

# Mahr and Divorce: An Islamic Marriage Concept and Its Effects on Intrahousehold Bargaining Power of Couples

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February 2018

## Abstract

This paper investigates how the recently (2013) reformed mahr system in Iran affects the intrahousehold bargaining power of couples. Mahr—a monetary gift promised by the groom to the bride at the time of marriage—is a mandatory part of prenuptial agreements in Islamic marriage contracts and plays a crucial role in divorce cases. Under Islamic law, a husband must pay mahr whenever his wife requests it or when he initiates a divorce, a right granted only to men. Women can request a divorce for exceptional reasons such as observed domestic violence, husband's infertility, or second marriage without the wife's permission. Lacking satisfactory cause, a woman usually must forfeit part of her mahr when she negotiates for her husband's approval of her divorce request. The new law obligates husbands to pay a capped value of mahr, up to 110 gold coins (around \$35k USD), with any additional payment conditional on men's individual wealth. The theoretical model of Islamic marriage and divorce presented here shows how mahr affects and alters a couple's choices and market outcomes. Divorce documents hand-collected in Shiraz, Iran, provided empirical evidence that supports the predictions of this model for divorces both before and after the policy change. Compared to the initial amount promised in male-initiated divorces, actual payment of mahr decreased substantially, whereas mahr paid in successful cases initiated by women showed no significant decrease. Length of the negotiation process did not change.

JEL Codes: D86, D19, J4, J1, J16

Keywords: Islamic Marriage, Mahr, Contracts, Divorce, Gender, Intrahousehold Bargaining

This paper examines how mahr, a monetary gift promised by the groom to the bride at the time of marriage, affects Islamic divorce negotiations in Iran. The unique structure of Islamic marriage and divorce is part of an asymmetric, one-sided system that reserves the right to divorce for men. The financial promise of mahr can secure some level of decision making within marriage and negotiating power in divorce for women. Under this specific framework, the approach to divorce is different for men and women.

In February 2013, a new policy in Iran capped the maximum value of mahr at 110 gold coins (around \$35k USD). If the marriage contract exceeds this cap, the husband must pay the first 110 gold coins but any remaining balance depends on his wealth and ability to pay. In contrast, the previous policy allowed women to use legal force, including imprisonment, if husbands refused to pay the promised value of mahr. Importantly, the new law removed these heavy penalties when mahr exceeded the cap and allowed husbands to pay any remaining balance in installments.

Many articles have investigated intrahousehold relationships (i.e., bargaining power within households, marriage, and divorce), and some have focused on theories of family and tried to develop models that explain the decision-making process within marriage (Becker 1980, Mancer & Brown 1980). No-fault divorce laws in the USA generated studies that examined how such changes might affect the intrahousehold relationship when both husbands and wives can initiate divorce. However, the one sided right of divorce only for men and in response, using mahr as a bargain tool by women separates the structure of Islamic divorce from others. To explain this mechanism, I defined a model of collective bargaining that expands previous theories of marriage by adding specifications for mahr and no-fault divorce rights for men. Hence, this model uses joint utility to compare a couple's options before and after the policy, and examines how the new policy affects behavior and outcomes for both spouses.

Policymakers justified the new law under the premise that the high price of mahr threatened married life and increased the number of men who were jailed because they could not pay the promised mahr. Diya Organization of Iran<sup>1</sup>, reported that around 3,000 men were imprisoned in 2012. Under the new policy, this figure decreased to around 2,000 in 2013 but rose again to around 2,300 by 2015.

I used data (1,000 cases) hand-collected from four different offices of marriage and divorce in Shiraz, Iran, to examine the outcomes of successful divorce cases before and after the policy change and compared them with the predictions of the model. Optimally, the court is the source for information about couples who filed for divorce and failed to receive permission. However, gaining access to Iranian divorce records is

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<sup>1</sup> Diya Organization of Iran is an institution that works with financial prisoners such as cases who commit mahr-related crime

extremely hard, especially from the courts. No previously collected data provided enough information about mahr and divorce. The data presented here offer many specific details, such as initial mahr values and payments, that can help when studying the relationship between mahr and divorce. Divorce documents separate all cases into three general groups: (i) divorces initiated by women, (ii) divorces initiated by men or those where the couple mutually agreed to a separation, and (iii) registered but unconsummated marriages. This paper examines the first two groups.

