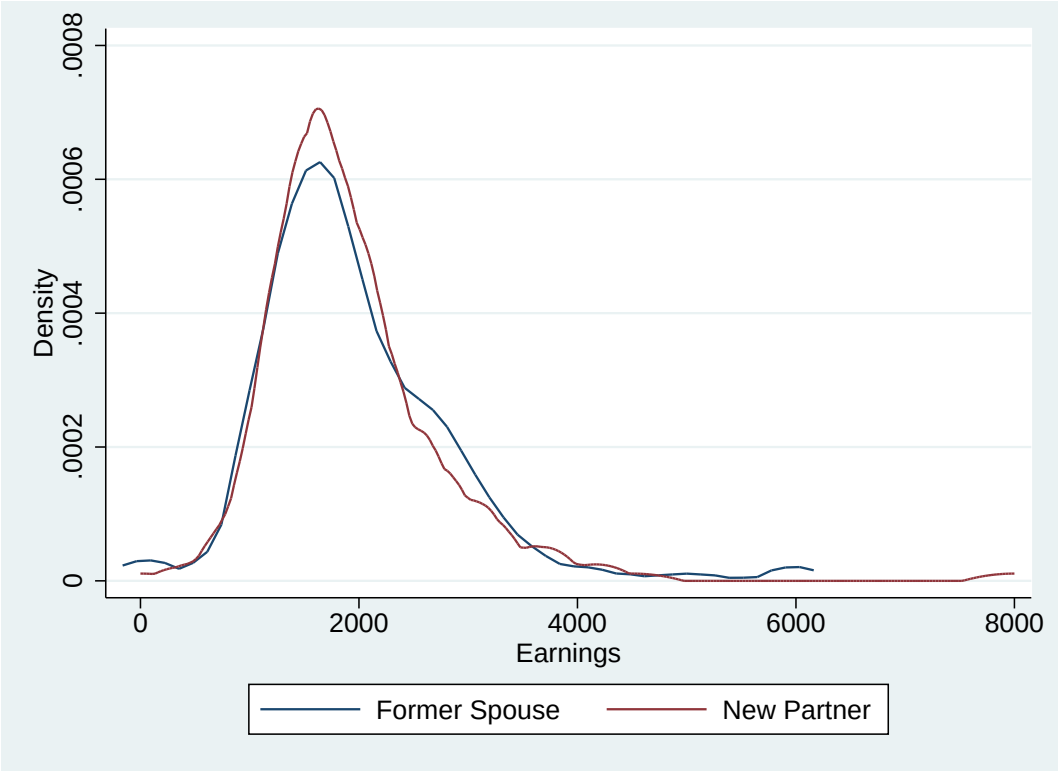

Figure 4.2: Earnings Distributions Women

Given the very strong results for earnings, it is not surprising that our composite indicator of quality of the partner also shows a discrepancy between women and men in terms of quality of the new match. Women on average loose substantially, whereas men gain. Both are statistically significant. The graph below (figure 4.3) shows the distributions of the difference between the quality of the former and the new spouse for men and women. Though it might seem that the distribution of quality differences for men is on average only marginally positive, the distribution is heavily skewed to the right. For women on the other hand the distribution is clearly skewed to the left.

Given the fact that age and wages are usually positively correlated we should be concerned that our findings regarding the difference in quality is influenced by the

difference in age. In other words, our findings might be driven by a cohort effect. To exclude the influence of age we regressed our quality constructs to age and repeated the analysis with the residuals of the this regression. Results are virtually identical only statistical significance is marginally lower. The distributions of the conditional quality construct are also depicted below in figure 4.4.

