

The Impact of Marriage Property Law on Marriage and Spouses' Marriage-specific Investments*

Daniela Piazzalunga[†]

University of Turin, CHILD Collegio Carlo Alberto and LISER

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Abstract

This paper analyses the effects of different marital property regimes on the marriage-specific investment of the spouses. In particular, it provides an empirical assessment of the effects of a change from a separation property regime towards a more equal distribution of matrimonial assets on labour supply, housework time and childcare, exploiting a decision taken by the English House of Lord in 2000. I use a difference-in-difference approach, with individual fixed effects. Preliminary results show that married women reduced the hours worked by about 1.5-2.5 hours (slightly more if overtime is included) when the property regime is more favourable to them. They didn't change the number of hours devoted to housework, but the probability that they are the main responsible for children increased by 5-9%. The results hide heterogeneities: as expected, the effects are significant for women in couples with higher level of assets and wealth (proxied by education), while no effect is found among low educated women.

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[†]E-mail: daniela.piazzalunga@unito.it. Address: Department of Economics and Statistics 'Cognetti de Martiis', Università di Torino, Lungo Dora Siena 100A, 10153 Torino, Italy.

1 Introduction

In most European countries, a divorce leads to an equal split of assets, which means that the wealth acquired during the marriage is subject to a 50/50 division between the husband and the wife if the marriage is dissolved, regardless to whom acquired it. The community property is usually considered as an implicit way to recognize the role of women in the formation of the household's wealth, through the domestic and care work (Deere and Doss, 2006), which often come at the disadvantage of their labour supply. However, it is also important to analyse the incentives that the different marital property regimes provide during the marriage, to investigate if and how they affect, and possibly reinforce, the traditional division of labour. In this paper I investigate if the division of assets at divorce affects female and male labour supply, housework time, and childcare.

There exists a wide and growing literature dedicated to the impacts of divorce laws, on several outcomes. A first strand focuses on verifying if the Coase theorem can be applied to marital bargaining, as suggested by Becker (1981): it analyses if the introduction of unilateral divorce has increased divorce rates (Peters, 1986; Friedberg, 1998; Wolfers, 2006; González and Viitanen, 2009). The two most recent papers show, indeed, that reforms leading to 'easier divorce' increased the divorce rate, at least in the short term, proving that the Coase theorem does not apply to marital bargaining. However, they also show that divorce laws are not the main cause of the growth in divorce rate, and that in the effect is not persistent, probably because an easier divorce led also to better-quality marriages (Rasul, 2006).

The second important strand of the literature, related to the first one as well, is the most connected to my research. It is based on the seminal works of Chiappori and his co-authors (Chiappori, 1988, 1992; Chiappori et al., 2002), who analyse the household-decision making process and the implications of divorce legislation for spouses' bargaining power. The empirical literature show that unilateral or more liberal divorce increase women's labour supply (Stevenson, 2008; Bargain et al., 2012). It reduces marriage-specific investments, such as spouse's education, home ownership and children (Stevenson, 2007; Bellido and Marcén, 2014), and domestic violence (Stevenson and Wolfers, 2006; Brassiolo, 2011)¹. ²

Some of those papers have considered if the introduction of unilateral divorce had a different impact depending on the underline marital property regime, but they fail to find coherent results among them. Recently, more attention has been devoted to the sole impact of different marital property regimes: Kapan (2008) for UK, Brassiolo (2013) for Spain, and Bayot and Voena (2014) for Italy find that community property reduce the labour participation of women. However, while Fisher (2012) also provides a theoretical model that predicts that a change to a more equal regime would increase efficient investments within the marriage, no empirical research has been conducted

¹See also González (2014) for a nice summary of the impacts of divorce laws.

²Other papers investigate how policies different from divorce laws affect the bargaining power of the spouses, for instance legalizing abortion (Oreffice, 2007).

yet on outcomes different from the labour supply.

This paper aims to fill this gap. In particular, it evaluates if a change from a title-based property regime to a more equal one increases women housework time, in a framework of efficient specialization within the household, with the husband being allowed to increase his labour supply or his human capital. I also investigate the impact on childcare, even though I do not have information on time devoted to childcare, but only on who is mainly responsible for the child.

Voena and her co-author provide some descriptive evidence on housework time: [Bayot and Voena \(2014\)](#) show that in Italy the separation of property is correlated with a lower probability for the wife to be a housewife and fewer hours of housework; [Voena \(forthcoming\)](#) documents that in the US the introduction of unilateral divorce in states with community property doesn't lead to a significant increase in housework time, while there is an increase in the time that women dedicate to leisure. However, the latter focuses on the introduction of unilateral divorce, controlling for different property regimes, and not on changes in the property regime *per se*. To the best of my knowledge, only [Wong \(2013\)](#) estimates a robust causal effect of a law similar to the one governing separation of assets at divorce. She investigates the impact of homemaking provisions in the US, namely the laws which recognises the homemaking contribution in property division at divorce. She finds that the homemaking provision reduces the labour supply of the wife and increases the time they devote to housework.

With respect to [Wong \(2013\)](#), I consider the explicit regime governing the division of assets at divorce. In addition, I do not have to worry about the contemporaneous changes from mutual consent to unilateral divorce or on other unobserved variables. For this reason, quasi-natural experiments are usually considered better than cross-sectional comparisons. Moreover, I will also estimate the impact of the change towards a more equal distribution on childcare. Finally, I also provide some evidence about the heterogeneous effect of such a reform³.

The rest of the paper is organized as follows: Section 2 describes the institutional background in the UK and the changes in the marital property regime in England and Wales. Section 3 provides the theoretical framework and predictions. The data and empirical strategy are presented respectively in Section 4 and 5. Section 6 presents the results. Finally, Section 7 concludes.

2 Institutional background

To analyse the impact of the change from a title-based to a more equitable regime, I exploit a decision taken by the English House of Lord in October 2000 (*White v. White*, [2001] 1 A.C. 596), which provides a quasi-natural experiment.

Family law usually encompasses family relationship (such as marriage, divorce, and civil part-

³For the sake of brevity, I sometimes refer to the *White v. White* decision as 'reform', even though it was not a proper reform, but a judge decision which made law.

nership nowadays), domestic violence, children and parental responsibility. It defines the ground for divorce, the allocation of property and alimony, and children custody law.

Historically, divorce was possible only under very restrictive conditions (fault ground), such as adultery (usually enough for men), domestic violence or desertion, the latter in the past required as aggravating factor when wife wanted to file for divorce⁴ (Burton, 2003). Over time, and in particular since the 1970s, countries have started reforming divorce law, widening the basis for divorce to the mutual consent of both spouses, or even to unilateral divorce, which means that one spouse has the right to divorce even without the consent of the other and without proving any fault⁵. González and Viitanen (2009) summarizes the reforms (and their timing) undertaken in European countries after 1950.

The other aspect regulated by divorce law, relevant for our analysis, is the division of property upon relationship breakdown. The main systems are the following ones:

- Separation property (or ‘title-based’) regimes, which allocate the assets to the spouse who holds it;
- Community property regimes, which split into half the total wealth own by the couple. It can include also assets acquired before the marriage (universal community), or only assets acquired during the marriage, excluding those that each spouse bring into the marriage, as well as inheritance and gifts (community of acquests). The latter is the most common among countries which have a community property regime;
- Equitable distribution regimes, which accords to the judge discretion in dividing couple’s wealth.

In England and Wales, the leading reform towards modern divorce law has been the Divorce Reform Act of 1969. Since then, the sole ground for divorce is ‘irretrievable breakdown’, proved by one of the following facts (UK Government, 2015): (i) Adultery; (ii) (Unreasonable) behaviour⁶; (iii) Desertion; (iv) Separation for more than 2 years (with mutual consent); (v) Separation for more than 5 years (unilateral).

The Divorce Reform Act 1969 has been combined with provisions regarding property division into the Matrimonial Causes Act 1973, which is still in place today as a source of divorce law, as amended in 1984 (Boele-Woelki et al., 2003).

According to Boele-Woelki et al. (2003), in England and Wales 45% of the divorce granted in 2000 were on the basis of behaviour, 23.6% for adultery and 23.4% on the basis of separation for

⁴In England, both sexes were placed on the same level in 1923.

⁵In the US, scholars refers to these changes as the ‘no-fault revolution’ (Wolfers, 2006) and ‘unilateral divorce revolution’ (Voena, forthcoming), which highlights the relevant role played by the new regime in shaping family relationships and behaviour.

⁶Fact (2) to prove the irretrievable breakdown is often abbreviated as ‘unreasonable behaviour’ (e.g. UK Government, 2015), but Boele-Woelki et al. (2003) affirm that it is a misleading definition, and only ‘behaviour’ should be used instead.

more than 2 years, with mutual consent. However, there are gender differences: first of all, wives' are two times more likely to ask a divorce than men. Moreover, the most common fact for men is two-years separation (31%), while for women is behaviour (52%).⁷

The division of marital property follows the equitable distribution regime⁸: the court has discretion in allocating family assets between the two spouses. When wealth exceeds the financial needs of the family, the rule of thumb was to consider 'reasonable requirements' to split assets, taking into account the needs of the wife (together with the children) and the standard of living she is accustomed to (hereafter 'need-based' approach). The share was larger only if the wife had been involved into generating marital assets, e.g. as a business partner (Smith, 2003). Usually, the wife was entitled to much less than 50% of total wealth. This approach has been largely modified by the *White v. White* case⁹.

Mr. and Mrs. White had been married for a long period (33 years). When they divorced in 1994, their total assets accounted for more than £4 million, which make their case one of the so-called 'big money' ones. Initially, Mrs. White was awarded £980,000, but she appealed. The Court of Appeal then awarded her with about £1.5 million, introducing the 'yardstick of equality' rather than the 'need-based' approach. The decision of the Court has been confirmed in October 2000 by the House of Lords, with a ruling which has been defined a 'landmark' (Smith, 2007) and a 'milestone(s) [on the] road to equality' (Dyer, 2002). Mrs. White was awarded less than 50% of total wealth because Mr. White's family had contributed in the early years. This decision has been reinforced in the *Lambert v. Lambert* case, the first one in which the wife was awarded half of the family wealth, when it also was stressed that a wife should not be discriminated against on the basis of her gender of role, and that she may have forgone other opportunities (see, for instance, Dyer, 2002, in The Guardian):

'Lord Justice Thorpe said recent divorce case rulings had shown that it was unacceptable to place a greater value on the contribution of the breadwinner than that of the homemaker as a justification for dividing the product of the breadwinner's efforts unequally. [...] There was also force in the argument that a woman frequently sacrifices her potential to generate assets by taking on the domestic commitment to her husband and children, he said.'

Indeed, the main idea behind community property or an equal split of family assets is the recognition of the role of the wife in the production of family wealth, even through domestic and care work, and to ensure the economical protection of the financially weaker spouse.

⁷These data are not provided for Scotland.

⁸In *Ferguson v. Ferguson*, 1994, the court described equitable distribution of marital property at divorce as more fair than the separate property system. Smith (2002) also claims that fixed division rules (even community property) can generate less fair outcomes than a discretionary system.

⁹The English legal system is a common law system, where decisions of courts and tribunals make law.

There has been discussion among lawyers if the *White v. White* case was to be applied only to ‘big money’ case, as it was the one in court, or to everyone (de Cruz, 2010). According to Smith (2003), the impact has been more widespread than only in the ‘big money’ case. It is also worth citing the following article from The Guardian (Pointer, 2004):

‘In *White*, the law lords said they were dealing with a “big money” case and the principles they were laying down were to be applied to similar cases. But the impact of that decision has been much more profound. It is rare these days for a wife to go away with less than 50% of the capita, whatever the level of the family’s assets.’

However, one should keep in mind that the division of matrimonial assets plays a role when they exceeds the financial needs of the two spouses - both when the ‘need-based’ approach was followed, and under the new yardstick of equal division. For this reason, I will also explore the heterogeneous effects of the *White* case.