Many common marriage institutions (e.g., dowry, or bride-price) have been studied in developing countries such as India, Bangladesh, and Nepal. Mahr differs from bride-price (i.e., money paid by the groom to the bride's family) because the bride receives the gift. Importantly, mahr affects the bargaining power of men and women and plays a key role in Islamic divorce. Few other researchers addressed mahr in studies that analyzed how mahr co-exists with dowry (Bianquis 1996, Carroll 1986a), and how it affects male and female bargaining power within that framework (Chowdhury et al. 2017, Ambrus et al. 2010). Various endogenous factors (e.g., education, wealth level of families, etc.) determine the relationship between mahr and marriage (Chowdhury et al. 2017). By exogenously restricting mahr, the new policy provides a natural experiment for observing how mahr value affects couples' bargaining power within intrahousehold relationships and in divorce cases.

The new cap only affects couples whose marriage contracts stipulate initial mahr that exceeds 110 gold coins. Therefore, I used cases with initial mahr greater or less than 110 gold coins as the control group and treatment group, respectively. Because mahr affects men and women oppositely, their approach to divorce must be studied separately. Additionally, because the new policy links the cap to husbands' wealth, the level of effects varies according the relative value of mahr for the husband.

The theory used here assumes that the probability of divorce requests will decrease for women and increase for men. However, the absence of information about unsuccessful cases or reasonable data on the pool of marriages that might have been affected by the policy makes calculation of this effect impossible. Rather, we examined how the new policy affects mahr payments and whether those effects affirm our model's prediction. Using a difference-in-differences approach, I examined the effects of the new policy on the final percentage of mahr paid and the length of the divorce process separately, based on which spouse initiates the divorce.

When men initiate divorce, the new policy negatively affects the value ratio of mahr paid over mahr promised. I found no substantial change in cases where women requested a divorce. This follows the

prediction of the model, which anticipates an ambiguous effect on observable divorce cases requested by women.

Indicating the value of mahr at the time of marriage is a common practice in most Muslim societies, which do not regulate the type or amount of mahr. Rather, mahr is based on an agreement between a couple. Family status, education, wealth level of each side, and even age difference may determine this agreed amount. At different time periods, specific types of mahr are more popular, but those types can change due to factors including acceptance of certain kinds of goods such as land or rapid changes in inflation. In Iran, the most common forms of mahr include money, gold, or properties such as houses or land. In the past two decades, high inflation rates made the official gold coin one of the most popular currencies for mahr<sup>2</sup>.

In most cases, the amount of mahr is decided under the supervision of both families. The agreed amount is written into the prenuptial marriage contract and, like the rest of the contract, it is binding. If his wife asks for her mahr at any point in the marriage, the husband must pay what he promised. In Islamic principles, the importance of mahr is so high that a widow receives her mahr, or its equivalent, before her husband's heirs divide their inheritance.

Traditionally, couples do not consider transferring the mahr unless they consider ending their marriage. If a woman asks for her mahr, her action is usually seen as a threat signal for divorce. Unlike many other religions, Islam has always accepted divorce, even though it is not favored socially in many countries, including Iran. The adverse impacts of divorce affect women more than men, as per societal norms. In recent years, divorce has increased and consequently has become more acceptable (Figure 1), especially in the major cities, but the social costs of divorce are far less for men compared to women. Figure 1 presents the total number of marriage and divorce cases in Iran between 2005 and 2015.