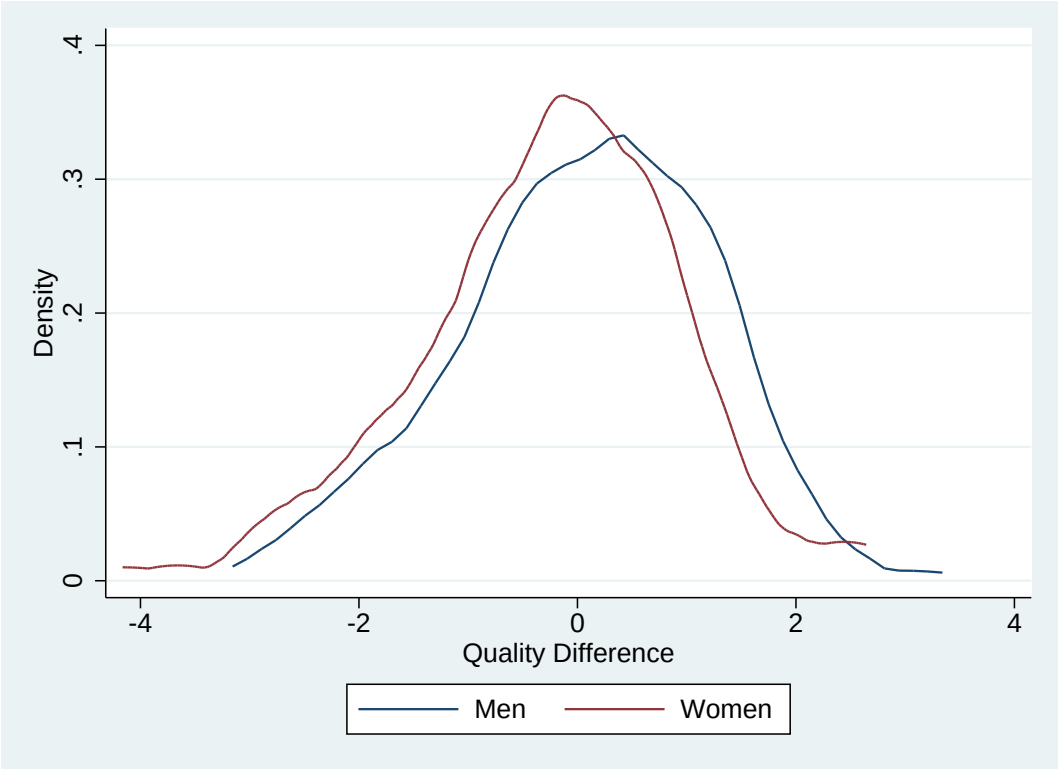

Figure 4.3: Difference in Quality between Former Spouse and New Partner

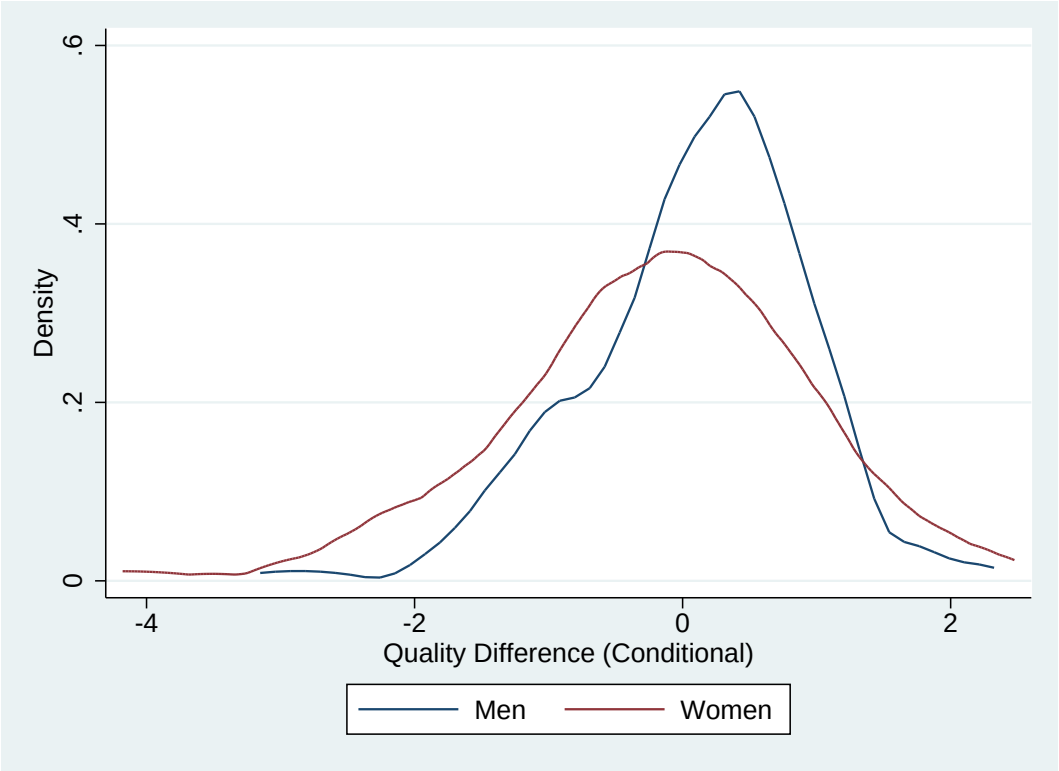

Figure 4.4: Difference in Quality between Former Spouse and New Partner (Conditional)

