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# **ABSTRACT**

# Divorced in a Flash: The Effect of the Administrative Divorce Option on Marital Stability in the Netherlands\*

Administrative divorce is an optional divorce procedure which allows couples to bypass the court system and dissolve their marriages in a streamlined, uncontested process. The lack of court involvement renders the administrative divorce faster and less expensive than the conventional divorce. In this paper, I investigate whether the administrative divorce option affected the stability of marriages in the Netherlands. Leveraging the ban of the procedure in 2009, I show that the divorce risks were 11.6% higher under the legal regime which allowed for administrative divorce. This effect is causal, and it exhibits considerable heterogeneity, being stronger among dual-earner couples, native couples, and couples living in rural regions.

JEL Classification: J12, J18, K36

**Keywords:** marital stability, divorce, administrative divorce, divorce costs

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Over the last forty years, family law systems around the world have witnessed the emergence of a new trend in the domain of divorce law. In many countries, the traditional court-based divorce procedures have become supplemented by less-adversarial alternatives, including the mediated divorce, administrative divorce, collaborative divorce or internet divorce. These alternatives allow cooperative couples to settle their divorces outside of the courtroom, rendering the process less expensive, faster, and less emotionally draining. According to legal scholars, the popularity of out-of-court divorce procedures is steadily growing (see Lande and Herman 2004; Ballard et al. 2011), however little is known about their effects on marital stability and, in extension, on other outcomes of divorcing spouses and their families.

Some insights into the effects of the new divorce procedures can be gained from prior reforms which have lowered the costs of divorce or removed other institutional barriers to it. The key reform in this regard is the legalization of unilateral divorce (UD), which allowed one spouse to divorce without the consent of the other. Multiple studies analyzed the effects of UD legislation on marital stability, showing that the reform led to a pronounced increase of divorce rates in the short run, and small (if any) increase in the long run (Wolfers 2006; Matouschek and Rasul 2008; González and Viitanen 2009). Other studies focused on different outcomes of interest, finding that the UD legislation lowered the incidence of domestic violence (Stevenson and Wolfers 2006; Brassiolo 2016), increased the match quality of new and surviving marriages (Matouschek and Rasul, 2008), but also worsened the outcomes of children exposed to the reform (Gruber 2004; Delpiano and Giolito 2012).

<sup>&</sup>lt;sup>1</sup> The main difference between the listed alternative divorce procedures lies in the extent of legal aid provision. In collaborative divorce, the divorcing parties are represented by attorneys who share all the relevant information in order to reach a fair divorce settlement. In mediated divorce, the attorneys are replaced by a neutral facilitator whose role is to provide legal and emotional support to both parties. Administrative and electronic divorces typically waive the requirement of legal aid altogether, allowing couples to pen the divorce settlement on their own. Another difference is that the settlements of collaborative and mediated divorces are generally submitted for the judge's approval, whereas the settlements of administrative and electronic divorces are approved automatically (provided that they satisfy basic procedural requirements).

<sup>&</sup>lt;sup>2</sup> Early empirical papers investigating the effects of the UD legislation on marital stability include Peters (1986), Allen (1992), and Friedberg (1998).

The extrapolation of these effects to the out-of-court divorce procedures is however not without its problems. A key issue is that the UD legislation and the out-of-court divorce procedures are targeted at very different types of couples: the UD legislation is targeted at non-cooperative couples who disagree on whether to divorce and whose divorces are likely to end in litigation; the out-of-court divorce procedures are targeted at couples who want to divorce and who are willing to settle in a cooperative fashion. This contrast suggests that the lessons learned from the UD reforms may not be readily translatable to the new policy instruments – particularly with respect to the family outcomes such as domestic violence, or children's achievement. The extrapolation of UD effects to the current divorce policies is further complicated by the demographic and cultural transition within the pool of married couples, since most of the UD reforms were implemented more than four decades ago. A preferable approach is therefore to analyze the new divorce procedures directly.

In this paper, I focus on an administrative divorce procedure for married couples in the Netherlands, and I investigate its effects on marital stability. The procedure, colloquially named 'flash divorce', allowed Dutch couples to bypass the court system and settle their divorces among themselves, waiving the requirement of legal representation or other forms of legal aid. The settlements of flash divorces were not challenged by authorities, and the cases were automatically processed as uncontested. This rendered the procedure much faster and cheaper than the conventional divorce. My empirical analysis exploits the 2009 ban of the flash divorce procedure, which has several unique and convenient features. First, in contrast to the UD legislation, the ban was not implemented in response to the public demand. The flash divorce option emerged in 2001 as an unintended consequence of another bill, and it was abolished in order to restore the legislative status quo. Second, the implementation of the ban was largely unexpected, with the reform announcement preceding its implementation by only 3 months. Third, unlike most divorce law reforms, the 2009 reform raised the costs of

marital dissolution, and it did so by banning a well-established divorce procedure. The fact that the flash divorce was well-established is particularly important for the causal analysis of its effects. This is because the new out-of-court divorce procedures are often associated with low levels of initial awareness and take-up by the divorcing couples (van Huis and Loozen 2009; Salava 2014), which prevents researchers from employing sharp discontinuity designs around the dates of their formal introduction. In contrast, the ban of an established divorce procedure does not suffer from these issues and can be used to aid causal identification.

Using administrative data covering all married couples in the Netherlands, I evaluate the relative risks of divorce before and after the ban. The model uses the regression discontinuity (RD) design and shows that the risks of divorce were 11.6% higher under the policy regime which allowed flash divorce. The RD estimates are validated by a regression discontinuity difference-in-differences (RD-DD) model. Due to data limitations, the RD-DD model is restricted to couples with children, with the control group consisting of cohabiting couples with children. Cohabiting couples serve as a viable control group because they were subject to the same socio-economic pressures as married couples, and at the same time they were not affected by the changing divorce legislation. The near equivalence of the RD and RD-DD estimates for couples with children bolsters the evidence that the RD effect is causally attributable to the flash divorce reform and not to other time-varying processes.

In subsample analyses, I explore heterogeneity in the baseline effect. First, I show that the effect is stronger for two-earner couples with similar wages. The intuition here is that the two-earner couples faced fewer obstacles to out-of-court divorce settlements, because they were less likely to bargain over alimonies and the division of their respective pensions.

Second, the effect is stronger among middle-income couples and couples living in rural areas, both of whom faced relatively high costs of the conventional divorce procedure. Third, the

effect is weaker among immigrant couples, which is attributed to the legal issues with recognition of flash divorces outside of the Netherlands.

This paper contributes to the literature documenting the effects of divorce legislation on household decision making.<sup>3</sup> The key innovation is the focus on administrative divorce, a policy which has not yet been empirically analyzed, and which is highly relevant for the current policy debate. Its relevance is demonstrated in several ways. First, the administrative divorce option is a contemporary policy which is being adopted by an increasing number of countries and states. Second, despite its growing availability, the administrative option remains highly contentious. Policy makers and legal experts stand divided on its desirability (Aygün 2015), which is best illustrated by the recent decisions to eliminate the administrative option (the Netherlands) or to make it less accessible (Denmark, see Dansk Regering 2018). Third, the effects of the flash divorce option are relevant for a broader set of innovative divorce procedures which aim to reduce the costs and the administrative burden of divorce. Lastly, the variation in the divorce rates identified in this paper can be leveraged to study the effects of out-of-court divorce procedures on other outcomes of interest, and it is likely to provide an interesting contrast to the findings of studies based on the legalization of unilateral divorce.

The rest of the paper is organized as follows. First, I introduce the institutional background and historical context of marriage and divorce in the Netherlands. Second, I describe the data used for the empirical analysis. Next, I specify the econometric model, and discuss the empirical findings. The discussion is followed by concluding remarks.

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<sup>&</sup>lt;sup>3</sup> In addition to the aforementioned papers focusing on the UD legislation, González and Viitanen (2017) investigate the effects of divorce legalization on children's outcomes, Chiappori et al. (2016) analyze the impact of changes in alimony laws on household decision making, and Felkey (2011) considers the implications of the covenant marriage reforms. In addition, several manuscripts in legal studies discuss the associations between the take-up of divorce mediation and the wellbeing of the divorcing spouses and their children (Bautz and Hill 1991; Beck et al. 2004; Ballard et al. 2011). In psychology, small-scale randomized control trials have shown that the parents who were assigned to divorce mediation reached better custodial arrangements for their children than parents who were assigned to litigation. The children in the mediation group were also shown to have better later-life outcomes (for a more detailed discussion, see Ballard et al. 2013).