The two journal articles just cited (Dyer, 2002; Pointer, 2004) - as well as others not listed here - provide also some evidence on the fact that in the UK there is large media coverage about divorce cases, thus people are informed about them and about thier consequences. On the other hand, the fact that similar changes follows a decision by the judge, and are not a proper reform by the Parliament, guarantees the change to be unexpected, since people cannot predict which will be the judge’s decision.

With respect to other countries, where individuals can choose between the default property regime (usually the community property) and an alternative one, as in Italy (Bayot and Voena, 2014) and in France (Frémeaux and Leturcq, 2014), in the United Kingdom is the judge who decides how the assets have to be split. Furthermore, in UK pre-marital contracts are infrequent, mainly because they are not legally binding¹⁰ (Smith, 2003). Hence, there is no issue of individuals sorting themselves into different regimes according to some unobservable characteristics.

On the other hand, *ex-post* agreements - at the moment of divorce - are binding and even encouraged: when divorcing, if the couple reaches an agreement, spouses just need to get the court to make it legally binding (‘consent order’). This is cheaper and faster than asking the court to make a ‘financial order’, when individuals do not agree. However, during the marriage there is no certainty for the spouses that they will reach an agreement at the time of divorce. Moreover, it is likely that also the bargaining in couples’ agreements has changed, since the wife knows that via the court order she is likely to be entitled to a larger share of assets than before.

¹⁰Scholars expected pressure to make the pre-nuptial contract enforceable after the *White v. White* case (Smith, 2003; de Cruz, 2010). Indeed, they gained some popularity after the case law *Radmacher v. Granatino* in 2010, when the UK Supreme Court ruled that prenups ought to be given decisive weight. The Law Commission commenced a project in 2009 to examine the status and enforceability of marital property agreements, and published a report in February 2014 suggesting the introduction of ‘qualifying nuptial agreements’, that should be legally binding, but only once the needs of the couple and of any children are taken into account. Still, at the moment there is no reform, and in particular the period covered by our data is largely before that.

We use married individuals living in Scotland as a control group. Scotland (as well as Northern Ireland) constitute separate jurisdiction, with its own family law and courts. The source of divorce law in Scotland is the Divorce (Scotland) Act 1976, which allowed divorce on the same basis of England and Wales (irretrievable breakdown, proved by one of the five circumstances mentioned above). The matrimonial property regime is ruled by the Family Law (Scotland) Act 1985, and set that assets acquired in prospect of the marriage or during the marriage are owned in equal shares (like a community property regime).

Divorce law has been largely amended by the Family Law (Scotland) Act of 2006. In particular, from 2006 the separation period required to divorce is reduced from 2 years to 1 year (under mutual consent) and from 5 years to 2 years (unilateral).¹¹ Since these changes could affect the behaviour of Scottish married people, that I use as a control group, I consider data only until 2005 (included).

3 Theoretical framework

Economists have long discussed the factors affecting the behaviour of married people. The idea that the household members maximize a unique utility function has been abandoned ('unitary' model; [Becker, 1981](#)), in favour of more flexible models, broadly grouped under the cap of 'bargaining models' or 'non-unitary' models.

The first 'non-unitary' models, based on cooperative game theory ('cooperative' models), have been extended to 'collective' models ([Chiappori, 1988](#)), which relies on the unique assumption that the outcomes are Pareto efficient, and to 'non-cooperative' models ([Lundberg and Pollak, 1994](#)).

All the 'non-unitary' models assume that the husband and the wife have two distinct utility functions, and that they bargain over the marriage-specific investments and over the distribution of marital surplus, namely the difference between the utility in the marriage and the utility at divorce. The bargaining power of each spouse is determined by her/his 'threat point', i.e. the outside option. The difference between cooperative and non-cooperative models is the definition of the threat point, either the well-being at divorce or a non-cooperative equilibrium within marriage. Crucial are the components of the bargaining power, namely those factors which affects the opportunity of the individuals outside the marriage, which are defined 'distribution factors' by [Chiappori et al. \(2002\)](#) when they affects individual bargaining power without changing their preferences and the budget constraint. Typical components of the bargaining power are (non-labour) income, wages, wealth, age, sex ratio, but also legislation - in particular divorce legislation. I focus here on the impact of divorce laws governing property division at divorce on the bargaining power of the spouses, modelled by [Chiappori et al. \(2002\)](#).

¹¹It also partially introduced a community property system for cohabiting couples.

3.1 Marriage-specific investments

Let the wife to be the financially weaker spouse for the sake of the description - as however it is very often. A shift towards a more equal sharing of resources, such the one occurred in England and Wales with the *White v. White* decision, causes a redistribution of household assets towards her. Indeed, if the relationship ends, she will be entitled to a larger share of the household wealth than before, even though it is hold in the name of her husband. Hence, a legal change from the ‘need-based’ approach to the ‘yardstick of equality’ increases the bargaining power of the wife with respect to that of the husband, and I should expect this to be reflected into allocation of time. The first implication is that the labour supply of the wife decreases under the more equal regime. On the other hand, the labour supply of men should increase. However, the total effect for married men is not clear, as their elasticity of labour supply is smaller; moreover, they may want to reduce labour supply, because the wealth that would follow from work should be shared with the wife upon divorce (substitution effect) (Brassiolo, 2013).

Chiappori et al. (2002) do not discuss the effect on other time-using outcomes, nor do so Kapan (2008) or Brassiolo (2013). However, it is interesting to investigating what would imply a reduction of the wife’s labour supply. Fisher (2012), for instance, show that under an equal sharing property division regime the wife makes efficient investments - such as working part-time ‘to support her husband in increasing his human capital’ (Fisher, 2012, p.11) - since both the costs and the benefits of such an investment will be shared in the case of divorce. Hence, the reduction in labour supply predicted by the model could be the consequence of the increased bargaining power of wives (Chiappori et al., 2002) or of more efficient investments in the marriage, which lead to a specialization within the couple (Fisher, 2012). The latter implies that the wife will increase her housework time. On the other hand, the first case (increased bargaining power of the wife) does not imply automatically that it will happen: since the wife has more bargaining power, and the allocation of time within the couple is shifted towards her preferences, she could use the spare time from work for leisure. Investigating the impact of the *White v. White* change on housework time, I provide an empirical test of which channel prevails.

Time spared from work could be used for housework, leisure or (child) care. Form a theoretical point of view, childcare pose some challenges. It is arguable if childcare should be considered as an investment in the marriage or not. Stevenson (2007), quoting Becker, considers children as marriage-specific investment: they are ‘produced’ in the household by the parents using time and resources, who in exchange have love and pride. These returns are largely reduced when the marriage is dissolved. However, Stevenson (2007) refers to fertility choices - which I will investigate only later on. Childcare *per se* is more debatable. For instance, Aguiar and Hurst (2007) report that people consider time spent playing with children among the most enjoyable, and general childcare more pleasant than other housework activities. One may also argue that, while playing with children can be pleasant, time dedicated to the basic needs of children is not. In the time-use literature,

childcare is usually treated as a separate category from both non-market production and leisure (e.g. [Aguiar and Hurst, 2007](#)). In our case, we can consider childcare as a marriage-specific investment more pleasant than housework chores. Moreover, an increase in childcare by married women can be unambiguously interpreted as a reinforcement of the traditional division of labour, and *vice versa*.

Unfortunately I do not have information on the number of hours spent in childcare, nor in leisure activities. While I provide an alternative measure as a proxy for childcare, which will be described in section [5.2](#), I am not able to estimate the impact of the reform on leisure.

3.2 Marriage and divorce rates

A change in the division of property upon divorce could also affect both the propensity to marry and to divorce.

[Fisher \(2012\)](#) predicts ambiguous effects on both the marriage rate and divorce rate. She suggests that some couple would be indifferent between cohabitation and marriage in a title-based and unilateral regime, and choose marriage. However, similar couples would not get married under the equal sharing regime, since the man in particular would avoid a marriage which is now riskier for him. On the other hand, she predicts more efficient investments in the marriage, which increase the value of marriage and may induce more marriages. Thus, the total effect is ambiguous. While she claims that also the composition of new couples is also ambiguous, [Brassiolo \(2013\)](#) suggests the new couples are expected to be more homogeneous.

With respect to divorce, [Fisher \(2012\)](#) expects a reduction in the number of divorce by existing couples (hence at the beginning), because men will be less prone to break the relationship. This deduction relies on the fact that, in her model, under a unilateral separation, such as the one in England and Wales, the man makes the separation decision: indeed, it can happen that the husband want to divorce but the wife doesn't, and thus he files for divorce, while whenever the wife want to divorce, the husband also prefers the separation to the marriage. In the long run, the effect on divorce is also ambiguous, because it depends on the composition of the new couples. On the other hand, [Brassiolo \(2013\)](#) favours the idea that divorce rate will increase, because more wives whose marriages were close to divorce may actually want to end the relationship; he shows empirically that in Spain there is a positive and significant effect of the introduction of community property on divorce.

The impact on divorce is also likely to be affected by the grounds for divorce. I will verify in the empirical section the impact of the reforms on marriage rates and divorce rates in England. Both the impact on marriages and on divorces could also affect the results on investments. I provide results for people married before the reform (existing couples), which allow us to run out the selection effect, and for all married people, if one prefer to consider the total effect of the reform. Unfortunately, it is not possible to run out the selection induced by divorce, if there is any.

4 Data

The dataset used to estimate the impact of the *White* case on individuals behaviour is the British Household Panel Survey (BHPS). The BHPS is a panel which covers from 1991 until 2008. The first wave had a sample size of about 5,500 household (about 10,000 individuals). In 1999 (wave 9) there was a boost for both Scotland and Wales (1,500 each), in order to have a number of observations large enough to allow analysis of each country. I use cross-sectional weights to correct for the oversampling deriving from this boost. Between 1997 and 2001 a low-income sample was also included to the initial BHPS sample. Since the cross-sectional weights provided since 1999 (that I am using) take into account also for the presence of this sample, I keep it into the total sample.

My main sample consists on married women aged 18-50, to avoid possible confounding effects coming from pension choices, living in England (treated group) or in Scotland (control group). I also show results for married men aged 18-50 - to assess if they react to the shift toward a different property regime, more favourable to their wife - and for non-married women, as a placebo.

I exclude Northern Ireland as an additional control group, because it passes a reform of family law in 2003, thus I could have considered only 3 years since the *White* case.

In addition to Northern Ireland, I also exclude Wales, because even though the same marriage law applies in England and Wales (while Scotland has its own ruling), the trend in hours worked in Wales was very different even before the reform, with respect to both England and Scotland (see Fig. 1 and 2). Thus, it is likely that other things were going on in Wales¹².

Figure 1

Figure 2

Moreover, I do not consider the full period covered by BHPS, but only the period 1992-2005 (wave 2 to 15). For 1991 there is no official statistics on female unemployment rate (which is one of the control variables), while in 2006 there is the aforementioned Scotland reform of family law, which could have changed the behaviour of Scottish people, my control group. When the dependent variables is hours of housework time, I consider the period 1994-2005, since the trend in Scotland was very different in 1992 and 1993 (Figure 2). Results for the full period 1992-2005 are also provided, and they confirm findings from our main specification, but they are less robust, since before 1994 the common trend assumption is violated.

To avoid confounding effect arising from a different selection into marriage after the reform, I consider only people married in 1999, and before and after¹³, for the main results.

¹²Results including also Wales are shown in the Appendix. Since the number of observation for Wales is pretty small, the results are similar, although significant only at 10%.

¹³I also show results using the actual marital status every year - and considering only married people - and findings are very similar.

Finally, I exclude people who moved between Scotland and England, and those who are still in education. When considering the panel sample, I select only people who are present at least once before the reform and once after.