4.5 Conclusion

Because repartnering is an important strategy to counter the negative financial impact of divorce, we take an in-depth look at the repartnering process in the first 2 years after divorce using a unique Belgian data set (IPOS). We estimate the probability to repartner and the probability to cohabit with a new partner for both men and women separately. In line with Becker et al. (1977) and Wu and Schimmele (2005) we find some evidence of a positive effect of men's earnings and educational attainment on the probability to repartner. Age has a clear negative effect on the probability to repartner, though the effect is somewhat milder for

men than for women. The influence of earnings, educational attainment and age, however, cannot be discerned in a statistically significant way for the probability to cohabit with a new partner. Both male and female first and second generation immigrants in our sample have a substantial smaller chance to both repartner and cohabit. Because the IPOS data set does not contain information on religion, it is highly likely that the immigrant dummy captures - at least partly - the effect of differences in religiosity.

We also find evidence in line with the Bumpass et al. (1990) hypothesis that the longer men have been married the more difficult it is for them to adapt to single life after divorce. Hence the opposite effect is found for age and marriage duration[7], though both variables are highly correlated. Most studies in the literature find no effect of the presence of children on repartnering, or even a positive effect. But this may be due to the omission of information on the residence of the child(ren). We on the contrary find a considerable negative impact of residing young children on the probability to repartner and cohabit for men. Whereas the literature in general focuses on the negative effect of young children for women, we find somewhat surprisingly that as far as repartnering is concerned this negative effect of residing children is only present for men. As far as post-divorce cohabitation is concerned we also find some (weak) evidence for women, though the magnitude of the effect remains much larger for men. A possible explanation for this might be that mothers with one or more young children are still be more socially accepted than men with young children. Indeed, Tables 4.2 and 4.3 show that our sample contains much more women than men with residing young children.

A last variable which seems to play an important role for divorced men is the initiator dummy. Men who indicated that they wanted divorce the most have an about

[7]This also hold when one of the two variables is excluded.

40% higher chance to repartner and are 78% more likely to cohabit after divorce. Results for women are similar yet the magnitude of the effect is considerably lower. Although the initiator dummy is an important variable, the interpretation of these results remains open to discussion. The most obvious explanation is that because they wanted divorce the most these respondents have fully turned the page on their previous marriage and are ready to move on. Another possible explanation for these results is that divorce was *premeditated*, i.e. these respondents wanted divorce the most because they already had (the prospect of a new partner), or they at least made a better guess of their rematching probabilities on the partner-market. As mentioned before, for women age has a clear negative effect on both repartnering and cohabitation odds, which is in line with Becker et al. (1977), Chiswick and Lehrer (1990), de Jong Gierveld (2004) and Wu and Schimmele (2005). A remarkable result for women is the effect of the alimony dummy. Women receiving alimony have a significant lower probability to repartner and cohabit after divorce. There are a few possible explanations for this finding. Jansen et al. (2009) indicate that repartnering is especially for women an important strategy to deal with financial losses that come with divorce. A possible explanation might therefore be that if women receive alimony the incentive to repartner may therefore be mitigated. An second possible reason is that judges can decide to revoke alimony once a (durable) new partnership is formed. Thirdly, there might be some unobserved characteristics which influence both alimony and repartnering odds.

Besides the probability to rematch we also look at the characteristics of the new match and compare these to the previous failed match. We look at marital homogamy in terms of age, earnings and education. In our sample we find that marital homogamy in terms of age rises for women but declines for men. While repartnered men in our sample are on average 2 years younger than their former spouse, they are on average 7 years older than their new partner. Homogamy in terms of

educational attainment seems to be stable for both men and women in their first and current match. Increased homogamy is observed with respect to earnings. In a final step we analyse the *quality* of the new match by constructing an index comparable to Two Factor Hollingshead Index of Social Position. We look at the mean of the difference in social position between the old and the new match and at the distribution of this difference. In both instances the difference in social position is negative for women and positive for men. Put differently, we find that men repartner up, whereas women repartner down, as far as socio-economic position is concerned.