#### **Institutional Context**

The Dutch experience with administrative divorce is distinct from other countries, because the emergence of this divorce procedure in the Netherlands was not intentional. Administrative divorce for married couples came into existence due to a loophole in a same-sex marriage bill which was passed in April 2001. This caused several idiosyncrasies which will be discussed in this section together with a broader institutional context of marriage and divorce in the Netherlands.

#### Marriage and divorce in the Netherlands

The basic principles underlying marriage and divorce in the Netherlands are similar to other developed countries. The commencement of marriage requires a civil wedding procedure which is administered at the local municipality, and the termination of marriage requires a divorce which is processed by the family court system. The default matrimonial property regime is joint (community) ownership. The Netherlands uses a no-fault divorce regime which was introduced in 1971 and replaced the law granting divorce only on grounds of adultery, cruelty or other pre-specified issues (Boele-Woelki et al. 2003). Divorcing couples are required to seek legal representation, and the judicial procedure is initiated by one of the lawyers filing a divorce petition to the court. There is no mandatory separation period, which means that the petition may be filed irrespective of the couple's current living arrangements. Upon receipt of the petition, the judge decides whether a hearing is needed. Court hearings are compulsory for couples with minor children and couples who disagree on the terms of their divorce settlement. If spouses do not object to the submitted divorce settlement, the hearings are typically waived, and the divorce is processed further as uncontested. The divorce takes effect when the court order is entered into the municipal register. The costs of divorce average at approximately €3,000, however they vary widely, depending on the amount of time spent with lawyers, number of court hearings, and other

factors. Legal services for low-income families are heavily subsidized which means that the disadvantaged couples can avoid a large share of the financial costs.

#### **Registered Partnership**

In 1998, the Dutch government introduced a new type of civil union – registered partnership. Registered partnerships were targeted at same-sex couples, allowing them to enter a formally recognized civil union while keeping marriage for heterosexual couples only (the notion of marriage equality was at that point too controversial). Heterosexual couples were allowed to enter registered partnerships as well. The legal benefits and protections of a registered partnership resemble those of marriage, with one major exception: unlike married couples, registered partners can file for administrative divorce.<sup>4</sup>

The administrative divorce procedure for registered partners consists of three steps. First, the couple is required to pen a mutually agreeable divorce settlement, specifying the details of alimony payments, division of estates, pensions, and child custody. This can be done with or without the assistance of lawyers. Second, the settlement has to be signed by both parties and notarised. Third, the notarised settlement has to be lodged at the municipality. Administrative divorces are strictly uncontested, which means that the settlement terms are not challenged by the municipal officers, and the divorce is effective immediately upon the receipt of the settlement contract. If the registered partners are unwilling or unable to pen a mutually agreeable settlement, they can resort to a conventional divorce procedure which resembles the procedure for married couples.

#### Same-sex marriage reform and its aftermath

The access to administrative divorce remained exclusive to registered partners for three years. This changed in 2001 when the Dutch government passed a bill legalizing same-

<sup>&</sup>lt;sup>4</sup> Waaldijk (2004) mentions two other legal differences between marriage and registered partnership in the Netherlands. Registered partners are excluded from international adoptions, and they do not automatically become legal parents when a child is born to their spouse.

sex marriage. The bill came into effect on April 1, 2001, and it had several consequences for marriages and registered partnerships in the Netherlands. Besides allowing same-sex couples to marry, the bill also addressed the transitions between registered partnership and marriage. Specifically, it allowed registered partners to transform their unions into marriages by means of a simple administrative procedure (couples were required to lodge a request at the municipality and pay a small fee). This procedure was quickly exercised by many same-sex couples who preferred the symbolic value of marriage over that of a registered partnership.

However, the bill also allowed the reverse transitions. To maintain legal symmetry, married couples were allowed to transition into registered partnerships, and they could do so using the same administrative procedure. This feature of the bill proved to have substantial unintended consequences. Unforeseen by policy-makers, the reverse transitions quickly became popular, with many (mostly heterosexual) couples transforming their marriages into registered partnerships. But rather than reflecting their intrinsic preferences for partnerships, these actions were prompted by marital instability. The couples who made the reverse transitions did so in order to dissolve their marriages, engaging in what was termed a 'flash divorce' (flitsscheiding).

#### Flash divorce

The reverse transition enabled married couples to switch to the legal regime applicable to registered partners which included the right to dissolve the partnership by means of administrative divorce. There were no other benefits associated with being in a registered partnership, and a vast majority of couples who made the reverse transition immediately followed through with their divorce intentions (Statistics Netherlands records only 9 marriages that have not been dissolved past the reverse transition).

Compared to the conventional divorce, flash divorce was advantageous in three respects. First, it was considerably cheaper. An illustrative comparison of costs embedded in

the two divorce procedures is presented in Table 1.<sup>5</sup> The settlement of financial and custodial matters was left up to the spouses themselves, and while they were encouraged to seek legal counsel, this was not formally required. These features made the flash option particularly attractive for divorcing couples who felt little to no need for legal aid.

#### [Table 1 about here]

Second, flash divorce was considerably faster to process. According to the Dutch divorce websites, conventional divorces take approximately 3 months to settle. This reflects the fact that the courts require a minimum of 6-8 weeks to process the submitted divorce petitions, and the submission itself is preceded by a period during which the spouses meet with their legal teams and prepare for the submission. In contrast, flash divorce was not burdened by any statutory processing times, which meant that the couple's decision could become effective immediately upon notarising the divorce settlement. The administrative burden was therefore greatly reduced, and couples could expect to be divorced in a fraction of time corresponding to the conventional procedure.<sup>6</sup>

Third, flash divorce was more accessible for couples living outside of regional centres. Unlike conventional divorces, which are processed by a small network of 19 regional courts, flash divorces were processed by local municipality offices (there are 390 municipalities in the Netherlands). By opting for a flash divorce, couples could save themselves the costs and time spent on commuting to the courts and law firms. Considering the Dutch geography, these considerations were inessential for the majority of couples, but they could prove substantive for couples living in rural areas or on the coastal islands.

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<sup>&</sup>lt;sup>5</sup> Munro et al. (2016) discuss the costs of administrative and conventional divorce in the United States, showing that the American couples are likely to face similar differences in the costs of the two procedures as the Dutch couples.

<sup>&</sup>lt;sup>6</sup> Even when accompanied by legal mediation, flash divorces were advertised with the prospect of being finalized in less than a week. See for example <a href="https://nl.hellolaw.com/node/1017">https://nl.hellolaw.com/node/1017</a>.

#### The proliferation and the ban of the flash divorce option

The accidental emergence of the new divorce option is evident in its pattern of adoptions. Flash divorce was not a part of the public discourse leading up to the same-sex marriage bill, which meant that people were initially unaware of its availability. The estimates of take-up rates of flash divorce reported in van Huis and Loozen (2009) suggest that the awareness rose throughout the year 2001, reaching full salience in the following year. In 2001, the flash option accounted for less than 2% of the divorce cases filed in the country, whereas in 2002 it accounted for more than 13%. This share remained relatively stable over the next 7 years, falling somewhat towards the end of the decade.

Despite its popularity, the institution of flash divorce was controversial. As an unintended outcome of the same-sex marriage bill, flash divorce was poorly incorporated into the existing family legislation. It created legal ambiguities, and legal experts grew increasingly concerned about potential problems with financial and custodial disputes of flash-divorced couples – particularly of the couples who arranged their divorce without seeking any legal counsel (see Aygün 2015). It also created problems for immigrant couples because the flash option was not embedded into international treaties, and couples could face problems when trying to get the flash divorce recognized in their countries of origin. For these reasons, the government passed a corrective bill which prohibited further transitions from marriage into the registered partnership, effectively banning the flash divorce option.

The bill was passed on November 28, 2008 and came into effect three months later, on March 1, 2009. Over the nearly eight years of the flash divorce availability, more than 30,000 couples opted for this procedure (van Huis and Loozen 2009). This represents a sizable proportion of the total of 290,000 divorces which occured in the Netherlands within this period.