To estimate the effect of the *White v. White* case on marriage rates and divorce rates, I use official data released from the UK’s Office for National Statistics (ONS), contained in the ‘Vital Statistics: Population and Health Reference Tables (May 2014 Update)’. The dataset contains information on the total number of marriages (at the country level), and the total number of divorces (for England and Wales together, Scotland, and Northern Ireland), which are collected from administrative sources. For the estimates, I consider England and Wales compared to Scotland, my control group, from 1900 until 2005. The advantage of using official statistics is that the measure of the number of marriages and divorce is very accurate. The latter, in particular, is a rare event, and it could have been a problem have a reliable number of divorces, in particular for Scotland before 1999 (before the boost sample). The disadvantage, with respect to similar analysis performed for the US, is the reduced number of observations, due to the fact that we have only one treated and one control group. Statistics on the country population also come from the ONS (‘Annual Mid-year Population Estimates, 2014’).

5 Identification strategy

5.1 Difference-in-difference

In order to investigate how the division of property at divorce affects couples’ outcomes, I exploit the *White v. White* case as a quasi-natural experiment. The baseline specification is the standard one for a difference-in-difference, pooling the cross-sections of BHPS:

$$h_{irt} = \beta Post * Treated + \mathbf{X}_{irt}\gamma + \sum_y \delta_y + \sum_r \lambda_r + \epsilon_{irt} \quad (1)$$

The main dependent variables (h) are: number of hours worked per week (usual, included paid overtime, and included total overtime) and number of hours of housework per week¹⁴.

I then estimate the following linear probability model, where the dependent variable is a dummy variable which takes value 0 or 1.

$$p_{irt} = \beta Post * Treated + \mathbf{X}_{irt}\gamma + \sum_y \delta_y + \sum_r \lambda_r + e_{irt} \quad (2)$$

¹⁴To have comparable results for the impact on housework time, I also estimate the impact on labour supply, at the intensive and extensive margin. With respect to [Kapan \(2008\)](#), I explicitly take into account issues such as people moving between the countries, and different selection into marriage. In addition, I provide some results at the extensive margin (the probability of being employed), and some heterogeneous results, which he hadn’t investigated.

The main dependent variables p are: a dummy variable equal to 1 if the person is employed; a dummy variable equal to 1 if the individual is responsible for child(ren) under 12 (childcare responsibility).

The same linear probability model described in equation 2 is used to estimate if the individual is mainly performing household chores, as an additional evidence on housework activities.

In both equations, the additional control variables \mathbf{X} are: age, age squared, the number of children aged 0-4 and the number of children aged 5-15 in the household, the level of education, household (real) equivalent income¹⁵, age (linear and squared) and education of the spouse, regional female unemployment rate and a dummy for urban area.

Moreover, I include region (r) and year (y) fixed effects. The dummy for the control group and for the post-period, which are usually included in the specification of the DD methodology, are controlled for via the region and time fixed effects.

In a second specification, I take advantage from the panel dimension of the data and include individual fixed-effects, which allow to control for potential unobservable characteristics different between the control and the treated group, but fixed over time.

$$h_{irt} = \beta Post * Treated + \mathbf{X}_{irt}\gamma + \sum_y \delta_y + \sum_r \lambda_r + \eta_i + \omega_{irt} \quad (3)$$

$$p_{irt} = \beta Post * Treated + \mathbf{X}_{irt}\gamma + \sum_y \delta_y + \sum_r \lambda_r + \eta_i + o_{irt} \quad (4)$$

In addition to the main results, I also evaluate if the reform had different impacts on some sub-groups of people. In particular, I expect to find a stronger impact of the reform among couples with higher level of assets, who have more wealth to split. Since income (and even wealth) could be endogenous to the reform and to the labour supply of women, I consider education as a proxy (a similar choice has been made by [Brewer et al., 2012](#)).

To assess the heterogeneous effects, I separate the sample into high and low educated individuals. I define as ‘low’ educated those women (or men) who obtained a GCE A level qualification at maximum, and as ‘high’ educated those who got a qualification higher than that, which means a university degree or other higher qualification (about 40% of the full sample)¹⁶.

The impact of the reform on marriage and divorce rates is estimated at the country level following [Friedberg \(1998\)](#) for the static model (eq. 5) and [Wolfers \(2006\)](#) for the dynamic one (eq. 6), as

¹⁵I control for total income. If household non-labour income is considered instead, results are very similar.

¹⁶I also estimate the heterogeneous effects considering the household equivalent income by age group in 1999, and splitting the sample into a ‘poor’ individuals - with the income below the median - and ‘rich’ individuals - with income above the median. The results are very similar.

follows:

$$r_{ct} = b \text{ Post} * \text{Treated} + \sum_y \delta_y + \sum_c \mu_c + \sum_c \mu_c * t + \sum_c \mu_c * t^2 + v_{ct} \quad (5)$$

$$r_{ct} = \sum_\tau \text{Post} * \text{Year}_{y\tau} + \sum_y \delta_y + \sum_c \mu_c + \sum_c \mu_c * t + \sum_c \mu_c * t^2 + u_{ct} \quad (6)$$

The dependent variable r refers either to the crude marriage rate or to the divorce rate, defined, respectively, as the number of annual marriages or divorces per 1,000 people. δ_y represents year fixed effects; μ_c corresponds to the country fixed effects, with one country being England and Wales (combined), and the other one Scotland. In both the static and the dynamic model, I first estimate a basic specification, without country-specific trends. Then, I include country-specific linear ($\mu_c * t$) and quadratic trends ($\mu_c * t^2$), to account for factors influencing marriage or divorce, changing within country over time.

In the static equation, the parameter of interest is b . In the dynamic equation, I include $\text{Year}_{t\tau}$, a vector of dummy variables which take value 1 if at the year y the new property regime has been in place for τ years (grouped into two years for each dummy).

5.2 Variables definition

It follows the definition of our dependent variables, as well as some of the control variables.

Our first dependent variable is the number of hours worked. They correspond to the number of hours worked in a normal week in the (main) job of the individual, excluding overtime and meal breaks, and are self-defined. In addition, individuals are asked how many hours overtime they usually work in a normal week and how many hours of paid overtime. I use this information to construct three different variables: hours worked, hours worked included paid overtime, and hours worked included total overtime. Self-employed are also asked how many hours do they work per week - hence they are included in our sample - but they are only asked how many hours do they usually work (obviously, there is no concept of overtime in their case). Thus, for self-employed the number of hours worked, with or without overtime, is the same. For non-working people, the number of hours worked is imputed to 0.

In addition, I consider the probability of working as one of the possible outcomes. It is defined using the information on current economic status. A person is considered employed if she/he is employed, self-employed or on maternity leave. When the employment status is missing, I impute it using information if the person did paid work the previous week, or she didn't but she has a job, if those variables are available.¹⁷

¹⁷I also considered alternative definition of the employment status, excluding people in maternity leave, or relying mainly on the information on paid work in the previous week. Results (not presented here) are very robust to the different definitions.

Housework time is included in the survey since 1992. It is self-defined, as an answer to the following question: ‘About how many hours do you spend on housework in an average week, such as time spent cooking, cleaning and doing the laundry?’. Hence childcare is not included in definition, but it is likely that people do not consider also other activities such as grocery shopping, gardening, or repairing.

In 1991 and then since 1994, individuals in couple were also asked ‘who mostly does housework jobs’, detailed in grocery shopping, cooking, washing/ironing, and cleaning. Possible answers were: mostly self, mostly partner, shared, paid help only, other. The answer to such a question is less precise than the time devoted to housework, but it can still provide some additional clues, and could be useful in particular for grocery shopping, which may be not considered by the respondent in housework time. For each of the 4 chores, I construct a dummy variable equal to 1 if the respondent says that s/he is mostly doing that housework activity.

I can use information on who is mainly responsible for children in the household as a proxy for childcare. Individuals living with a partner and with child(ren) under 12 in the household are asked ‘Who is the main responsible for looking after the child(ren)?’. Possible answers are: mainly respondent, mainly partner, joint with partner, someone else¹⁸. I construct a different dummy variable for men and women. For women, ‘childcare responsibility’ is a dummy equal to 1 if she is the main responsible for the child. For men, the dummy is equal to 1 if he answers that he is the main responsible or jointly with the partner. Since each individual is answering to the question separately, and it is a highly subjective question, in principle men and women could give answers which are inconsistent between them¹⁹ (e.g. we may find an increase in childcare responsibility for both men and women). I apply different definitions for men and women because it is uncommon for men to be the main carer²⁰, and it is much more likely to identify a shift from a shared responsibility to a sole responsibility of the wife, than a shift from a sole responsibility of the husband to a joint responsibility or to the sole responsibility of the wife²¹.

Unfortunately, the information about leisure time available in the BHPS is too imprecise to be used for the analysis. Individuals were asked how often they do some ‘leisure’ activities, such as sport, going to the cinema, or even DIY²². Possible answers are: at least once a week, at least

¹⁸In 1992 the possible answers were slightly different, and I recoded them to be consistent with the other years.

¹⁹Interestingly, the percentage of men and women who says that the men is mainly responsible is very similar, while men report a joint responsibility about 5% higher, with a reduction of the wife being the main responsible according to them, with respect to when the wife herself is answering.

²⁰Only 2.7% of men affirm to be mainly responsible for the child, while 35.6% of them claim to be joint responsible with their spouse. On the other hand, 66.9% of women is mainly responsible for the child, while 29.5% of them say that she is jointly with her partner. See Table A.1 in the Appendix

²¹The descriptive statistics present a reduction in the probability of a man being mainly or jointly responsible by of 7 percent, compared to Scotland. The change in the probability of being the main responsible is only 0.5% (percentage not shown).

²²The different categories are: walk, swim and play sport; watch live sport; go to the cinema; go to theatre/concert; eat out; go out for a drink; work in the garden; do DIY, car maintenance; attend evening classes; attend meetings for local groups; do voluntary work.

once a month, several times a year, once a year or less, never/almost never. The questions were included in the survey every two years between 1996 and 2008 (i.e. we have only two waves before the change and three waves after).

To define the level of education (one of our control variable), several variables are available in BHPS. I use *qfedhi* (the highest educational qualification attained), imputing values from other variables (*ISCED* or *qfachi*, the highest academic qualification) when *qfedhi* is missing and they are not. The geographical level is available as Metropolitan area (*region*) or as Government Office Region (*region2*). I use the first one, which is more detailed, imputing information available for *region2* when *region* is missing.

5.3 Common trends assumption

The main assumption in a difference-in-difference specification is the common trends assumption.

Figure 1 and 2 show the trends in weekly hours worked (usually, with paid overtime, and with total overtime) and in weekly hours of house chores in England and Scotland (and Wales). It can be noticed an increasing trend in the number of hours worked in both country, with Scottish women always working longer hours. For Scotland and England, the pre-reform trends are parallel. While the trend is continuing for Scotland, after the reform the number of hours supplied by English women is reducing and below the pre-existing trend. On the other hand, the number of hours devoted to housework chores is decreasing over time for both Scotland and England, with a parallel trend between 1994 and 2000, but for England the trend changes after 2000.

Figure 3 present the probability of being employed for women. Again England and Scotland have a similar trend²³, but while the increasing probability of being employed is continuing for Scotland, for England it is lower than the previous trend.

Figure 3

These figures are confirmed by Table 1, which summarises our main dependent variables in England and Scotland before and after the *White v. White* decision. For married women, there is a reduction of about 1.6 hours worked (1.9 if I consider total overtime) in England with respect to Scotland, reflected in an increase in housework time by 1.1 hour.