4.6 Robustness Checks

4.6.1 Excluding Respondents Who Already Had A New Match In T1

Variable	(1)	(2)	(3)	(4)	(5)	(6)
Educ	1.221***	1.199***	1.206***	0.999	0.990	0.983
	(0.089)	(0.083)	(0.085)	(0.062)	(0.061)	(0.062)
Earnings	1.082	1.081	1.072	0.987	0.996	0.976
	(0.069)	(0.071)	(0.072)	(0.128)	(0.127)	(0.129)
Age	0.996	0.978*	0.976*	0.974***	0.981*	0.983*
	(0.009)	(0.014)	(0.014)	(0.007)	(0.010)	(0.010)
Immigrant	0.522**	0.589*	0.563*	0.795	0.762	0.797
	(0.170)	(0.186)	(0.182)	(0.185)	(0.179)	(0.184)
Separation	0.830**	0.789**	0.790**	0.823**	0.837**	0.846**
	(0.066)	(0.076)	(0.074)	(0.063)	(0.065)	(0.064)
Chores		0.999	1.003		1.015	1.014
		(0.017)	(0.017)		(0.018)	(0.018)
MarrDurr		1.022*	1.024*		0.989	0.990
		(0.014)	(0.014)		(0.011)	(0.011)
Residing Child		-	-		0.999	1.032
					(0.178)	(0.186)
Conflict		0.992	0.968		1.674	1.336
		(0.066)	(0.066)			
Alimony			0.911			0.706
			(0.259)			(0.213)
Initiator			1.424*			1.269
			(0.277)			(0.197)
Model (χ^2)	23.16***	27.70***	32.66***	20.39***	23.93***	25.63***
Frailty	No	No	No	No	No	No

Significance levels : $*$: 10% $**$: 5% $***$: 1%

Table 4.9: Proportional-Hazard of Repartnering after Divorce (Men and Women)

Variable	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Educ	1.239*	1.220*	1.257*	0.986	0.972	0.963
	(0.154)	(0.147)	(0.150)	(0.126)	(0.118)	(0.121)
Earnings	1.068	1.071	1.026	0.775	0.796	0.767
	(0.113)	(0.120)	(0.107)	(0.196)	(0.192)	(0.193)
Age	0.996	0.978	0.971	0.961***	0.985	0.985
	(0.016)	(0.023)	(0.023)	(0.014)	(0.019)	(0.019)
Immigrant	0.453	0.535	0.490	0.646	0.561	0.619
	(0.286)	(0.334)	(0.302)	(0.250)	(0.215)	(0.238)
Separation	0.732	0.674*	0.688*	0.710***	0.719**	0.727**
	(0.132)	(0.150)	(0.143)	(0.093)	(0.098)	(0.099)
Chores		0.979	0.984		1.015	1.013
		(0.030)	(0.032)		(0.034)	(0.034)
MarrDurr		1.025	1.030		0.956**	0.959**
		(0.021)	(0.022)		(0.021)	(0.021)
Residing Child		-	-		0.696	0.721
					(0.230)	(0.240)
Conflict		0.849	0.789*		1.237	1.985
		(0.114)	(0.101)			
Alimony			0.947			0.397*
			(0.486)			(0.221)
Initiator			2.937***			1.138
			(0.966)			(0.291)
Model (χ^2)	7.80	10.00	21.31**	22.64***	33.49***	95.42***
Frailty	No	No	No	No	No	No

Significance levels : $*$: 10% $**$: 5% $***$: 1%

Table 4.10: Proportional-Hazard of Cohabitation after Divorce (Men and Women)

When we exclude respondents who already had a rematching when we they first completed the survey (T1), we lose a considerable amount of data (cfr. Table 4.1). Explanatory power will therefore be substantially lower since standard errors will inevitably rise. This reduction in sample size will especially manifest itself in the smallest groups controlled for by dummies, such as (male and female) immigrants and males with a child below the age of 6 which mostly resides with them. This latter group is even too small to incorporate in the regressions. Furthermore, when performing this exercise we actually introduce a possible sample selection bias in the model. It is nevertheless a useful robustness check to whether our results are influenced by the high number of respondents indicating to already have a match at T1. As mentioned supra, at T1 respondents completed the survey after being contacted in court a few weeks prior but the search process may have already started while not yet being (legally) divorced.

The tables above present the proportional hazard to rematch (table 4.9) and cohabit (table 4.10) to cohabit after divorce for those respondents who did not have a new match yet at the first contact point. Columns (1) to (3) deal with men, whereas columns (4) to (6) deal with women. Though statistical significance is sometimes lost, the coefficients reported in the tables above are fully in line with the results previously presented. The only coefficients which diverts from those reported in tables 4.4 and 4.5 is the coefficient of the factual separation time prior to divorce. The results suggest that the longer respondents who did not have a new match yet at the first contact point have been factually separated prior to divorce, the lower the likelihood they will find a rematch in the 2 year period considered. The coefficients for post-divorce cohabitation are also very similar. However, due to the even smaller sample size, statistical significance is considerably lower.