#### **International experience**

Although the notion of administrative divorce may seem unusual, numerous countries have embedded this option into their divorce law systems. Denmark, Estonia, Japan and Portugal offer administrative divorces which resemble the Dutch variant: the divorces are processed at the municipality; the couples are required to present a divorce settlement contract and pay a processing fee; and legal mediation is not required. In Norway and Romania, the administrative procedure differs in two respects: it is free of charge and couples with minor children are required to enter legal mediation prior to the divorce. Other countries offer administrative divorces executed by a notary (Latvia and Spain) or by a legal representative (Greece). The Greek and Spanish variants are restricted to couples who have no minor children, whereas the Latvian variant is accessible without restrictions. In the United States, administrative divorce is known as 'summary dissolution', and it is available in nearly half of the states. A distinctive feature of summary dissolution is that it is subject to stricter eligibility criteria than administrative divorce in other countries. These criteria differ state-by-state, and they include limits on spousal income and assets, absence of children, marriage duration limits, debt ceilings and others (for details, see Munro et al. 2016).

Administrative divorce also constitutes a very active domain of public policy. The availability of the procedure is growing, with the most recent adopters being Romania (2011) and Connecticut (2015). In the United States, administrative divorce is being viewed as an important instrument for reducing the case congestion in family courts, and legal experts call for its broader adoption and loosening of its eligibility criteria (Garrison 2007; Munro et al. 2016). In Denmark, the administrative procedure has been recently amended to include a 3-month waiting period before the divorce takes effect (Dansk Regering 2018). This period is intended to give the divorcing couples time to reflect on the terms of their divorce settlement, particularly with regard to the custodial arrangements for their children.

#### **Dutch** administrative data

My empirical analysis rests on a dataset constructed from the Dutch municipal registers. The register data are maintained by Statistics Netherlands (CBS) and cover all residents living in the Netherlands between years 1995 and 2016 (the population in 2005 was 16.3 million inhabitants). Each record contains a unique personal identifier, date of birth, gender, and immigration background. I also observe full marital histories with spousal identifiers, full fertility histories with child identifiers, and residential histories over the period 1995-2016 with household identifiers.

The marital histories cover each resident's past and present marriages, including the marriages that were initiated and terminated prior to 1995. This includes 3,540,794 marriages that were on-going on 1 January 1995 and 1,859,763 marriages that began on or after this date. For each marriage, the data indicate the date of wedding, the date of divorce (i.e., the date when the divorce was recorded into the register of births, marriages and deaths) or the date of termination due to death of one of the spouses. The type of divorce procedure is not observed. Leveraging the spousal and child identifiers, I link the married individuals to their spouses and children. Residential histories are then used to determine geographic characteristics of their households.

#### Dynamics of marriage and divorce incidence

As an initial exercise, I investigate the aggregate flows into and out of marriage. Figure 1 shows the quarterly incidence of weddings and divorces of Dutch heterosexual couples from 1995 to 2016. The wedding incidence is adjusted for seasonality, which is necessary due to its strong seasonal component (an unadjusted plot can be found in Appendix Figure A1). The vertical dashed lines correspond to the introduction and the ban of the flash divorce option.

[Figure 1 about here]

The wedding incidence declines over time, dropping from an adjusted 23,000 weddings per quarter in the late 1990s to 15,000 in 2016. This decline resembles trends in other developed countries, and it is consistent with the theory of 'deinstitutionalisation' of marriage (Cherlin 2004). With respect to the two thresholds, there is little evidence that the wedding incidence was meaningfully affected by the changes of the divorce regime. There is a noticeable decrease in the quarterly variability after the introduction of flash divorce, however this change is unrelated to the introduction of the new divorce regime.<sup>7</sup>

The dynamics of the divorce incidence are presented in the second panel of Figure 1 and they are in a stark contrast to the wedding incidence. The number of divorces recorded at the beginning and end of the observation period is virtually the same – approximately 8500 per quarter. However, since the wedding incidence is falling, the relative incidence of divorces is increasing. In 1995, the annual divorce rate amounted to 9.1 divorces per 1000 ongoing marriages and it rose to 10.1 divorces per 1000 ongoing marriages in 2016. The graph also reveals that the risks of divorce were elevated throughout the period of flash divorce availability. The divorce incidence increases around the introduction of the policy and falls after its ban.

The 2001 increase of divorce incidence is, however, unlikely to be attributable to the new divorce option. The graph shows that the divorce incidence started growing *prior* to the introduction date (April 1, 2001), and the two quarters adjacent to the threshold show no sign of discontinuity. The absence of a discontinuous change conforms with the institutional background presented above - the new divorce regime was not immediately salient to

<sup>&</sup>lt;sup>7</sup> As documented by Kabátek and Ribar (2018), the observed fluctuations of quarterly wedding incidence are attributable to couples who are targeting easily memorable wedding dates, such as 08/08/08 or 05/06/07. In the second half of each decade, these dates fall predominantly on spring and summer months, and their popularity is so large that it enhances the overall seasonality of weddings.

<sup>&</sup>lt;sup>8</sup> The notion of divorce rate used throughout this paper is not equivalent to the crude divorce rate which is often found in national statistics (England and Kunz 1975). The crude divorce rate is defined relative to the population, whereas the divorce rate used here is defined relative to the pool of couples at risk of divorce.

divorcing couples, and few exercised the flash option within the first year of its availability. The cause of the rising incidence of divorce between the years 2000 and 2001 lies elsewhere, and to the best of my knowledge it remains unaddressed by the academic literature. One hypothesis is that the increase is a consequence of the slowing economy (De Groot 2002), while other hypotheses link it to the same-sex marriage legislation.<sup>9</sup>

Compared to the introduction, the ban of the flash divorce option in March 2009 marks a clear discontinuity of the divorce trend. The incidence of divorce dropped from 8,700 per quarter to 7,400 per quarter, suggesting that the availability of flash divorce did indeed have a sizable effect on marital stability. The immediate drop in the first quarter following the ban is partially compensated in the following quarters. The larger magnitude of the immediate change is likely a mechanical consequence of the ban: The couples who decided to split shortly after March 1 2009 were no longer able to exercise the fast administrative divorce option. Instead, they had to wait several months for their conventional divorce to get processed. This processing lag would result in a temporary dip of the divorce incidence which would be compensated as soon as the first wave of post-reform divorces got finalized. <sup>10</sup>

#### **Econometric Analysis**

The following econometric analysis is aimed at estimating the effect of flash divorce availability on marital stability. The identification is aided by the ban of the flash divorce

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<sup>&</sup>lt;sup>9</sup> Trandafir (2015) considers the argument that the same-sex marriage bill may have destabilized the institution of marriage in the Netherlands. This argument was purportedly used in parliamentary debates of the same-sex bill. The claim is that the reform could induce heterosexual couples to divorce (or not to marry) either as a form of protest against the same-sex legislation, or as a result of spousal conflict stemming from disagreement over the controversial policy. Trandafir finds no evidence of a drop in heterosexual wedding incidence past the legalization of same-sex marriage. His analysis however does not consider the divorce channel, leaving this mechanism as a possible explanation of the 2001 increase of divorce incidence.

<sup>&</sup>lt;sup>10</sup> The dip could be also potentially attributed to the strategic behavior of couples who had expedited their divorce process in order to qualify for the flash divorce option. However, the administrative data show little evidence of pre-reform bunching, and I conduct robustness checks to make sure that the results are not driven by this confounding variation.

option. The introduction of the flash divorce option is not considered because the corresponding discontinuity of divorce incidence is not sharp (due to the low levels of initial awareness), and because the underlying trends may be distorted by simultaneous policy changes.

The principal estimation strategy employs a regression discontinuity (RD) design. The RD model evaluates the incidence of divorces in a restricted sample of marriages observed within the 3-year window around the ban of the flash divorce option. This restriction renders the sample of marriages relatively homogenous, and allows me to abstract from modelling the compositional changes within the pool of married couples. Characteristics of the 3,757,400 married couples observed within the 3-year window are summarized in Table 2.

### [Table 2 about here]

The unit of observation is the marital outcome (continuation or divorce) for a given marriage within a given period of time. The period is defined as a three-month interval (narrower interval definitions have been employed as well, leading to very similar results). Compared to standard calendar quarters, the three-month intervals used in this paper are shifted one month backwards, so that the date of the reform (March 1, 2009) coincides with the first day of the first post-reform interval. Note that I still call this shifted three-month interval a 'quarter' and use this nomenclature throughout the paper.