Table 1

²³If we exclude 1991 from the fitted trend - which seems strangely high for Scotland, and which in any case is not included in the regressions - the parallel trend is even clearer. Unfortunately, the official employment rate by region is available from 1992, then we cannot check if the (high) probability of being employed that we found for 1991 in Scotland is confirmed or not. However, the graph with ONS statistics of the 16-64 female employment rate confirms the parallel trend between England and Scotland until 2000 - and Wales to a less extent (not shown, available upon request). The probability of being employed continue to increase for Scotland, while it is almost flat for England since 2000.

For childcare, the trends are shown in figure 4. The probability for the wife to be mainly responsible is decreasing both in England and Scotland. The trend is completely parallel if I exclude 1992²⁴ (graph B, on the right side), but even when I include it, it is easy to see that after 2000 the decreasing trend is continuing for Scotland, while it reversed in England, with an increasing probability for the wife to be mainly responsible for children. Overall, married women in England are 8% more likely to be the mainly responsible for children after the *White v. White* case (Table 1).

Figure 4

Considering the probability that the respondent is mostly performing a specific housework job, the graphs show some suggestive trends (see Figure A.1), with wives in England performing relatively more task than in Scotland after the reform (see also Table A.4). However, it is more difficult to assert the common trends assumption, especially for cooking.

Table 2 presents the labour supply, housework time and childcare responsibility for married men. No strong change emerges when comparing England and Scotland before and after the reform, even though there is a reduction of about 0.4 hour per week in housework. Interestingly, there is a reduction in their probability of being mainly or jointly responsible for childcare by 7%, apparently mirroring the change for women.

Table 2

The summary statistics of the control variables for England and Scotland, before and after the reform, are presented in Tables A.2 and A.3.

5.4 Other legal changes

In addition to the common trends assumption, to correctly identify the effect of the change of interest via difference-in-difference methodology, there should be no other policy reform during the same period which could affect the outcome. However, in 1999 the ‘Welfare Reform and Pension Act’ was implemented and entered into operations in December 2000, almost at the same time of the reform I am considering.

The provision that may affect the behaviour of married people concerns the pension at divorce. The 1999 Act introduced a scheme of pension sharing that consists in splitting or sharing the (private) pension fund: the transferee (usually the wife) is entitled with a percentage of the transferor’s pension arrangement (reduced accordingly), or become a member of the original scheme. As a consequence, the pension sharing scheme increased the capital assets of the wife, even if she is going to receive the benefits only at the retirement age.

²⁴In 1992 the codification used was different...may the drop be because of that?

First of all, this reform is likely to affect - if anything - the behaviour of people divorcing closer to their retirement, while I explicitly focus on younger individuals. Secondly, the Act concerns the entire UK, affecting both my treated group (England) and my control one (Scotland). Still, one may argue that since in Scotland there existed already a community property regime, Scottish people may respond less than English ones to the pension sharing regime; moreover, it is possible that younger women also change their behaviour if they rationally consider the pension as a capital assets. Even in those cases, this reform cause a shift of household assets towards the financially weaker spouse, thus it operates in exactly the same way of the *White* case. Under such circumstances, it would pose problems in terms of identification of which reform affected the behaviour, but it can still be interpreted as an increase in the bargaining power of the wife following an increase in her bargaining power; thus, it does not pose any to our interpretation of the results.

A second major reform happening in the same period is the introduction of the Working Families' Tax Credit (WFTC) in October 1999, fully implemented in April 2000, extensively described in [Brewer et al. \(2006\)](#)²⁵. However, on the one hand, in-work benefits are targeted at low-income households²⁶, while I show that the change in the marital property regime affected only 'rich' families. On the other hand, the reform was implemented in all the United Kingdom, and thus in Scotland as well. If any change would have happened as a consequence of the WFTC also on high-income families, it is cancelled out by the diff-in-diff with Scotland²⁷.

6 Results

6.1 Impact on labour supply and marriage specific investments

Table 3 presents the main results: after a shift towards a more equal marital property regime, on average married women reduce their labour supply by about 1.6 hours (FE)-2.4 hours (OLS). Results for hours usually worked, with and without paid overtime are very similar. If I consider the total number of hours, including total overtime, the reduction is even larger²⁸. There is a reduction also of the probability of being employed (extensive margin), but it is not statistically significant.

On the other hand, there is an increase in housework time by 0.5-0.9 hours (respectively, FE and OLS), but it is not statistically different from 0: hence, it seems that married women did not change their supply of housework time.

²⁵Studies have shown that the WFTC significantly increased the employment of lone parents, but had small to none effects on that of women in couples; WFTC also increased fertility among women in low-income couples, while there is a non significant effect on the fertility of single women [Brewer et al. \(2012, see\)](#)[for a summary of the findings].

²⁶indeed, high-income families are used as a control group in [Brewer et al. \(2012\)](#)

²⁷If that was not the case, we should find effects also for single or cohabiting women, while they are not affected, as shown by the placebo analysis.

²⁸[Kapan \(2008\)](#) found similar results: a significant reduction in the number of hours worked by 18-55 married women (about 2-3 hours), robust to the different specifications (OLS, Tobit, FE).

Table 3

Table 4 presents the heterogeneous results. As expected, the reform has a stronger negative impact on the labour supply of high educated women: they reduced their labour supply of more than 4 hours. In addition, there is a significant reduction of the probability of being employed among them, by 7-11% . Still, there is also no significant impact on the number of hours dedicated to housework chores. Among low educated women, there is no significant impact at all.

Table 4

One of the possible critique is that housework time is estimated very imprecisely, and this could be the reason why the positive effect we capture is not significant. On the one hand, [Wong \(2013\)](#) also uses reported data on housework time, and she find a significant effect. On the other hand, notice that in the analysis of the heterogeneities, the impact of the *White* care on housework time is even negative for high educated women (when including individual fixed effects) - even though non statistically significant. It can be considered as a signal that we do not identify any significant effect not because of the higher measurement error for housework time than for labour supply, but because there is no effect at all.

In addition, the fact that there is no impact on housework time is confirmed by the analysis on who in the couple is performing a specific housework chore. The results reflect those on housework time, for which the descriptive statistics and the graph present some changes, which however are not statistically significant. Similarly, even though the graphs suggest an increase in the wife performing these chores ([Figure A.1](#)), the change is not significant (see [Table A.5](#)).

The results of the regressions for married men are shown in [Table 5](#). There is a negative coefficient on hours worked for them as well, but it is not significant, as we expected, both because the elasticity of male labour supply is smaller, and because there are incentives in opposite directions.

There is a small negative effect on the numbers of hours in housework done by married men: in the full sample, there is a reduction by about half an hour, significant at 10% only when individual fixed-effects are included. Among high educated men, the reduction is slightly larger (0.9 hours) and significant at 5% in the pooled regression, but not significant with fixed effects.²⁹

Table 5

On the other hand, there is no significant change in the probability that the husband performs a specific housework job (no reduction on the probability that is mostly the husband performing the job - [Tab. A.5](#) - nor on the probability that is mostly the husband or a shared responsibility (not shown)).

²⁹It is also interesting that the coefficients has not only the opposite sign than the coefficient on housework for women, but also similar magnitude.

Table 6 present the results on childcare. There is a small but significant increase in the probability that married women are mainly responsible for children under 12, by 5-9%, with and without individual fixed effects. Moreover, when we consider the heterogeneous effects, the impact is significant only among high educated women, in line with our previous findings.

On the other hand, there is a reduction in the probability that men are mainly or jointly responsible for the child, significant only in the pooled cross-section, and not with the fixed effects.³⁰

Table 6

6.2 Placebo

Since the property division at divorce affects only married couples, the changes introduced through the *White* case should have no effect on the behaviour of other groups of people. Falling that, some concerns may arise on the fact that other changes took place in the same period, which affected the behaviour of all women in England and not in Scotland, for instance affecting their preferences instead of the bargaining power. To test this hypothesis, I investigate the impact of the reform on non-married women labour supply and housework time. It can be considered a placebo.

I provide evidence for different groups of non-married women: cohabiting women and single women. Single women is the most common group used as a placebo in similar set-up (e.g. Brassiolo, 2013), however women cohabiting with their partner can be considered to be more similar to married women. In particular, it is more likely that they will have some form of division of labour with their partner. Hence, investigating the behaviour of cohabiting women has the advantage to control if there has been any change - different from the *White* case - affecting women in couples, but not single women. Moreover, I am able to control for the same set of variables used in the specification for married women, while when considering single women I cannot to control for partner's age and education level by definition. In addition, cohabiting women are the only group that I can use as a placebo to test the impact of the reform on childcare responsibility.

On the other hand, the drawback is that cohabiting women are a small group (about 2,800 - 3,000 observations). For this reason, as well as for comparability with other studies, I also present results for single women. The definition of 'single' women may refer only to never married women or to never married, separated, divorced, and widowed women, and it is not always clear to which group it refers. I consider both cases: only never married women, and all single women (never married, separated, divorced, widowed, defined 'unmarried' hereafter), except cohabiting. In the second case, I include only those who undergone the separation or divorce by 1999, otherwise I risk to include individuals who may have divorced because of the reform itself.

³⁰I considered also the answer given by the spouse: for instance, men answering that their partner is mainly responsible for children; or women answering that their husband is mainly or jointly responsible for children. Even though they are less often significant, the direction and magnitude of the results are similar, suggesting that on average men and women have the same perception on who is responsible for the child.

The effects of the reform for the three different groups are presented in Table 7: there is no significant effect for any of the three groups considered on labour supply (at the extensive or intensive margin) and on housework time.

I find a positive effect on the probability of being mainly responsible for children among cohabiting women, significant (at 10%) only with the individual fixed effects. However, the trend is flat for English women, while increasing for Scotland before the reform, and decreasing afterwards. Hence, the results are likely driven by the Scottish trend, which was not parallel to the English one before the reform. In addition, the results are driven by low educated women, while among high educated the effect is negative and not significant³¹. Overall, also with respect to childcare responsibility, we can exclude other contemporary changes, or changes in preferences among English people, affecting our results.

Table 7

6.3 Robustness Checks

Additional sensitivity checks are presented in Table A.6 in the Appendix, and show that results are robust to different specifications.

A possible concern may arise from the fact that I am using the full BHPS sample, composed also by a boost sample for Scotland and Wales introduced in 1999. Even though I am using cross-sectional weights, which should correct for the oversampling of Scotland and Wales, one may question our results, as the boost is only one year before the policy. As a robustness checks, I replicate my estimations excluding the boost sample for Scotland (Wales is already excluded from the sample). The impact on hours of work is much larger when considering OLS (an average reduction of more than 4 hours), but similar with fixed-effects, suggesting that including the boost sample helps in estimating more precisely the results. The effect on childcare is in the same direction and of the same magnitude, but not statistically significant - even though the p-value is 0.101: probably the fact that the findings are not significant in this care arise from the smaller sample size.

Findings are robust to the exclusion of inner and outer London, which one may consider a peculiar case. Also when I include also Wales results are confirmed, although slightly less significant, in particular with the individual fixed-effects (but still statistically different from 0). finally, the results are confirmed if I consider housework time for the entire period 1992-2005, instead of 1994-2005 (Table A.7).

³¹Graph and heterogeneous results for cohabiting women not shown, but available from the author upon request.

6.4 Divorce and marriage rates

As anticipated, I also investigate of the impact of the reform on marriage and divorce rates. Figure 5 presents the trends before and after the reform. The pre-reform trends on marriage and divorce rates are similar, even though one can notice an increase in Scotland's marriage rates in the few years before 2000. For this reason, we also control for the pre-reform country specific trends.

Moreover, Figure 5 shows that England and Wales have the same trends in terms of marriage rates, and it is thus safe to use the rates for England and Wales together, instead of excluding Wales. This allows me to have comparable estimate with respect to the divorce rates, which are available only with England and Wales aggregated.