4.6.2 Only Taking into Account the First New Match

Variable	(1)	(2)	(3)	(4)	(5)	(6)
Educ	1.056*	1.047*	1.048*	0.978	0.972	0.968
	(0.031)	(0.029)	(0.029)	(0.027)	(0.027)	(0.027)
Earnings	1.060**	1.050*	1.037	0.989	0.989	0.973
	(0.029)	(0.028)	(0.028)	(0.051)	(0.049)	(0.049)
Age	0.999	0.985***	0.985***	0.976***	0.978***	0.980***
	(0.003)	(0.004)	(0.004)	(0.003)	(0.005)	(0.005)
Immigrant	0.675***	0.712***	0.697***	0.843*	0.834*	0.854*
	(0.085)	(0.084)	(0.083)	(0.082)	(0.080)	(0.081)
Separation	1.026**	1.019*	1.017	1.015	1.016	1.020*
	(0.012)	(0.011)	(0.012)	(0.012)	(0.011)	(0.012)
Chores		1.001	1.003		1.003	1.003
		(0.006)	(0.006)		(0.006)	(0.006)
MarrDurr		1.016***	1.015***		0.996	0.996
		(0.004)	(0.004)		(0.005)	(0.005)
Residing Child		0.679	0.675		0.992	1.015
		(0.227)	(0.234)		(0.064)	(0.065)
Conflict		1.072***	1.051**		1.374	1.247
		(0.024)	(0.023)			
Alimony			0.992			0.802*
			(0.069)			(0.103)
Initiator			1.305***			1.317***
			(0.0675)			(0.081)
Model (χ^2)	35.09***	54.21***	86.98***	68.30***	76.18***	99.24***
Frailty	No	No	No	No	No	No

Significance levels : $*$: 10% $**$: 5% $***$: 1%

Table 4.11: Proportional-Hazard of Repartnering after Divorce (Men and Women)

Variable	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Educ	1.019	1.010	1.014	0.966	0.962	0.956
	(0.047)	(0.045)	(0.044)	(0.046)	(0.046)	(0.046)
Earnings	1.093**	1.086**	1.055	0.910	0.909	0.879
	(0.047)	(0.045)	(0.045)	(0.097)	(0.095)	(0.097)
Age	0.997	0.983**	0.982**	0.964***	0.967***	0.970***
	(0.006)	(0.007)	(0.007)	(0.005)	(0.009)	(0.008)
Immigrant	0.621**	0.642**	0.617**	0.691**	0.672**	0.708**
	(0.126)	(0.126)	(0.120)	(0.120)	(0.120)	(0.124)
Separation	1.051***	1.044**	1.041**	1.035	1.033	1.039
	(0.018)	(0.018)	(0.017)	(0.026)	(0.026)	(0.026)
Chores		0.996	0.999		1.002	1.002
		(0.010)	(0.010)		(0.011)	(0.011)
MarrDurr		1.015**	1.014**		0.993	0.994
		(0.007)	(0.007)		(0.008)	(0.008)
Residing Child		0.234	0.233		0.782**	0.808*
		(0.225)	(0.228)		(0.095)	(0.097)
Conflict		1.084**	1.042		0.946	1.332
		(0.043)	(0.040)			
Alimony			1.035			0.536**
			(0.133)			(0.144)
Initiator			1.678***			1.451***
			(0.159)			(0.156)
Model (χ^2)	22.39***	29.08***	58.92***	50.04***	62.02***	82.21***
Frailty	No	No	No	No	No	No

Significance levels : $*$: 10% $**$: 5% $***$: 1%

Table 4.12: Proportional-Hazard of Cohabitation after Divorce (Men and Women)

In the analysis performed for tables 4.4 to 4.7 we observe at 4 time periods. It is therefore possible that a respondent had a post-divorce match in the second period, had no match in the third period, and then again had a match in the fourth and last period. This last match is in fact not a post-divorce rematch, but rather a post-rematch rematch. We therefore check if our results are influenced by this by only taking into account the first rematch spell. As above we present the proportional hazard to rematch (table 4.11) and cohabit (table 4.12) to cohabit after divorce; columns (1) to (3) deal with men, columns (4) to (6) deal with women. Again the coefficients we obtain are fully in line with other results.

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