The RD model uses a donut hole specification, excluding the first quarter which follows the ban (because the divorce incidence was distorted by the post-reform processing delay). The policy effect is identified through the discrete change of divorce propensities at the threshold. The functional form of the RD model is logit, with the probability of divorce *y* defined as

$$\Pr[y_{it} = 1 \mid \mathbf{x}_{it}, \boldsymbol{\beta}] = \frac{1}{1 + \exp(-\mathbf{x}_{it}\boldsymbol{\beta})}.$$

The couples are indexed by i and time is indexed by t. The exponentiated term corresponds to the product of a vector of covariates  $\mathbf{x}$ , and a parameter vector  $\boldsymbol{\beta}$  which is defined as follows,

$$\mathbf{x}_{it}\mathbf{\beta} = \beta_0 + \beta_1 \cdot Flash_t + f(t, \mathbf{\beta}_2) + \mathbf{\beta}_3 \cdot \mathbf{q}_t$$

The covariates include a dummy indicating the availability of flash divorce (*Flash*), a flexible time trend polynomial  $f(t, \mathbf{\beta}_2)$ , and a vector of quarterly dummies ( $\mathbf{q}$ ) capturing seasonality. The baseline specification of the time trend is using linear spline function with a knot at the point of the ban c,

$$f(t, \boldsymbol{\beta}_2) = \beta_{21}(t-c) + Flash_t \cdot \beta_2(t-c).$$

In order to ensure robustness of the results, other time trend specifications are considered as well. The error terms  $\varepsilon$  are assumed to be drawn from the type 1 generalized extreme value distribution.

The identification of the RD model is aided by variation of the outcome variable over time. This makes the model susceptible to confounding effects of other time-varying processes which may be affecting the stability of marriages (such as macroeconomic conditions). To account for these confounders, I complement the RD model with a regression discontinuity difference-in-differences (RD-DD) model. The RD-DD model operates with a control group of couples whose outcomes were not affected by the flash divorce legislation. In this analysis, the control group consists of cohabiting (de facto) couples. Cohabiting couples can be considered a valid control group, because while they were subject to the same macroeconomic and societal processes as married couples, the flash divorce legislation did not affect the rules governing dissolution of their unions. De facto unions can be dissolved without any legal or administrative process, which means that the availability of flash divorce

option was not relevant for cohabiting couples.

The policy effect is identified through the difference between the RD effects corresponding to the treatment and the control group. The functional form of the principal RD-DD model is an interacted version of the RD model,

$$\mathbf{x}_{tt}\mathbf{\beta} = \beta_0 + \beta_1 \cdot Flash_t + f(t, \mathbf{\beta}_2) + \mathbf{\beta}_3 \cdot \mathbf{q}_t + Married \cdot (\gamma_0 + \gamma_1 \cdot Flash_t + f(t, \mathbf{\gamma}_2) + \mathbf{\gamma}_3 \cdot \mathbf{q}_t),$$

in which the main coefficient of interest is  $\gamma_1$ . I also estimate an alternative specification of the RD-DD model which uses time fixed effects  $\lambda_i$ ,

$$\mathbf{x}_{it}\mathbf{\beta} = \beta_0 + Married \cdot (\gamma_0 + \gamma_1 \cdot Flash_t) + \lambda_t$$
.

One disadvantage of using cohabiting couples as the control group is that I cannot identify cohabiters who are childless (the structure of the data renders them observationally equivalent to two unrelated individuals who share the same household). The RD-DD model is therefore restricted to married and cohabiting couples with children, and serves primarily as a validation exercise for the RD model estimates.

#### **Baseline results**

The results are presented both graphically and numerically. Graphical representation of the RD estimate is shown in Figure 2, which plots the realized and predicted divorce rates around the ban of the flash divorce option.

#### [Figure 2 about here]

The graph shows a clear drop of divorce rate at the point of discontinuity. Estimates of the corresponding RD effect are listed in the first column of Table 3. In relative terms, the period of flash divorce availability was associated with 11.6% higher risks of divorce than the period following the ban. In absolute terms, this translates into 1 additional divorce per 1,000

married couples per year, totaling approximately 3,800 divorces per year. The estimates are statistically significant and robust across multiple specifications which are listed in Table A1.

#### [Table 3 about here]

The RD model is accompanied with the RD-DD model for couples with children. The control group of cohabiting couples is extracted from population registers using couples' residential histories and parent-child identifiers. This means that each couple in the control group shares at least one biological child, and was recorded as cohabiting in the beginning of the observation window. In order to make the treatment and control group more comparable, the same restriction is imposed on the married couples as well. Since the cohabiting couples are not required to formally register their separations, I define a separation of a cohabiting couple as the point when one of the spouses moves out of the shared residence. This event is treated as a separation only if the couple is not observed to move back together within a period of two years. The two-year condition is put in place to account for other reasons for residential separations, such as seasonal work engagements, studies abroad, or a sequential move into a new residence. Figure 3 shows a graphical representation of the RD-DD results, plotting the realized divorce and separation rates against the fitted lines for both married and cohabiting couples with children.

### [Figure 3 about here]

The plots show that while married couples experience a discrete drop of the divorce rate at the point of discontinuity, de facto couples are not subject to a similar change.

Corroborating the visual evidence, the RD-DD estimate listed in Table 3 is only marginally smaller than the RD estimate for married couples with children. This bolsters the claim that the measured change of divorce rate should be causally attributed to the availability of flash

divorce and not to other time-varying processes. In terms of the magnitude, the estimates of relative effects for couples with children are similar to those corresponding to the full sample of married couples. The absolute effects are however smaller, because the divorce incidence is lower among couples with children. In nominal terms, the 10.8% increase of the divorce rate corresponds to 2,300 divorces of families with children per year. The estimates are statistically significant and robust across multiple specifications which are listed in Table A2.

The similarity of the RD-DD effect for couples with children and the effect found in the full sample may seem counterintuitive – one might expect couples with children to be less responsive to the flash divorce availability, because their settlements were complicated by custodial arrangements and child support plans. However, these complications were counterweighed by substantially larger reductions of divorce costs for families with children (recall that the couples with children are required to attend court hearings, which raises the costs of conventional divorce by court hearing fees and additional lawyer fees). The idiosyncratic design of the policy (and of the legal system in which it was embedded) therefore made the couples with children as responsive to the flash divorce legislation as the couples who were childless.

## Heterogeneity of the baseline results

While certain features of the flash divorce option led to homogenous responses across distinct population groups, other features had the opposite effect. I explore this heterogeneity by estimating the principal specification of the RD model for specific sub-samples of married couples. I choose the subsamples to highlight the practical considerations which either encouraged couples to take up the flash divorce option, or deterred them from doing so. The results of these analyses are listed in Table 4.

[Table 4 about here]

First, I consider the role of relative earning potential, isolating couples whose wages were close to each other, and couples whose wages were far apart. The intuition is that couples with similar earning potentials should respond more to the flash legislation, because they face fewer obstacles to informal divorce settlement. With similar levels of spousal earnings, the settlements are unlikely to be complicated by bargaining over alimony, pensions, and overall maintenance of living standards. These issues will be more salient to the single-earner couples and couples with very dissimilar earnings, who are expected to rely more often on the advice of lawyers, and therefore respond less to the flash divorce legislation.

In order to approximate spousal earning potential, I use hourly wages observed over the year 2007. I do not use annual earnings, because many married women in the Netherlands work part-time, and their hourly wages are therefore more indicative of their earning potential. The pool of married couples is split into three groups, distinguishing couples whose hourly wages were 1) less than 5 Euros apart, 2) between 5 to 10 Euros apart, and 3) At least 10 Euros apart. The last group also contains single-earner households. The results are presented in the first three rows of Table 4. In line with the intuition, the couples with similar hourly wages are shown to be significantly more responsive to the flash divorce legislation than couples with dissimilar hourly wages. The divorce risks of the most homogenous group were 15.5% higher under the flash divorce regime, compared to 9.3% higher among couples in the least homogenous group.