As can be seen, the crude marriage rate in England and Wales was about 6.5 in 1990, and since then it has decreasing, reaching about 4.5 in 2005 (last year in our analysis), and slightly less than that in 2011. In Scotland, marriage rate was higher since the beginning out the period, but also decreasing over time (from 6.8 marriages per 1,000 people to 5.5). Conversely, the crude divorce rate has always been higher in England and Wales (from 3.0 in 1990, until 2.1 in 2011), than in Scotland (2.4 in 1990 and 1.7 in 2011), decreasing until 1999. One can notice that the divorce rate has been increasing in England and Wales in the first years after the *White* case, and decreasing again afterwards. This suggests a response to the new property regime in terms of divorce rate in the first years. On the other hand, after a few years the divorce rate seems to decrease with a trend similar to the pre-reform one after a few years, and even to a larger extent. This would confirm the prediction of more homogeneous marriages under the new regime, and thus a reduction in the divorce rate in the long run. Unfortunately, we do not have a proper control group to verify the effect in the long run: the Scotland Family Law reform of 2006, reducing the number of years required to obtain divorce from separation caused a pick in the number of divorces in 2006. Also in this case, the pick is only temporary, suggesting only an adjustment to the new law, but no long-lasting effect on the divorce rate.

Figure 5

Results are presented in Table 8: the *White v. White* decision seems to have a negative impact on marriage rate; however, it is large and significant only in the basic specification, while including country-specific trends, the effect is much smaller and not significant. When considering the dynamic response to the *White* case, the results are similar: there is significant decrease of marriage rate, at least until the end of 2005, even larger in the last two years, which disappears with the inclusion of country time trends.

With respect to the divorce rate, we do not find any significant effect in the basic specification. However, controlling for previous trends, the *White v. White* case increased divorce rates, of about 0.3-0.2 divorces per thousand people. The dynamic specification points up an interesting trend:

the increase in the divorce rate, which last until the end of 2005, is even larger from 2002 onwards, consistent with the fact that the *White* case was confirmed and reinforced by the *Lambert* one.

Overall, if the inclusion of country-specific trends is considered necessary, the *White v. White* case has no effect on marriages, reflecting the incentives in opposite directions suggested by Fisher (2012): on the one hand, men would prefer to avoid the marriage, because under the new regime marriage is riskier for them; on the other hand, more couples are willing to marry because of the higher value of the marriage. The latter could be also weakened by the fact that the more efficient investments into the marriage are only in terms of childcare, and new couples may not know if they will have a baby or not.

On the other hand, the *White v. White* case increases the divorce rate, indicate a demand for the dissolution of the marriage by wives, who had seen their outside option improving, in line with the suggestion and the results of Brassiolo (2013). The results are in contrast with the prediction of Fisher (2012), which however relies on the fact that the man decides if separate or not under a unilateral regime (such as the one in England is mainly considered). While the model proposed by Fisher (2012) is appealing, in England women are twice more likely to ask a divorce than men (Boele-Woelki et al., 2003), a fact which seems to contradict the prediction that the man takes the separation decision.

These results, however, are sensitive to the inclusion of country-specific trends. Moreover, the number of observations is very small, due to the fact that in this case there is just one treated and one control group. Additional evidence on the effect of the change should be provided using microdata with a larger sample size than BHPS, to be able to capture even rare events such as divorce.

Table 8

7 Conclusion

In the paper, I estimate how the division of marital property regime at divorce affects the marriage-specific investments of the spouses. In order to assess a causal relationship, I exploit a decision taken by the House of Lords in England and Wales in 2000 (*White v. White*) as a quasi-natural experiment, to perform a difference-in-difference. Married people in Scotland are my control group, since Scotland constitute a separate jurisdiction. The *White v. White* case introduced the ‘yardstick of equality’, with respect to the ‘need-based approach’ which was ruling before. Using the British Household Panel Survey, I am also able to additionally control for unobserved heterogeneity.

Results show that a shift toward an equal split of access reduced the labour supply of women married prior the change between 1.6 to 2.4 hours, even more if we include overtime. While married didn’t increase housework time, they are more likely to be mainly responsible for children under 12

(+ 5-10%). As expected, these results are significant only among high educated women (a proxy for the family wealth), when we consider the heterogeneous effects. There is even a reduction in the labour supply of high educated women at the extensive margin: they are 7-11% less likely to be employed. On the other hand, almost no effects is found among married men. A placebo test, performed with three different groups, allow me to rule out changes in preferences among English women, or the presence of other changes which may have affected women in couples or all other women.

These findings suggest that the main channel which induces a reduction in women labour supply is their increased bargaining power within the couple, while they haven't little incentive in increasing marriage-specific investments. However, if childcare responsibility may be interpreted as childcare time, there is an increase in marriage-specific investment.

The reason why women are making household investments, but only on children responsibilities, may be twofold. On the one hand, it is possible that, given they higher bargaining power, they are investing only in the more enjoyable activities ([Aguiar and Hurst, 2007](#)). On the other hand, the increase in childcare responsibility may be a choice due to opportunity cost: if childcare performed by people outside the family is more expensive than housework, married women have an incentive to use their spared time for childcare instead that for housework. I will explore additional evidence in this sense.

The reduction in women labour supply together with the increase in childcare questions the role of community property in protect the financially weaker spouse: while it can be a fair and protective tool ex-post, for women who already reduced their labour supply to perform domestic and care chores, ex-ante it reinforces the traditional division of labour, slightly pushing women out of the labour force. Moreover, it arises policy concerns with respect to the objective of increase married women's labour supply. Future research needs to investigate if, after a possible divorce, women are able to increase again the time they devote to work, or if they are stuck in a lower participation.

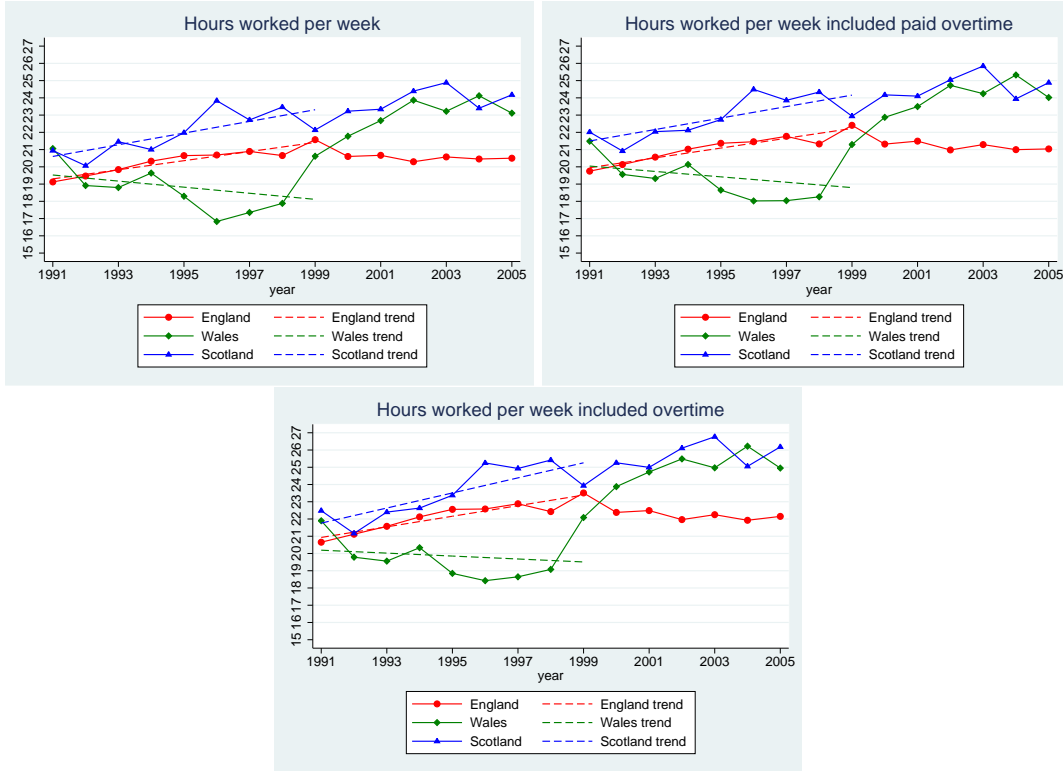
References

- Aguiar, M., Hurst, E., 2007. Measuring trends in leisure: The allocation of time over five decades. *The Quarterly Journal of Economics* 122(3), 969–1006.
- Bargain, O., González, L., Keane, C., Özcan, B., 2012. Female labor supply and divorce: New evidence from Ireland. *European Economic Review* 56(8), 1675–1691.
- Bayot, D., Voena, A., 2014. Prenuptial contracts, labor supply and household investments.
- Becker, G. S., 1981. *A Treatise on the Family*. Harvard University Press, Cambridge, MA.
- Bellido, H., Marcén, M., 2014. Divorce laws and fertility. *Labour Economics* 27, 56–70.
- Boele-Woelki, K., Braat, B., Curry-Sumner, I. (Eds.), 2003. *European Family Law in Action. Volume I: Grounds for Divorce*. Intersentia, Antwerpen/Groningen.
- Brassiolo, P., 2011. Domestic violence and divorce law: When divorce threats become credible.
- Brassiolo, P., 2013. The effect of property division laws on spouses' labor supply: Evidence from Spain. Working paper 2013/02, CAF, Caracas.
- Brewer, M., Duncan, A., Shephard, A., Suárez, M. J., 2006. Did working families' tax credit work? the impact of in-work support on labour supply in great britain. *Labour Economics* 13(6), 699 – 720.
- Brewer, M., Ratcliffe, A., Smith, S., 2012. Does welfare reform affect fertility? Evidence from the UK. *Journal of Population Economics* 25(1), 245–266.
- Burton, F., 2003. *Family Law*. Cavendish Publishing, London.
- Chiappori, P.-A., 1988. Rational household labor supply. *Econometrica* 56(1), 63–90.
- Chiappori, P.-A., 1992. Collective labor supply and welfare. *Journal of Political Economy* 100(3), 437–467.
- Chiappori, P.-A., Fortin, B., Lacroix, G., 2002. Marriage market, divorce legislation, and household labor supply. *Journal of Political Economy* 110(1), 37–72.
- de Cruz, P., 2010. *Family Law, Sex and Society*. Routledge, London and New York.
- Deere, C. D., Doss, C. R., 2006. The gender asset gap: What do we know and why does it matter? *Feminist Economics* 12(1-2), 1–50.
- Dyer, C., 2002. Divorce court history as wife wins half of £20m fortune. *The Guardian* (15 November).
- Fisher, H., 2012. Divorce property division laws and the decision to marry or cohabit. *The Journal of Law, Economics, and Organization* 28(4), 734–753.
- Frémeaux, N., Leturcq, M., 2014. Plus ou moins mariés : l'évolution du mariage et des régimes matrimoniaux en France. *Économie et Statistique* 462-463(125-151).