Islamic divorce regulations define main differences in how men and women approach divorce. Based on Islamic practice and Article 1133 of Iran's civil codes, the unilateral right to divorce belongs to men (Osanloo 2009). Some believe that mahr for women is the equivalent of this right. Women request a divorce only in exceptional and compelling cases (e.g., observed domestic violence, the inability of the man to financially support his family, addiction, absence of the husband for four full years, divorce right included in prenuptial agreement, etc.). Aside from such exceptions, a woman must negotiate to gain her husband's approval for divorce. Arrangements may include compensating the husband for his approval by forfeiting

<sup>2</sup> Tamam Seke Bahar Azadi. Each gold coin weighs 8.133 g (0.287 ounces), and the price of an Iranian gold coin is linked to the world price of the gold. Further, Iran prices its official currency according to the demand for gold within the country and the exchange rate between the Iranian riyal and other commonly used currencies in international trade, especially USD, Euro, etc.

part or all of the promised mahr or, in some cases, paying their husbands an extra amount. If the man does not accept the best offer that his wife is willing and able to provide, he must pay the full amount of mahr. In doing so, man reserves his divorce rights and ends the divorce process.

Considering that Muslims account for 23 percent of the world's population, the number of studies investigating Islamic concepts is surprisingly small. Regarding marriage market and family structure, various studies examined dowry and its consequences in India, Bangladesh, etc. (Becker 1981, Rao 1993, Anderson 2003). However, very few papers have examined Islamic marriage contracts. The current study uses the change in mahr policy as a natural experiment to fill part of this gap. There have been many debates about the role of mahr in marriage, women's bargaining power during marriage, and in case of divorce, as a counter-argument to men's unilateral divorce rights. It is rational to assume that increasing the amount of mahr will increase women's bargaining power with men, and it is necessary to recognize that the influence of mahr depends on a man's wealth. If the relative value of mahr is small compared to the husband's financial situation, it will detrimentally affect a woman's bargaining power because the husband will not consider mahr worthy of negotiation. By limiting the power of mahr and linking it to a man's wealth, the new policy artificially limits the market mechanism. This paper illustrates a divorce framework wherein men and women consider their utility in both marriage and divorce and analyze the net outcome of mahr before deciding to continue their marriage or file for divorce. It then uses the new policy to determine how the new limit on the amount of mahr might change behavior and identify the outcome they will face in this new environment.

Section I explains some of the related legal concepts and the history of family law in Iran. Section II describes the data and provides some information about the details of cases. Section III covers the framework and model of the divorce and Section IV explains the general divorce framework and the identification strategy. Section V reports the result, and Section VI discusses some the processes and results while highlighting the limitations.

## I. Iran and Family Laws

Family laws in Iran have changed many times in the past few decades. In 1930, the Modernization Act established the minimum legal age of marriage (15 and 18 years of age for girls and boys, respectively), starting in 1935 (Momeni,1972). Lacking a legitimate request to the court, Article 1041 of the Iranian Civil Code makes marriage below these ages illegal. Even then, girls and boys younger than 13 and 15 years, respectively, could not marry (Aghajanian,2001). In practice, the law had a smaller impact in rural areas, where marriage at less than 13 years of age was still a social norm.

During the post-World War II period (1955–1979), Iran faced significant structural changes to its economy, accompanied by social reforms such as women's suffrage and political participation. In the following years, new family laws affected household formation by altering the level of fertility and household growth (Aghajanian,2001).

Only two weeks after the 1979 Revolution, Iran suspended the Family Protection Law (FPL) of 1967, which had been revised in 1975. FPL had three primary objectives: procedural limitations to men's unilateral right to divorce, a restriction on polygamy, and a qualification of men's presumptive rights to child custody (Osanloo 2009). Based on FPL, husbands were required for the first time to start a formal procedure to request a divorce. This process did not remove their unilateral divorce rights, but rather required mediation to resolve their problems. These laws also raised the age of marriage to 18 and 20 years for women and men, respectively. Questioning its compatibility with Islamic practice, Iran removed FLP from the new civil laws after the revolution.

By October 1979, previously suspended family courts resumed their activities regarding disputed divorces under the new name of the Special Civil Courts. When divorce consent was mutual, husbands were only required to register a divorce in the presence of two male witnesses. After many complications caused by changes in the divorce process and the lack of clear rules, the post-revolution Parliament formed a committee on family matters in 1984 to propose remedies for judicial confusion about family laws (Paidar 1995). By 1989, a more uniform set of family laws included many previous FPL regulations. In 1992, the Amendments to Divorce Regulations required husbands to attend court arbitration and obtain a letter of noncompatibility (Osanloo 2009). Also in 1992, a new law allowed women to request post-divorce maintenance as compensation for their work at home during marriage<sup>3</sup>. In 1999, women once again were able to initiate divorce if their husband married a second wife without their permission.