Second, I consider the role of household income. Couples who are expected to be most responsive to the legislation are middle-income couples, because low-income couples are sheltered from a large fraction of the legal costs of divorce, and high-income couples are likely to be less sensitive to the financial costs. I split the couples into terciles according to their joint annual income in the year 2007, roughly separating the low-income, middle-

income, and high-income couples. The corresponding RD estimates are presented in the second block of Table 4. Also in this case, the empirical estimates are in accord with the expectations. The low-income couples are shown to be largely unaffected by the ban of flash divorce, facing 4% higher divorce risks under the flash divorce regime. In contrast, the risks faced by middle-income couples were 15% higher, and the risks faced by high-income couples were 10% higher. The estimates for middle-income and high-income couples are statistically significant.

Third, I investigate the heterogeneity with respect to the spousal immigration background, distinguishing between native Dutch couples, immigrant couples, and blended couples in which one spouse is an immigrant and the other is a native. Heterogeneous effects among these groups are also expected, because immigrant couples were more affected by the problems with recognition of flash divorces outside of the Netherlands. Accordingly, the couples with (partial) immigrant background are expected to respond less to the flash divorce legislation than the natives. This is confirmed by the RD estimates which show that the effect among native couples is 12%, whereas the effect among immigrant couples is 9%. The difference between these two effects is statistically significant. The relative effect for blended couples lies in between the two, however note that the absolute effect for blended couples is much larger. This is caused by substantially higher divorce risks faced by couples with dissimilar immigration background.

Lastly, I investigate the role of distance to courts. The couples living in areas which are poorly connected to the court network are expected to be more responsive to the legislation, because the flash divorce option allowed them to administer their divorce locally. For this exercise, I proxy the distance to courts by municipal urbanization levels. I prefer the urbanization levels over Euclidean distance to courts, because local urbanization better captures the degree of connectedness to the regional centers. The urbanization level is captured

by an ordered scale ranging from 1 for the least urbanized regions of the Netherlands to 5 for the densest cities. A map of municipal urbanization levels and locations of regional courts is presented in Figure 4.

## [Figure 4 about here]

If the time and monetary costs of commuting play a considerable role in divorce decisions, we should see stronger effects among couples living in the least urbanized areas of the Netherlands. The results presented in the fourth block of Table 4 confirm this reasoning. The couples living in more urbanized areas (with urbanization index ranging from 3 to 5) were subject to 10% higher risks of divorce before the ban of flash divorce. In contrast, couples living in the areas with below-average urbanization were subject to significantly stronger effects. The effects were strongest among couples living in the least urbanized areas (with the urbanization index equal to one) who were subject to a 21% increase in the risks of divorce under the flash divorce regime. The effect, however, is estimated with low precision due to the smaller sample size and lower incidence of divorces in the least urbanized regions.

#### **Robustness checks**

The estimates of the flash divorce effect have been subjected to a battery of robustness checks to ensure their stability. The results corresponding to these checks are listed in Table A.1 First, I experiment with the specification of the time trend, replacing the linear spline consecutively by a simple linear trend, quadratic trend, and a quadratic spline. All three specifications yield significant effects, with the effects corresponding to the linear and quadratic specification being nearly identical to the baseline effect. The effect captured by the quadratic spline specification is considerably larger than the baseline, which is likely due to overfitting.

Next, I change the sample selection by: expanding the window of observation to 18

quarters surrounding the ban; dropping couples who got married prior to the introduction of the UD legislation; and expanding the donut hole to also exclude the last quarter preceding the ban. The last robustness check is conducted to account for potential surge of last-minute divorces preceding the ban. The reform bill was passed in late November 2008, which could indeed render the excluded quarter susceptible to such anticipatory behavior. Nevertheless, all three specifications yield estimates of the effect which are not statistically different from the baseline. Further robustness checks involve changing the model specification from logit to linear probability model, and including current marriage duration among the covariates. Their results are also in line with the baseline.

I also subject the RD-DD model to robustness checks including changing the trend specification, and replacing the time trend by time fixed effects. The results of these robustness checks also support the effect size found in the baseline specification of the model.

#### **External validity**

The empirical analysis presented above reveals that the availability of administrative divorce in the Netherlands was associated with a sizable reduction in marital stability. The magnitude of the effect is comparable to the short-run effect of Unilateral Divorce legislation found by Wolfers (2006), and the heterogeneity analysis shows that certain groups within the pool of married couples were considerably more responsive to the reform than the average couple.

Considering the similarity of the Dutch flash divorce option to other variants of administrative divorce which are currently in place in other countries, it can be expected that the marital stability in these countries is influenced by the administrative divorce option as

<sup>11</sup> 

<sup>&</sup>lt;sup>11</sup> While such behavior is possible, an analysis of Google Trends reveals no spike of flash divorce searches in the period leading up to the ban. Nor could I retrieve any news articles which would report on the passing of the corrective bill and its consequences. It appears that the ban of the flash divorce option was indeed an unexpected policy shock accompanied by minimal anticipatory behavior.

well. These country-specific effects on marriage stability may be however stronger or weaker, depending on certain features of the institutional design. On the one hand, the effects measured in the Netherlands were pulled down by the problems with the legal status of flash divorcees and their international recognition. The effects of other variants of the administrative divorce option could be therefore stronger, provided that the procedures are well-embedded into the national and international law systems. On the other hand, some countries use administrative divorce procedures which are stricter than the Dutch variant, requiring couples to engage in legal mediation, or imposing waiting periods. In such cases, the effects of administrative divorce are likely to be moderated by the extra costs embedded in the stricter design of the policy. However even then, the divorce effect is unlikely to disappear completely since the total costs of the mediated administrative procedure are still likely to be lower than the costs of conventional divorce.

#### **Conclusion**

In this paper, I show that the costs of divorce are an important factor influencing marital stability. I do so by analyzing a unique policy shock which temporarily reduced the costs of divorce for married couples in the Netherlands. This policy shock consisted of the introduction and the later ban of the 'flash divorce', an administrative divorce option which allowed couples to get divorced in a streamlined procedure at the local municipality. The flash-divorcing couples were not required to seek legal aid and they did not have to file for a divorce through the court system. This made the optional procedure substantially cheaper and faster than the conventional divorce.

My empirical analysis rests on an administrative dataset covering the full population of married couples in the Netherlands. Leveraging the discontinuous change of the divorce rate around the ban of the flash divorce option in April 2009, I show that the Dutch couples were subject to risks of divorce that were 11.6% higher under the flash divorce regime. This

increase of the divorce risks translates into approximately one additional divorce per 1,000 couples per year, totaling 3,800 divorces per year. This baseline result is derived using a RD model and is robust to various changes to the model specification and sample selection criteria. It is also confirmed by a RD-DD model using cohabiting couples with children as a control group who were unaffected by the reform.

The subsample analysis reveals that the estimated effect exhibits considerable heterogeneity. First, the effect is stronger among couples in which both the husband and the wife have similar earning potentials. The similarity of earning potentials facilitates informal settlement of alimony and pension arrangements, and renders the couples more responsive to the flash divorce option. Second, the effect is stronger among middle-income couples, for whom the costs of conventional divorce were particularly high. Third, the effect is weaker among immigrant couples. This is likely due to the problems with the recognition of flash divorces outside of the Netherlands. Fourth, the effect is stronger among couples living in the least urbanized regions of the country. The couples living in these areas were more responsive to the administrative divorce option, because the possibility of divorce at the local municipality saved them the costs of commuting to the regional centers.

The lower stability of marriages under the flash divorce regime can be attributed to multiple factors. Flash divorce was associated with lower procedural costs, shorter processing times, better accessibility, and possibly also lower emotional strain on the divorcing couples. Each of these attributes is likely to reduce the stability of marriages. In addition, flash divorce enabled couples to avoid court hearings and other time-intensive meetings with their attorneys, saving them the costs of legal representation, foregone wages, vacation days, childcare costs and other related expenses. The administrative procedure also left couples with less time to reconsider their decisions. Having the possibility to divorce in less than a week could have prompted some couples to dissolve their marriage 'in the heat of the

moment', even though they would have acted differently had they been given more time to reflect on their initial decision.