- Friedberg, L., 1998. Did Unilateral Divorce Raise Divorce Rates? Evidence from Panel Data. *The American Economic Review* 88(3), 608–627.
- González, L., 2014. Should divorce be easier or harder? *IZA World of Labor* 113.
- González, L., Viitanen, T. K., 2009. The effect of divorce laws on divorce rates in Europe. *European Economic Review* 53(2), 127–138.
- Kapan, T., 2008. Property division laws: The effects on labour supply and household bargaining. Ph.D. thesis, Columbia University.
- Lundberg, S., Pollak, R. A., 1994. Noncooperative bargaining models of marriage. *The American Economic Review* 84(2), 132–137.
- Oreffice, S., 2007. Did the legalization of abortion increase women’s household bargaining power? evidence from labor supply. *Review of Economics of the Household* 5(2), 181–207.
- Peters, H. E., 1986. Marriage and divorce: Informational constraints and private contracting. *The American Economic Review* 76(3), 437–454.
- Pointer, M., 2004. Impact of decision could be more widespread. *The Guardian* (8 July).
- Rasul, I., 2006. Marriage markets and divorce laws. *Journal of Law, Economics, and Organization* 22(1), 30–69.
- Smith, I., 2002. European divorce laws, divorce rates and their consequences. In: Dnes, A. W., Rowthorn, R. (Eds.), *Law and Economics of Marriage and Divorce*, chapter 12, pp. 201–229, Cambridge University Press, Cambridge.
- Smith, I., 2003. The law and economics of marriage contracts. *Journal of Economic Surveys* 17(2), 201–226.
- Smith, I., 2007. Property division on divorce with inequity aversion. *International Review of Law and Economics* 27(2), 111–128.
- Stevenson, B., 2007. The impact of divorce laws on marriage-specific capital. *Journal of Labor Economics* 25(1), 75–94.
- Stevenson, B., 2008. Divorce law and women’s labor supply. *Journal of Empirical Legal Studies* 5(4), 853–873.
- Stevenson, B., Wolfers, J., 2006. Bargaining in the shadow of the law: Divorce laws and family distress. *The Quarterly Journal of Economics* 121(1), 267–288.
- UK Government, 2015. Births, deaths, marriages and care. marriage, civil partnership and divorce. get a divorce. <https://www.gov.uk/divorce>, [9 April 2015].
- Voena, A., forthcoming. Yours, mine and ours: Do divorce laws affect the intertemporal behavior of married couples? *American Economic Review* .
- Wolfers, J., 2006. Did unilateral divorce laws raise divorce rates? a reconciliation and new results. *American Economic Review* 96(5), 1802–1820.
- Wong, H.-P. C., 2013. When homemakers are compensated: a study of the effect of homemaking provision in property division following divorce. Ph.D. thesis, University of Washington.

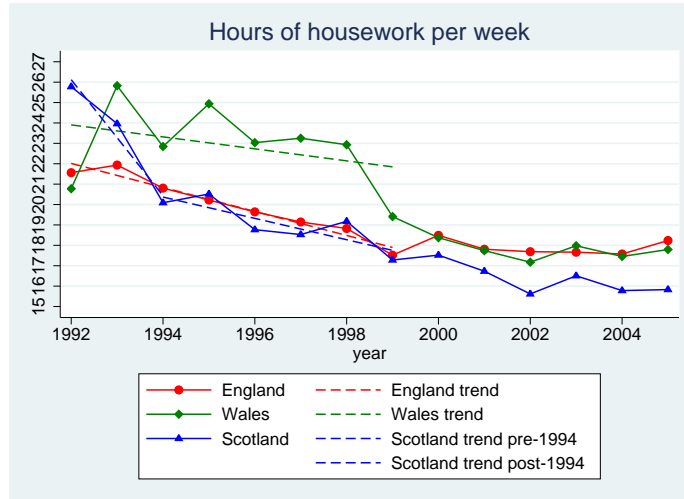
8 Figures

Figure 1: Women's hours worked per week, by country



Source: BHPS

Figure 2: Women's hours of housework, by country



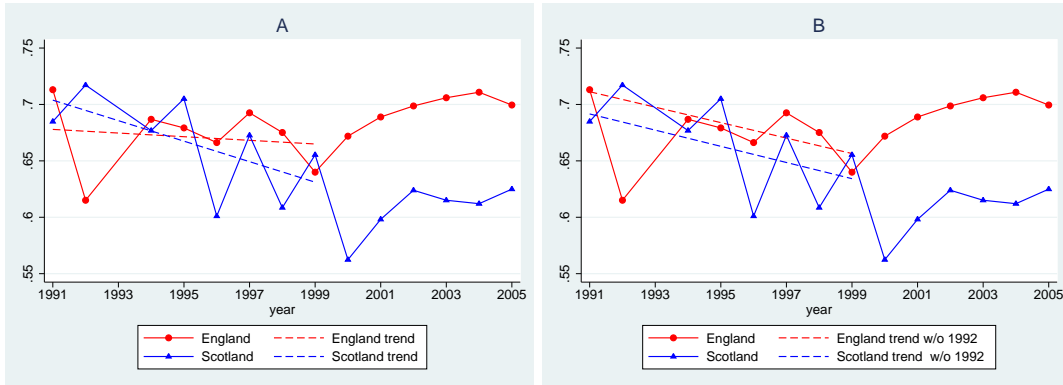
Source: BHPS

Figure 3: Women's probability of being employed, by country



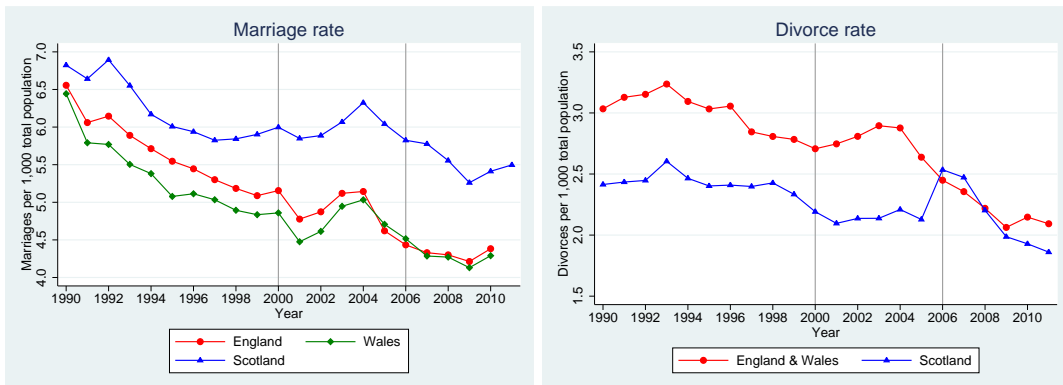
Source: BHPS

Figure 4: Women mainly responsible for looking after the children, by country



Source: BHPS

Figure 5: Marriage rate and divorce rate, by country



Source: BHPS

9 Tables

Table 1: Summary statistics: difference-in-difference, women

H. of work	Pre	Post	Difference
England	20.50	20.52	0.02
Scotland	22.20	23.87	1.66
Difference	-1.71	-3.35	-1.64
H. of work & paid overtime	Pre	Post	Difference
England	21.24	21.20	-0.04
Scotland	23.08	24.64	1.56
Difference	-1.84	-3.44	-1.60
H. of work & total overtime	Pre	Post	Difference
England	22.32	22.21	-0.11
Scotland	23.83	25.68	1.85
Difference	-1.51	-3.48	-1.96
H. of housework [†]	Pre	Post	Difference
England	19.15	17.91	-1.25
Scotland	18.78	16.39	-2.38
Difference	0.38	1.51	1.14
Mainly resp. for children < 12 [‡]	Pre	Post	Difference
England	0.67	0.70	0.03
Scotland	0.66	0.60	-0.06
Difference	0.01	0.09	0.08

Using cross-sectional weights. Difference-in-difference in bold.

[†] After 1994.

[‡] It applies only to people living with spouse/partner and with child(ren) under 12 living in the household.

Table 2: Summary statistics: difference-in-difference, men

H. of work	Pre	Post	Difference
England	38.15	38.41	0.26
Scotland	38.73	38.85	0.11
Difference	-0.58	-0.43	0.15
H. of work & total overtime	Pre	Post	Difference
England	40.70	40.48	-0.22
Scotland	41.33	40.58	-0.75
Difference	-0.64	-0.10	0.53
H. of work & paid overtime	Pre	Post	Difference
England	43.00	42.83	-0.17
Scotland	42.90	42.50	-0.40
Difference	0.10	0.33	0.23
H. of housework [†]	Pre	Post	Difference
England	5.10	4.96	-0.14
Scotland	5.69	5.96	0.26
Difference	-0.59	-1.00	-0.41
Mainly or joint resp. for children < 12 [‡]	Pre	Post	Difference
England	0.38	0.36	-0.02
Scotland	0.40	0.45	0.05
Difference	-0.01	-0.09	-0.07

Using cross-sectional weights. Difference-in-difference in bold.

[†] After 1994.

[‡] It applies only to people living with spouse/partner and with child(ren) under 12 living in the household.

Table 3: Effects of the *White v. White* case on married women's outcomes

Dependent variable	Pooled cross-sections	Panel-FE
Hours worked	-2.54** (1.44)	-1.54** (0.74)
Hours worked included paid overtime	-2.56** (1.14)	-1.57** (0.76)
Hours worked included total overtime	-2.86** (1.15)	-1.71** (0.79)
<i>Observations</i>	<i>17,141</i>	<i>14,795</i>
<i>R squared</i>	<i>0.21</i>	<i>0.12</i>
Employment	-0.05 (0.03)	-0.01 (0.02)
<i>Observations</i>	<i>17,219</i>	<i>14,852</i>
<i>R squared</i>	<i>0.14</i>	<i>0.08</i>
Houseworks	0.88 (0.69)	0.51 (0.55)
<i>Observations</i>	<i>14,782</i>	<i>13,222</i>
<i>R squared</i>	<i>0.17</i>	<i>0.06</i>
<i>Controls:</i>		
Demographic controls	X	X
Spouses controls	X	X
Time FE	X	X
Region FE	X	X
Individual FE		X

Standard errors clustered at the individual level in parentheses.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 4: Heterogeneous effects of the reform on married women's outcomes

Dependent variable	High educated		Low educated	
	Pooled cross-sections	Panel-FE	Pooled cross-sections	Panel-FE
Hours worked	-4.72*** (1.71)	-4.07*** (0.96)	-1.49 (1.55)	-0.48 (1.07)
Hours worked included paid overtime	-4.65*** (1.75)	-3.99*** (0.97)	-1.63 (1.60)	-0.27 (1.11)
Hours worked included total overtime	-5.44*** (1.93)	-4.46*** (1.12)	-1.62 (1.57)	-0.42 (1.12)
<i>Observations</i>	6,804	5,677	10,337	8,103
<i>R squared</i>	0.18	0.12	0.22	0.11
Employment	-0.12*** (0.05)	-0.07** (0.03)	-0.01 (0.04)	0.03 (0.03)
<i>Observations</i>	6,838	5,699	10,381	8,136
<i>R squared</i>	0.09	0.07	0.16	0.08
Houseworks	1.06 (1.16)	-0.36 (0.83)	0.87 (0.96)	1.23* (0.67)
<i>Observations</i>	6,130	5,206	8,652	7,183
<i>R squared</i>	0.16	0.07	0.17	0.05
<i>Controls:</i>				
Demographic controls	X	X	X	X
Spouses controls	X	X	X	X
Time FE	X	X	X	X
Region FE	X	X	X	X
Individual FE		X		X

Standard errors clustered at the individual level in parentheses.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 5: Effect of the reform on married men's outcomes

Dependent variable	Full sample		Heterogeneous results			
	Pooled cross-sections	Panel-FE	High educated		Low educated	
			Pooled cross-sections	Panel-FE	Pooled cross-sections	Panel-FE
Hours worked	-0.60 (1.18)	-0.84 (0.65)	-1.60 (1.45)	-1.16 (1.06)	0.23 (1.84)	-0.06 (0.83)
& paid overtime	-0.17 (1.27)	-0.47 (0.75)	-1.17 (1.61)	-0.83 (1.16)	0.60 (1.96)	0.23 (0.96)
& total overtime	-0.61 (1.28)	-0.44 (0.78)	-1.47 (1.60)	-1.06 (1.17)	0.05 (1.97)	0.48 (1.01)
<i>Observations</i>	<i>14,869</i>	<i>12,697</i>	<i>7,208</i>	<i>5,871</i>	<i>7,661</i>	<i>5,881</i>
<i>R squared</i>	<i>0.07</i>	<i>0.02</i>	<i>0.08</i>	<i>0.02</i>	<i>0.11</i>	<i>0.04</i>
Employment	-0.03 (0.02)	-0.00 (0.01)	-0.01 (0.02)	-0.00 (0.01)	-0.04 (0.03)	0.01 (0.01)
<i>Observations</i>	<i>14,945</i>	<i>12,756</i>	<i>7,241</i>	<i>5,900</i>	<i>7,704</i>	<i>5,908</i>
<i>R squared</i>	<i>0.10</i>	<i>0.03</i>	<i>0.06</i>	<i>0.03</i>	<i>0.13</i>	<i>0.05</i>
Houseworks	-0.58 (0.38)	-0.48* (0.25)	-0.92** (0.45)	-0.50 (0.31)	-0.24 (0.59)	-0.44 (0.40)
<i>Observations</i>	<i>12,902</i>	<i>11,464</i>	<i>6,435</i>	<i>5,387</i>	<i>6,467</i>	<i>5,283</i>
<i>R squared</i>	<i>0.05</i>	<i>0.01</i>	<i>0.08</i>	<i>0.01</i>	<i>0.05</i>	<i>0.04</i>
<i>Controls:</i>						
Demographic controls	X	X	X	X	X	X
Spouses controls	X	X	X	X	X	X
Time FE	X	X	X	X	X	X
Region FE	X	X	X	X	X	X
Individual FE		X		X		X