The results presented in this paper should be of considerable policy interest, especially for the countries whose legal systems allow married couples to exercise the administrative divorce option. The divorce rates in these countries are often higher than those observed among their neighbours (Portugal, Spain and Denmark have the highest divorce rates in the European Union), and the availability administrative option may well be contributing to the observed disparities. An obvious policy aimed at increasing the marital stability would therefore be to follow the Dutch example and ban the administrative procedure (or increase its costs). However, while marital stability is likely to benefit from such policy, its normative merit is yet to be determined. Ex ante, it is unclear which policy regime is associated with greater social welfare and a careful analysis of the outcomes of families divorcing under the two policy regimes is necessary to resolve this question. From this perspective, the Dutch policy shock offers great potential for follow-up analyses to yield novel and highly relevant insights into the causal effects of the administrative divorce option.

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Table 1: An illustration of the costs involved in the conventional and flash divorce procedures

|                | Conventional divorce | Flash divorce     |
|----------------|----------------------|-------------------|
| Municipal fees | €100                 | €200 <sup>1</sup> |
| Court fees     | €200                 | -                 |
| Lawyer fees    | €2400 <sup>2,3</sup> | -                 |
| Notary fees    | €600³                | €300 <sup>3</sup> |
| Total fees     | €3300                | €500              |

Notes:

<sup>&</sup>lt;sup>1</sup> Municipal fees are higher for the flash divorce option, because the couple needs to make two administrative changes: a transition into the partnership, and then a termination of the partnership.

<sup>&</sup>lt;sup>2</sup> Lawyer fees are not applicable to spouses with low levels of income. The low-income couples are entitled to subsidized legal services provided by the city council.

<sup>&</sup>lt;sup>3</sup> Indicative averages reported by the Dutch divorce law websites.

Table 2: Summary statistics, married couples observed between years 2007 and 2010

| Variable                                | Mean    | St. Dev. |
|---|---------|----------|
| Year of marriage                        | 1983.94 | 16.64    |
| Duration of marriage (in years)         | 22.53   | 16.63    |
| Age, husband                            | 51.64   | 14.81    |
| Age, wife                               | 48.94   | 14.83    |
| First-time married                      | 88.13 % |          |
| Immigration background                  |         |          |
| Native couples                          | 83.36 % |          |
| Blended couples                         | 7.59 %  |          |
| Immigrant couples                       | 9.05 %  |          |
| Education level, husband                |         |          |
| Primary education                       | 3.06 %  |          |
| Secondary education                     | 17.70 % |          |
| Tertiary education                      | 11.05 % |          |
| Missing records                         | 68.19 % |          |
| Education level, wife                   |         |          |
| Primary education                       | 5.30 %  |          |
| Secondary education                     | 20.48 % |          |
| Tertiary education                      | 11.69 % |          |
| Missing records                         | 62.53 % |          |
| Number of children                      |         |          |
| Childless                               | 21.66 % |          |
| 1                                       | 14.48 % |          |
| 2                                       | 39.70 % |          |
| 3                                       | 16.65 % |          |
| 4                                       | 4.80 %  |          |
| 5 and more                              | 2.71 %  |          |
| Labor supply (spouses aged 64 and less) |         |          |
| Employed, husband                       | 83.16 % |          |
| Employed, wife                          | 62.98 % |          |
| Hourly wage, in €, husband              | 16.67   | 97.48    |
| Hourly wage, in €, wife                 | 10.72   | 68.47    |
| Annual household income, in €1000       | 40.05   | 54.51    |
| Urbanization index (1=min, 5=max)       | 2.96    | 1.26     |
| Number of marriages observed            | 3,      | 757,400  |

Note: Characteristics of the population of married couples observed within the 12-quarter interval surrounding the ban of the flash divorce option. The availability of education records is increasing over time, reaching full coverage for the cohort born in 1987. Labor supply characteristics are restricted to spouses below the retirement age (65). The wage statistics are conditional on employment, and annual income excludes rents and government transfers.

Table 3: Estimates of the effect of flash divorce availability on quarterly divorce rate

| Model Specification               | Relative 6  |                   | Absolute effect (ann. div. rate) |                   |  |
|-----------------------------------|-------------|-------------------|----------------------------------|-------------------|--|
|                                   | Coefficient | Standard<br>error | Coefficient                      | Standard<br>error |  |
| RD model                          |             |                   |                                  |                   |  |
| Full sample                       | 11.57 %     | (1.91)            | 1.04                             | (0.16)            |  |
| Couples with children             | 12.38 %     | (2.12)            | 0.88                             | (0.14)            |  |
| RD-DD model Couples with children | 10.82 %     | (3.82)            | 0.78                             | (0.26)            |  |

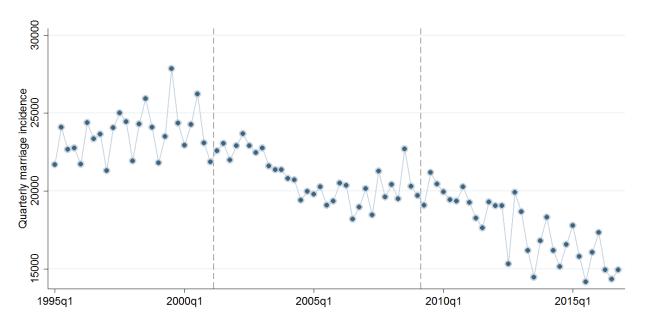
Note: Author's estimates of the flash dummy coefficients from Logit models of divorce risks. The unit of observation is marriage per quarter, and the outcome is divorce within the given quarter. Absolute effects correspond to the change of the annual divorce rate, specified as the number of realized divorces per 1000 married couples per year. Dutch municipal register data. Standard errors in parentheses are clustered on time.

**Table 4: RD subsample estimates** 

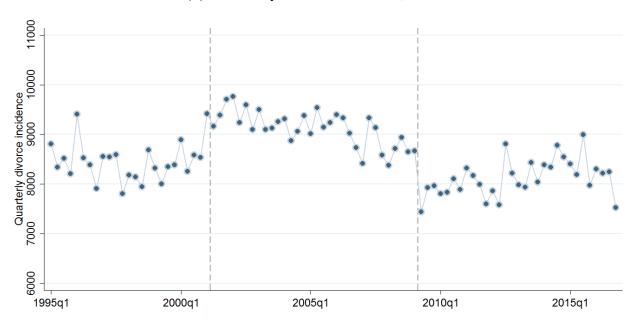
|                                | Relative effect (% change) |                   | Absolute effect (ann. div. rate) |                   |              |
|--------------------------------|----------------------------|-------------------|----------------------------------|-------------------|--------------|
| Subsample                      | Coefficient                | Standard<br>error | Coefficient                      | Standard<br>error | Observations |
| Earning potential              |                            |                   |                                  |                   |              |
| Hourly wage diff. < €5         | 15.48 %                    | (1.16)            | 2.04                             | (0.14)            | 10,364,174   |
| Hourly wage diff. ≥ €5 & < €10 | 10.53 %                    | (3.08)            | 1.26                             | (0.35)            | 4,688,984    |
| Hourly wage diff. ≥ €10        | 9.26 %                     | (3.28)            | 0.66                             | (0.22)            | 29,751,457   |
| Income terciles                |                            |                   |                                  |                   |              |
| 1 <sup>st</sup> tercile        | 3.97 %                     | (3.66)            | 0.17                             | (0.15)            | 14,726,264   |
| 2 <sup>nd</sup> tercile        | 15.43 %                    | (1.19)            | 1.79                             | (0.13)            | 14,939,916   |
| 3 <sup>rd</sup> tercile        | 10.35 %                    | (3.77)            | 1.13                             | (0.38)            | 15,119,546   |
| Immigration background         |                            |                   |                                  |                   |              |
| Native couples                 | 12.40 %                    | (2.23)            | 1.00                             | (0.17)            | 37,645,001   |
| Blended couples                | 9.36 %                     | (2.08)            | 1.56                             | (0.32)            | 3,240,942    |
| Immigrant couples              | 8.78 %                     | (1.03)            | 0.97                             | (0.11)            | 3,918,672    |
| Urbanisation (1=min, 5=max)    |                            |                   |                                  |                   |              |
| Urbanisation index $\geq 3$    | 9.73 %                     | (1.92)            | 0.98                             | (0.18)            | 27,754,914   |
| Urbanisation index $= 2$       | 13.10 %                    | (1.33)            | 0.97                             | (0.09)            | 10,825,472   |
| Urbanisation index = 1         | 20.87 %                    | (7.11)            | 1.39                             | (0.40)            | 6,200,545    |

Note: Author's estimates of the flash dummy coefficients from Logit models of divorce risks. The unit of observation is marriage per quarter, and the outcome is divorce within the given quarter. Absolute effects correspond to the change of the annual divorce rate, specified as the number of realized divorces per 1000 married couples within the given subsample per year. Dutch municipal register data. Standard errors in parentheses are clustered on time.