Standard errors clustered at the individual level in parentheses.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 6: Married individuals' responsibility for child(ren) under 12

Dependent variable	Full sample		Heterogeneous results			
	Pooled cross-sections	Panel-FE	High educated		Low educated	
			Pooled cross-sections	Panel-FE	Pooled cross-sections	Panel-FE
	Women					
Main child resp. [†]	0.09** (0.04)	0.05** (0.03)	0.10* (0.06)	0.08* (0.05)	0.08 (0.06)	0.04 (0.05)
<i>Observations</i>	9,000	7,236	3,700	2,730	5,300	4,016
<i>R squared</i>	0.06	0.02	0.08	0.04	0.08	0.02
	Men					
Main child resp. or jointly [‡]	-0.09** (0.04)	-0.04 (0.03)	-0.13** (0.05)	-0.02 (0.04)	-0.05 (0.06)	-0.08 (0.06)
<i>Observations</i>	8,324	6,666	4,148	3,170	4,176	3,074
<i>R squared</i>	0.07	0.02	0.09	0.03	0.08	0.03
<i>Controls:</i>						
Demographic controls	X	X	X	X	X	X
Spouses controls	X	X	X	X	X	X
Time FE	X	X	X	X	X	X
Region FE	X	X	X	X	X	X
Individual FE		X		X		X

Standard errors clustered at the individual level in parentheses.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

[†] women: probability of being the main responsible,

[‡] men: probability of being the main responsible or jointly responsible with the wife.

Table 7: Placebo: Effect of the reform on non-married women's outcomes

Dependent variable	Cohabiting		Never married		Unmarried [†]	
	Pooled cross-sections	Panel-FE	Pooled cross-sections	Panel-FE	Pooled cross-sections	Panel-FE
Hours worked	-0.20 (2.23)	0.67 (1.40)	-0.29 (1.24)	-0.60 (1.25)	-0.56 (1.03)	-0.26 (1.01)
& paid overt.	0.10 (2.42)	0.70 (1.49)	-0.13 (1.30)	-0.90 (1.28)	-0.41 (1.08)	-0.39 (1.04)
& total overt.	0.52 (2.49)	0.67 (1.54)	-0.42 (1.35)	-0.85 (1.33)	-0.61 (1.12)	-0.38 (1.08)
<i>Observations</i>	3,097	2,738	8,794	4,913	16,041	7,842
<i>R squared</i>	0.34	0.11	0.32	0.24	0.28	0.17
Employment	-0.04 (0.07)	-0.00 (0.04)	-0.00 (0.03)	0.03 (0.04)	-0.01 (0.03)	0.03 (0.03)
<i>Observations</i>	3,106	2,747	8,826	4,931	16,128	7,878
<i>R squared</i>	0.31	0.10	0.31	0.31	0.26	0.22
Housework	-2.42 (1.48)	-0.98 (1.02)	-0.58 (0.55)	0.23 (0.54)	0.25 (0.62)	0.82 (0.52)
<i>Observations</i>	2,849	2,537	7,140	4,322	11,322	6,647
<i>R squared</i>	0.32	0.06	0.28	0.05	0.37	0.03
Main child resp.	0.08 (0.11)	0.13* (0.08)				
<i>Observations</i>	1,308	1,026				
<i>R squared</i>	0.18	0.05				
<i>Controls:</i>						
Demographic controls	X	X	X	X	X	X
Partners controls	X	X				
Time FE	X	X	X	X	X	X
Region FE	X	X	X	X	X	X
Individual FE		X		X		X

[†] 'Unmarried' refers to never married women and separated, divorced or widowed women.

Standard errors clustered at the individual level in parentheses.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 8: Impact of the *White vs. White* on marriage rate and divorce rate

Marriage rate						
	No trends	Country-specific linear trends	Country-specific quadratic trends	No trends	Country-specific linear trends	Country-specific quadratic trends
White v. White	-0.51*** (0.09)	-0.23 (0.15)	-0.09 (0.16)			
First 2 years				-0.39*** (0.12)	-0.24 (0.15)	-0.14 (0.20)
Years 3-4				-0.41*** (0.12)	-0.21 (0.17)	-0.01 (0.32)
Years 5-6				-0.72*** (0.12)	-0.46** (0.20)	-0.14 (0.49)
<i>Observations</i>	32	32	32	32	32	32
<i>R squared</i>	0.98	0.99	0.99	0.99	0.99	0.99
Divorce rate						
White v. White	0.05 (0.06)	0.24** (0.09)	0.21** (0.10)			
First 2 years				-0.00 (0.08)	0.17* (0.08)	0.24** (0.11)
Years 3-4				0.13 (0.08)	0.37*** (0.09)	0.50** (0.17)
Years 5-6				0.01 (0.08)	0.30** (0.11)	0.52* (0.26)
<i>Observations</i>	32	32	32	32	32	32
<i>R squared</i>	0.97	0.98	0.98	0.97	0.98	0.98
<i>Controls</i>						
Years FE	X	X	X	X	X	X
Country FE	X	X	X	X	X	X
Country*time		X	X		X	X
Country*time sq.			X			X

Using country's population weights. Standard errors in parentheses.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

A Appendix

Figure A.1: Probability that the wife is mostly doing the following housework chores, by country



Source: BHPS

Table A.1: Answers to ‘Who is mainly responsible for looking after the child(ren)? Is it..’

Answers	Who is answering	
	Women	Men
Mainly resp.	66.94	2.66
Mainly partner	2.47	60.78
Joint w partner	29.47	35.58
Someone else	1.13	0.98
Observations	10,293	9,010

Table A.2: Married women's summary statistics

	Before 2000				Since 2000			
	England		Scotland		England		Scotland	
	Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.
Hours worked	20.50	0.17	22.20	0.49	20.52	0.22	23.87	0.37
Hours worked & paid overtime	21.24	0.17	23.08	0.50	21.20	0.23	24.64	0.38
Hours worked & total overtime	22.32	0.18	23.83	0.52	22.21	0.24	25.68	0.40
Employed	0.74	0.00	0.77	0.01	0.76	0.01	0.81	0.01
Hours of housework	19.70	0.14	19.93	0.45	17.91	0.15	16.39	0.25
Mainly resp for children	0.67	0.01	0.66	0.02	0.70	0.01	0.60	0.02
Age	38.29	0.08	37.73	0.21	39.93	0.09	39.65	0.16
N of children aged 0-4	0.28	0.01	0.27	0.02	0.25	0.01	0.27	0.01
N of children aged 5-15	0.81	0.01	0.75	0.03	0.96	0.01	0.93	0.02
Higher degree	0.02	0.00	0.00	0.00	0.03	0.00	0.03	0.00
First degree	0.09	0.00	0.11	0.01	0.12	0.00	0.14	0.01
Teaching qf	0.04	0.00	0.03	0.01	0.03	0.00	0.03	0.00
Other higher qf	0.16	0.00	0.16	0.01	0.29	0.01	0.26	0.01
Nursing qf	0.03	0.00	0.05	0.01	0.02	0.00	0.03	0.00
GCE A levels	0.09	0.00	0.24	0.01	0.10	0.00	0.17	0.01
GCE O levels or equiv	0.26	0.00	0.23	0.01	0.22	0.01	0.19	0.01
Commercial qf, no o levels	0.05	0.00	0.03	0.00	0.03	0.00	0.02	0.00
CSE grade 2-5, scot grade 4-5	0.05	0.00	0.00	0.00	0.06	0.00	0.01	0.00
Apprenticeship	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other qualification	0.01	0.00	0.00	0.00	0.01	0.00	0.01	0.00
No qualification	0.19	0.00	0.14	0.01	0.10	0.00	0.11	0.01
HH equiv income	28,303.32	194.36	28,098.78	586.84	30,858.13	260.65	30,074.87	469.48
Spouse's age	40.98	0.09	40.40	0.25	42.57	0.11	42.03	0.19
Higher degree (husband)	0.03	0.00	0.03	0.01	0.04	0.00	0.04	0.00
First degree (husband)	0.11	0.00	0.09	0.01	0.15	0.01	0.11	0.01
Teaching qf (husband)	0.01	0.00	0.01	0.00	0.01	0.00	0.00	0.00
Other higher qf (husband)	0.27	0.00	0.26	0.01	0.37	0.01	0.34	0.01
Nursing qf (husband)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GCE A levels (husband)	0.13	0.00	0.15	0.01	0.11	0.00	0.15	0.01
GCE O levels or equiv (husband)	0.18	0.00	0.22	0.01	0.15	0.01	0.19	0.01
Commercial qf (husband)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CSE grade 2-5 (husband)	0.05	0.00	0.00	0.00	0.06	0.00	0.01	0.00
Apprenticeship (husband)	0.02	0.00	0.08	0.01	0.01	0.00	0.04	0.01
Other qualification (husband)	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.00
No qualification (husband)	0.18	0.00	0.14	0.01	0.11	0.00	0.11	0.01
Female unempl Rate	6.42	0.01	6.82	0.03	4.47	0.00	5.13	0.01
Urban dummy	0.76	0.00	0.73	0.01	0.76	0.01	0.66	0.01
Inner London	0.03	0.00	0.00	0.00	0.02	0.00	0.00	0.00
Outer London	0.08	0.00	0.00	0.00	0.06	0.00	0.00	0.00
R of South East	0.24	0.00	0.00	0.00	0.22	0.01	0.00	0.00
South West	0.10	0.00	0.00	0.00	0.11	0.00	0.00	0.00
East Anglia	0.05	0.00	0.00	0.00	0.06	0.00	0.00	0.00
East Midlands	0.10	0.00	0.00	0.00	0.11	0.00	0.00	0.00
West Midlands Conurbation	0.04	0.00	0.00	0.00	0.04	0.00	0.00	0.00
R of West Midlands	0.07	0.00	0.00	0.00	0.06	0.00	0.00	0.00
Greater Manchester	0.04	0.00	0.00	0.00	0.05	0.00	0.00	0.00
Merseyside	0.03	0.00	0.00	0.00	0.03	0.00	0.00	0.00
R of North West	0.05	0.00	0.00	0.00	0.05	0.00	0.00	0.00
South Yorkshire	0.03	0.00	0.00	0.00	0.04	0.00	0.00	0.00
West Yorkshire	0.04	0.00	0.00	0.00	0.03	0.00	0.00	0.00
R of Yorks & Humberside	0.05	0.00	0.00	0.00	0.05	0.00	0.00	0.00
Yyne & Wear	0.02	0.00	0.00	0.00	0.02	0.00	0.00	0.00
R of North	0.04	0.00	0.00	0.00	0.05	0.00	0.00	0.00
Scotland	0.00	0.00	1.00	0.00	0.00	0.00	1.00	0.00
Observations	10,814		1,511		5,434		2,070	

Table A.3: Married men's summary statistics

	Before 2000				Since 2000			
	England		Scotland		England		Scotland	
	Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.
Hours worked	38.15	0.18	38.73	0.57	38.41	0.22	38.85	0.40
Hours worked & paid overtime	40.70	0.19	41.33	0.60	40.48	0.23	40.58	0.42
Hours worked & total overtime	43.00	0.20	42.90	0.61	42.83	0.25	42.50	0.43
Employed	0.92	0.00	0.91	0.01	0.94	0.00	0.93	0.01
Hours of housework	5.15	0.07	5.58	0.19	4.96	0.08	5.96	0.15
Mainly-joint resp for children	0.38	0.01	0.40	0.02	0.36	0.01	0.45	0.02
Age	39.02	0.08	38.52	0.24	40.86	0.09	40.39	0.17
N of children aged 0-4	0.32	0.01	0.32	0.02	0.27	0.01	0.30	0.02
N of children aged 5-15	0.86	0.01	0.77	0.03	1.04	0.02	0.96	0.03
Higher degree	0.04	0.00	0.05	0.01	0.03	0.00	0.05	0.01
First degree	0.12	0.00	0.09	0.01	0.16	0.01	0.11	0.01
Teaching qf	0.02	0.00	0.01	0.00	0.01	0.00	0.00	0.00
Other higher qf	0.27	0.01	0.26	0.01	0.37	0.01	0.34	0.01
Nursing qf	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GCE A levels	0.14	0.00	0.17	0.01	0.11	0.00	0.16	0.01
GCE O levels or equiv	0.18	0.00	0.22	0.01	0.14	0.01	0.19	0.01
Commercial qf, no o levels	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CSE grade 2-5, scot grade 4-5	0.06	0.00	0.00	0.00	0.07	0.00	0.01	0.00
Apprenticeship	0.02	0.00	0.07	0.01	0.00	0.00	0.04	0.01
Other qualification	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
No qualification	0.16	0.00	0.13	0.01	0.09	0.00	0.10	0.01
HH equiv income	28,733.04	215.97	29,067.79	798.44	30,819.70	279.78	30,535.85	588.01
Spouse's age	37.27	0.09	36.59	0.24	39.36	0.10	38.86	0.18
Higher degree (husband)	0.02	0.00	0.01	0.00	0.02	0.00	0.03	0.00
First degree (husband)	0.10	0.00	0.13	0.01	0.13	0.01	0.14	0.01
Teaching qf (husband)	0.04	0.00	0.03	0.01	0.03	0.00	0.03	0.00
Other higher qf (husband)	0.17	0.00	0.17	0.01	0.28	0.01	0.27	0.01
Nursing qf (husband)	0.03	0.00	0.07	0.01	0.02	0.00	0.04	0.01
GCE A levels (husband)	0.10	0.00	0.23	0.01	0.10	0.00	0.17	0.01
GCE O levels or equiv (husband)	0.26	0.01	0.21	0.01	0.23	0.01	0.18	0.01
Commercial qf (husband)	0.05	0.00	0.03	0.01	0.04	0.00	0.01	0.00
CSE grade 2-5 (husband)	0.06	0.00	0.00	0.00	0.06	0.00	0.01	0.00
Apprenticeship (husband)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other qualification (husband)	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.00
No qualification (husband)	0.16	0.00	0.11	0.01	0.08	0.00	0.12	0.01
Female unempl Rate	6.42	0.01	6.80	0.03	4.47	0.00	5.14	0.01
Urban dummy	0.76	0.00	0.74	0.01	0.76	0.01	0.68	0.01
Inner London	0.03	0.00	0.00	0.00	0.03	0.00	0.00	0.00
Outer London	0.08	0.00	0.00	0.00	0.06	0.00	0.00	0.00
R of South East	0.24	0.00	0.00	0.00	0.22	0.01	0.00	0.00
South West	0.09	0.00	0.00	0.00	0.11	0.00	0.00	0.00
East Anglia	0.04	0.00	0.00	0.00	0.05	0.00	0.00	0.00
East Midlands	0.10	0.00	0.00	0.00	0.11	0.00	0.00	0.00
West Midlands Conurbation	0.04	0.00	0.00	0.00	0.04	0.00	0.00	0.00
R of West Midlands	0.07	0.00	0.00	0.00	0.07	0.00	0.00	0.00
Greater Manchester	0.04	0.00	0.00	0.00	0.04	0.00	0.00	0.00
Merseyside	0.03	0.00	0.00	0.00	0.03	0.00	0.00	0.00
R of North West	0.05	0.00	0.00	0.00	0.06	0.00	0.00	0.00
South Yorkshire	0.03	0.00	0.00	0.00	0.03	0.00	0.00	0.00
West Yorkshire	0.04	0.00	0.00	0.00	0.03	0.00	0.00	0.00
R of Yorks & Humberside	0.05	0.00	0.00	0.00	0.05	0.00	0.00	0.00
Yyne & Wear	0.02	0.00	0.00	0.00	0.02	0.00	0.00	0.00
R of North	0.05	0.00	0.00	0.00	0.05	0.00	0.00	0.00
Scotland	0.00	0.00	1.00	0.00	0.00	0.00	1.00	0.00
Observations	8,888		1,203		4,507		1,611	

Table A.4: Summary statistics for housework chores: difference-in-difference

	Women			Men		
Grocery shopping	Pre	Post	Difference	Pre	Post	Difference
England	0.59	0.63	0.04	0.11	0.11	0.00
Scotland	0.62	0.61	-0.01	0.08	0.12	0.04
Difference	-0.03	0.02	0.05	0.03	-0.01	-0.04
Cooking	Pre	Post	Difference	Pre	Post	Difference
England	0.71	0.69	-0.03	0.10	0.11	0.01
Scotland	0.67	0.62	-0.05	0.14	0.17	0.03
Difference	0.04	0.06	0.02	-0.04	-0.06	-0.02
Washing/ironing	Pre	Post	Difference	Pre	Post	Difference
England	0.83	0.81	-0.02	0.05	0.04	-0.01
Scotland	0.80	0.74	-0.06	0.08	0.07	0.00
Difference	0.03	0.07	0.04	-0.03	-0.03	-0.01
Cleaning	Pre	Post	Difference	Pre	Post	Difference
England	0.72	0.72	0.00	0.06	0.06	-0.01
Scotland	0.69	0.68	-0.01	0.08	0.08	0.00
Difference	0.03	0.04	0.01	-0.02	-0.03	-0.01

Using cross-sectional weights. Difference-in-difference in bold.

Not available for 1992 and 1993.

Table A.5: Impact of the reform on the probability that the individual is mostly doing the following housework jobs (full sample)

Dependent variable	Women		Men	
	Pooled cross-sections	Panel-FE	Pooled cross-sections	Panel-FE
Grocery shopping	0.04 (0.03)	0.03 (0.02)	-0.05** (0.02)	0.00 (0.02)
<i>Observations</i>	<i>14,912</i>	<i>13,333</i>	<i>12,983</i>	<i>11,522</i>
<i>R squared</i>	<i>0.06</i>	<i>0.02</i>	<i>0.03</i>	<i>0.01</i>
Cooking	0.03 (0.03)	-0.02 (0.02)	-0.02 (0.03)	0.00 (0.02)
<i>Observations</i>	<i>14,911</i>	<i>13,333</i>	<i>12,983</i>	<i>11,522</i>
<i>R squared</i>	<i>0.05</i>	<i>0.02</i>	<i>0.03</i>	<i>0.01</i>
Washing/ironing	0.04 (0.03)	0.01 (0.02)	-0.01 (0.01)	-0.00 (0.01)
<i>Observations</i>	<i>14,908</i>	<i>13,331</i>	<i>12,979</i>	<i>11,520</i>
<i>R squared</i>	<i>0.05</i>	<i>0.01</i>	<i>0.03</i>	<i>0.01</i>
Cleaning	0.02 (0.03)	0.02 (0.02)	-0.00 (0.02)	-0.00 (0.01)
<i>Observations</i>	<i>14,908</i>	<i>13,329</i>	<i>12,981</i>	<i>11,520</i>
<i>R squared</i>	<i>0.06</i>	<i>0.01</i>	<i>0.03</i>	<i>0.01</i>
<i>Controls:</i>				
Demographic controls	X	X	X	X
Spouses controls	X	X	X	X
Time FE	X	X	X	X
Region FE	X	X	X	X
Individual FE		X		X

Standard errors clustered at the individual level in parentheses.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A.6: Effect of the White case on women's outcome: robustness checks

Dependent variable	No Scotland boost		Excluding London		Including Wales	
	Pooled cross-sections	Panel-FE	Pooled cross-sections	Panel-FE	Pooled cross-sections	Panel-FE
Hours worked	-4.26*** (1.38)	-1.91* (1.02)	-2.37** (1.11)	-1.33* (0.75)	-2.44** (1.10)	-1.19* (0.72)
paid overtime	-4.27*** (1.40)	-1.90* (1.04)	-2.42** (1.13)	-1.39* (0.76)	-2.18** (1.09)	-1.28* (0.72)
total overtime	-4.70*** (1.49)	-2.04* (1.11)	-2.73** (1.19)	-1.53* (0.80)	-2.48** (1.12)	-1.21* (0.73)
<i>Observations</i>	15,526	13,291	15,982	13,778	19,556	17,080
<i>R squared</i>	0.21	0.13	0.21	0.12	0.20	0.11
Employment	-0.10*** (0.04)	-0.02 (0.03)	-0.05 (0.03)	-0.01 (0.02)	-0.04 (0.03)	-0.00 (0.02)
<i>Observations</i>	15,600	13,344	16,053	13,828	19,642	17,146
<i>R squared</i>	0.15	0.08	0.14	0.07	0.14	0.07
Houseworks	0.41 (0.88)	0.20 (0.78)	0.76 (0.70)	0.46 (0.56)	0.83 (0.69)	0.38 (0.54)
<i>Observations</i>	13,204	11,749	13,812	12,314	17,058	15,393
<i>R squared</i>	0.18	0.06	0.17	0.06	0.17	0.05
Mainly resp. for children†	0.09 (0.06)	0.07 (0.04)	0.09** (0.04)	0.05* (0.03)	0.09** (0.04)	0.05 (0.03)
<i>Observations</i>	8,138	6,547	8,412	6,763	10,352	8,430
<i>R squared</i>	0.18	0.02	0.06	0.02	0.06	0.02
<i>Controls:</i>						
Demographic controls	X	X	X	X	X	X
Spouses controls	X	X	X	X	X	X
Time FE	X	X	X	X	X	X
Region FE	X	X	X	X	X	X
Individual FE		X		X		X

Standard errors clustered at the individual level in parentheses.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

†Only women with child(ren) under 12 in the family.

Table A.7: Effect of the reform on married women's housework time (from 1992)

Dependent variable	Full sample		Heterogeneous results			
	Pooled cross-sections	Panel-FE	High educated		Low educated	
			Pooled cross-sections	Panel-FE	Pooled cross-sections	Panel-FE
Housework 1992-2005	1.48** (0.73)	0.62 (0.59)	1.86 (1.22)	-0.18 (0.86)	1.35 (1.00)	1.34* (0.70)
<i>Observations</i>	<i>17,010</i>	<i>14,684</i>	<i>6,778</i>	<i>5,654</i>	<i>10,232</i>	<i>8,024</i>
<i>R squared</i>	<i>0.18</i>	<i>0.07</i>	<i>0.17</i>	<i>0.08</i>	<i>0.18</i>	<i>0.07</i>
<i>Controls:</i>						
Demographic controls	X	X	X	X	X	X
Spouses controls	X	X	X	X	X	X
Time FE	X	X	X	X	X	X
Region FE	X	X	X	X	X	X
Individual FE		X		X		X

Standard errors clustered at the individual level in parentheses.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$