Figure 1: Wedding and divorce incidence (a) Quarterly wedding incidence, seasonally adjusted, 1995-2016

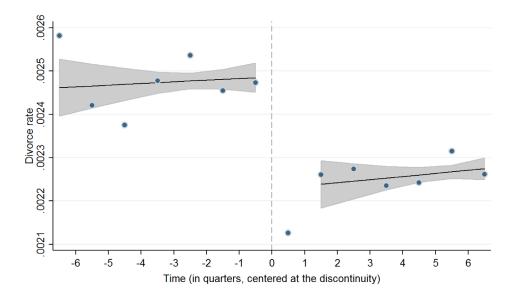


# (b) Quarterly divorce incidence, 1995-2016



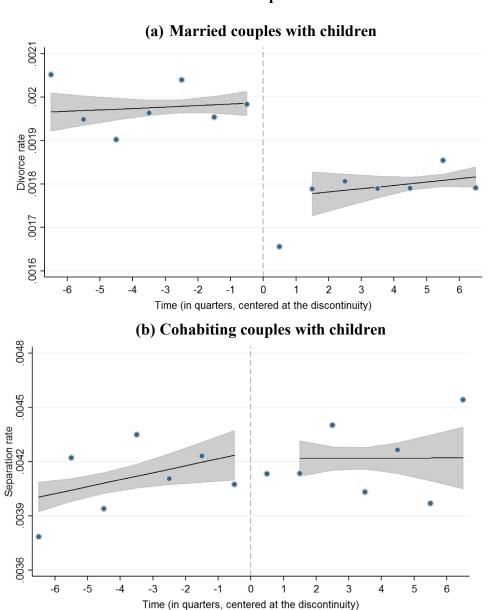
Note: Author's calculations of quarterly wedding and divorce incidence in the Netherlands between years 1995 and 2016. Vertical dashed lines represent the introduction and the ban of the flash divorce option.

Figure 2: Discontinuity of the quarterly divorce rate around the ban of the flash divorce option



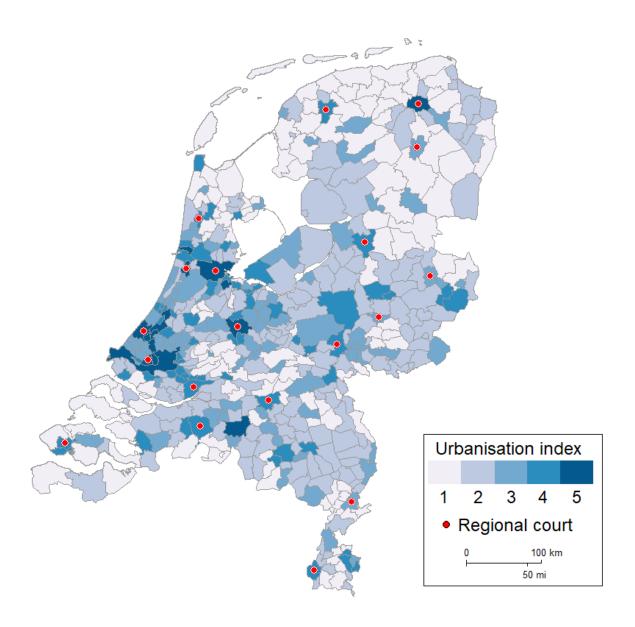
Note: Author's calculations of realized and predicted quarterly divorce rates around the ban of the flash divorce option. The divorce rate is defined as the number of divorces realized over the given quarter relative to the stock of marriages. The time is equal to zero on the date of the ban. Fitted lines correspond to the baseline logit model with a linear spline at the point of the discontinuity.

Figure 3: Dynamics of the divorce rate and separation rate around the ban of the flash divorce option



Note: Author's calculation of realized and predicted quarterly divorce and separation rates around the ban of the flash divorce option. Separations are defined as residential separations that have not been followed by repartnering of the same couple in less than 2 years. Fitted lines correspond to the RD-DD logit model with a linear spline at the point of the discontinuity.

Figure 4: Municipal urbanization levels and location of regional courts in the Netherlands



Note: The urbanisation data is sourced from CBS (2010), and the court locations are sourced from Rechtspraak (2018). The urbanisation index is constructed by CBS from the average density of residential and business addresses registered at the given municipality.

# **Supplementary Appendix – for online publication only**

Table A1: RD estimates of the effect of flash divorce availability on quarterly divorce rate

| Variable                       | Linear spline | Linear trend | Quadratic<br>trend | Quadratic spline | Lin. spline,<br>duration FE | Lin. spline,<br>two Q donut | Lin. spline,<br>18Q window |
|--------------------------------|---------------|--------------|--------------------|------------------|-----------------------------|-----------------------------|----------------------------|
| Flash                          | 11.573***     | 11.469***    | 11.682***          | 18.009***        | 11.701***                   | 9.852***                    | 11.128***                  |
|                                | (1.913)       | (1.878)      | (1.928)            | (2.779)          | (1.933)                     | (2.037)                     | (2.184)                    |
| Time (before ban)              | 0.311         |              |                    | 1.772            | 0.546*                      | 0.279                       | -0.143                     |
| ,                              | (0.312)       |              |                    | (1.335)          | (0.317)                     | (0.313)                     | (0.145)                    |
| Time (after ban)               | 0.171         |              |                    | 2.608***         | 0.464                       | -0.104                      | -0.304                     |
| , ,                            | (0.310)       |              |                    | (0.697)          | (0.311)                     | (0.305)                     | (0.235)                    |
| Second quarter                 | 1.474         | 1.547        | 1.474              | 2.271**          | 1.447                       | 2.306*                      | -1.793                     |
| -                              | (1.051)       | (0.956)      | (1.037)            | (1.167)          | (1.054)                     | (1.248)                     | (1.168)                    |
| Third quarter                  | 4.451***      | 4.511***     | 4.385***           | 4.882***         | 4.289***                    | 5.140***                    | -2.279                     |
| •                              | (1.209)       | (1.175)      | (1.182)            | (0.657)          | (1.212)                     | (1.344)                     | (1.443)                    |
| Fourth quarter                 | 1.140         | 1.213        | 1.075              | 1.716**          | 1.087                       | 1.969                       | -4.296***                  |
| •                              | (1.145)       | (1.021)      | (1.168)            | (0.852)          | (1.149)                     | (1.354)                     | (1.353)                    |
| Time                           |               | 0.223        | 0.260              |                  |                             |                             |                            |
|                                |               | (0.217)      | (0.206)            |                  |                             |                             |                            |
| Time <sup>2</sup>              |               |              | 0.016              |                  |                             |                             |                            |
|                                |               |              | (0.029)            |                  |                             |                             |                            |
| Time <sup>2</sup> (before ban) |               |              |                    | -0.211           |                             |                             |                            |
| ,                              |               |              |                    | (0.185)          |                             |                             |                            |
| Time <sup>2</sup> (after ban)  |               |              |                    | 0.296***         |                             |                             |                            |
| , ,                            |               |              |                    | (0.087)          |                             |                             |                            |
| Observations                   | 41,327,565    | 41,327,565   | 41,327,565         | 41,327,565       | 44,804,615                  | 41,361,673                  | 76,813,457                 |
| II                             | -687,477      | -687,476     | -687,476           | -687,476         | -710,705                    | -690,322                    | -1,295,048                 |

Note: Author's estimates of the coefficients from Logit models of divorce risks. The unit of observation is marriage per quarter, and the outcome is an event of divorce within the given quarter. The quarters are shifted by one month so that the first quarter following the ban starts on the first day of the ban, March 1 2009. The time trend is centered on the first quarter following the ban. Dutch municipal register data. Standard errors in parentheses are clustered on time.

Table A2: RD-DD estimates of the effect of flash divorce availability on quarterly divorce rate

| Variable                    | RD couples with children | RD-DD linear trend               | RD-DD<br>lin. spline             | RD-DD<br>quad. trend   | RD-DD<br>w/ time FE              |
|-----------------------------|--------------------------|----------------------------------|----------------------------------|------------------------|----------------------------------|
| Flash * Married             | 12.381***<br>(2.125)     | 10.273***<br>(4.011)             | 10.810***<br>(3.820)             | 10.984***<br>(3.918)   | 12.973***                        |
| Married                     | (2.123)                  | -59.100***<br>(0.740)            | -60.158***<br>(1.183)            | -59.869***<br>(1.004)  | (3.658)<br>-57.411***<br>(0.999) |
| Flash                       |                          | 1.761<br>(2.909)                 | 1.410<br>(2.618)                 | 1.329 (2.641)          | (0.777)                          |
| Time                        |                          | 0.557 (0.347)                    | (2.010)                          | 0.460<br>(0.353)       |                                  |
| Time * Married              |                          | -0.285<br>(0.449)                |                                  | -0.145<br>(0.473)      |                                  |
| Time (before ban)           | 0.419<br>(0.371)         | , ,                              | 0.00503<br>(0.577)               | ` '                    |                                  |
| Time (after ban)            | 0.182<br>(0.269)         |                                  | 0.953** (0.390)                  |                        |                                  |
| Time (before ban) * Married |                          |                                  | 0.414<br>(0.828)                 |                        |                                  |
| Time (after ban) * Married  |                          |                                  | -0.764<br>(0.497)                |                        |                                  |
| Time <sup>2</sup>           |                          |                                  |                                  | -0.0603<br>(0.050)     |                                  |
| Time <sup>2</sup> * Married |                          |                                  |                                  | 0.0791<br>(0.069)      |                                  |
| Second quarter              | 0.745<br>(1.052)         | 6.934***<br>(1.890)              | 7.485***<br>(1.841)              | 7.262*** (1.783)       |                                  |
| Third quarter               | 4.109***<br>(1.286)      | -0.136<br>(1.696)                | 0.274 (1.347)                    | 0.345 (1.370)          |                                  |
| Fourth quarter              | 0.633<br>(1.197)         | 8.091***<br>(1.107)<br>-5.673*** | 8.644***<br>(1.510)<br>-6.270*** | 8.681*** (1.538)       |                                  |
| Second quarter * Married    |                          | (1.903)                          | (2.007)                          | -6.041***<br>(1.900)   |                                  |
| Third quarter * Married     |                          | 4.353*<br>(2.332)                | 3.825*<br>(2.107)                | 3.705*<br>(2.054)      |                                  |
| Fourth quarter * Married    | 37                       | -6.787***<br>(1.140)             | -7.374***<br>(1.683)             | -7.441***<br>(1.669)   | 77                               |
| Time Fixed Effects          | N                        | N                                | N                                | N                      | Y                                |
| Observations log likelihood | 34,270,113<br>-469,698   | 46,11,866<br>-791,900            | 46,151,866<br>-791,899           | 46,151,866<br>-791,898 | 46,151 866<br>-791,895           |

Note: Author's estimates of the coefficients from Logit models of union dissolution risks of married and de facto couples with children. The time trend is centered on the first quarter following the ban. Dutch municipal register data. Standard errors in parentheses are clustered on time.

**Table A3: Heterogeneity of the RD estimates** 

|                   | Wage differentials |           |              |            | Income tercile | es         |
|-------------------|--------------------|-----------|--------------|------------|----------------|------------|
| Variable          | €0 - €5            | €5 - €10  | €10 and more | 1          | 2              | 3          |
| Flash             | 15.48***           | 10.53***  | 9.268***     | 3.967      | 15.43***       | 10.35**    |
|                   | (1.158)            | (3.077)   | (3.275)      | (3.656)    | (1.185)        | (3.768)    |
| Time (before ban) | -0.033             | -0.814**  | 0.566        | -0.642     | 1.167***       | -0.753     |
|                   | (0.186)            | (0.347)   | (0.488)      | (0.626)    | (0.217)        | (0.743)    |
| Time (after ban)  | -0.103             | -0.518    | 0.215        | -0.387     | 0.782***       | -0.758*    |
|                   | (0.186)            | (0.428)   | (0.580)      | (0.607)    | (0.195)        | (0.395)    |
| 2nd quarter       | 5.706***           | 4.016*    | -2.044       | 0.859      | 2.769***       | 0.255      |
|                   | (0.772)            | (2.169)   | (1.696)      | (1.950)    | (0.842)        | (1.499)    |
| 3rd quarter       | 5.749***           | 7.386***  | 2.688        | 1.078      | 3.736***       | 6.332***   |
|                   | (0.800)            | (1.318)   | (2.082)      | (2.130)    | (0.974)        | (1.967)    |
| 4th quarter       | 1.375*             | 4.177**   | 0.040        | 3.636*     | 1.045          | 0.175      |
|                   | (0.708)            | (1.696)   | (1.894)      | (2.117)    | (0.822)        | (1.813)    |
| Observations      | 10,364,174         | 4,688,984 | 29,751,457   | 14,726,264 | 14,939,916     | 15,119,546 |
| Log-likelihood    | -246,601           | -100,324  | -397,562     | -126,423   | -317,531       | -297,051   |

Table A3, cont'd

|                   | Immigration background |           |           |            | Urbanization | ation     |  |
|-------------------|------------------------|-----------|-----------|------------|--------------|-----------|--|
| Variable          | Native                 | Blended   | Immigrant | Index ≥ 3  | Index = 2    | Index = 1 |  |
| Flash             | 12.40***               | 9.358***  | 8.778***  | 9.733***   | 13.10***     | 20.87***  |  |
|                   | (2.234)                | (2.075)   | (1.027)   | (1.921)    | (1.325)      | (7.112)   |  |
| Time (before ban) | 0.539                  | -0.307    | -0.767*** | -0.062     | 0.808***     | 1.676     |  |
|                   | (0.355)                | (0.386)   | (0.266)   | (0.312)    | (0.153)      | (1.123)   |  |
| Time (after ban)  | 0.090                  | 0.093     | 0.645***  | 0.058      | 0.523**      | 0.184     |  |
|                   | (0.350)                | (0.294)   | (0.170)   | (0.321)    | (0.240)      | (0.741)   |  |
| 2nd quarter       | 0.693                  | 2.095***  | 6.627***  | 1.756      | -0.289       | 3.014     |  |
| _                 | (1.251)                | (0.808)   | (0.854)   | (1.142)    | (1.527)      | (4.144)   |  |
| 3rd quarter       | 3.921***               | 4.044***  | 8.863***  | 5.129***   | 1.319        | 5.969     |  |
| _                 | (1.413)                | (1.092)   | (0.503)   | (0.960)    | (0.818)      | (5.049)   |  |
| 4th quarter       | -1.083                 | 6.816***  | 10.54***  | 1.420      | -0.148       | 1.808     |  |
| •                 | (1.314)                | (1.025)   | (0.614)   | (1.030)    | (0.800)      | (4.302)   |  |
| Observations      | 37,645,001             | 3,240,942 | 3,918,672 | 27,754,914 | 10,825,472   | 6,200,545 |  |
| Log-likelihood    | -577,511               | -92,134   | -77,353   | -508,218   | -155,339     | -85,169   |  |

Note: Author's estimates of the coefficients from Logit models of divorce risks. The unit of observation is marriage per quarter, and the outcome is an event of divorce within the given quarter. The quarters are shifted by one month so that the first quarter following the ban starts on the first day of the ban, March 1 2009. The time trend is centered on the first quarter following the ban. Dutch municipal register data. Standard errors in parentheses are clustered on time.

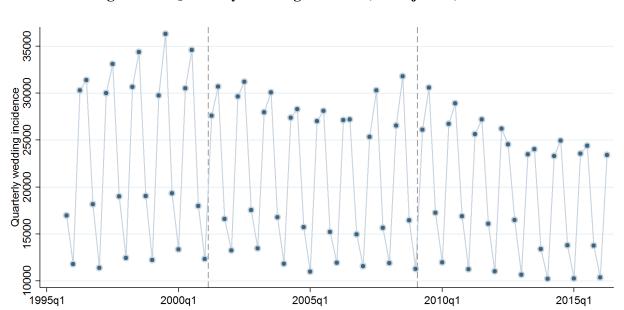


Figure A1: Quarterly wedding incidence, unadjusted, 1995-2016

Note: Author's calculations of quarterly wedding incidence in the Netherlands between years 1995 and 2016. Vertical dashed lines represent the introduction and the ban of the flash divorce option.