Regulations regarding child guardianship were the subject of many controversial discussions. Based on the Iranian Civil Act<sup>4</sup> , the mother could have custody of the children until they reach the age of 2 and 7 years for boys and girls, respectively, if the couple lacked a prior agreement. Afterward, guardianship moved to the father (Ebrahimi 2005). In 1997, a new set of child custody laws granted custody to the mother if she could show that her husband was unfit to care for children (Mir-Hosseini 2000). In 2002, the court entrusted guardianship to the mother from birth to 7 years, without regard to gender, and then to the father for girls

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<sup>3</sup> *Ojratol Masal*

<sup>4</sup> Article 1169

aged 7–9 years and boys aged 7–15 years, at which point the children could choose their guardian (Ebrahimi 2005). In all instances, the father was responsible for child support.

Recently, debate over women rights resulted in some changes to the content of marriage contracts, including pre-written conditions that give women more power in the marriage, including women's right to work or travel abroad at will. Although the contract provides such information to increase awareness about possible grounds for agreement, many women are not aware of these possibilities, especially in rural areas. In more traditional cultures, prenuptial options are not acceptable. Interestingly, many men prefer to accept higher mahr than relinquish these rights to women. Also, some parts of Iran still use other culturally defined agreements like bride-price<sup>5</sup>, which has decreased over time.

## II. Data

The data presented here were collected at four local offices of marriage and divorce in various parts of Shiraz, Iran. The best and most comprehensive resource for data related to marriage and divorce documents in Iran is the National Organization for Civil Registration (NOCR). To register a divorce case, couples must take a court permit to a local office, which records their information (i.e., type of divorce, permit date, etc.), and reports the divorce to NOCR. In the past, NOCR lacked comprehensive information related to factors such as child guardianship or amount of mahr promised or paid.

Because local offices restrict access to their data due to privacy concerns, unauthorized people cannot see any of the documents. However, a team of lawyers who were working on another project in local offices could access the documents, and they helped me collect 1,000 data points for this paper. The data, which were drawn from offices located in one high-income area, two middle-income areas, and one low-income area, contain no personal identifiers, and there is no opportunity for follow up. To prevent possible effects of the policy change on marriage contracts, this paper only used data from marriage dates that preceded the new policy. Divorce documents were organized according to divorce date. The data represent a cross-section from specific months in 2006–2009 and 2011–2016. Due to recently unstable inflation rates, gold has turned to the most popular currencies for mahr agreements. When mahr value is defined in terms of the Iranian Rials, the court uses a CPI table to convert the numbers to present value. Thus, men pay the present value of mahr rather than the nominal amount stated in the marriage contract. Following the same process, this paper calculated the value of a gold coin based on the price of gold at the time of divorce (i.e., when men must buy and pay the mahr). The new policy defines the cap in terms of gold coins. This specific way

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<sup>5</sup> The literal meaning of Shir Baha is the cost of breast feeding

of defining the cap is the main reason this paper makes comparisons using the same measurements rather than the Iranian Rials. Every divorce document in the data contained information on divorce-related factors such as birth dates, total amount of mahr promised and mahr paid, alimony, guardianship of children, etc.

This study discusses two kinds of divorce:

- (i) male-initiated, including mutual decision;
- (ii) female-initiated; and

A third group (i.e., formally registered but unconsummated marriages) follows different rules and must annihilate the marriage. In unconsummated marriages, women can get no more than half of the promised mahr unless ordered by the court. Additionally, because marriage termination in the third group usually happens very near the time of marriage, it caused a huge decrease in the sample after the policy. Finally, there is no way to determine who requested annihilation of the marriage because either spouse can request it and the legal term is the same for both spouses.

Table 1 shows some basic information for men and women, based on divorce type.

**\*Table 1\***

Table 2 reports the number of observations based on divorce date, separated by divorce type (i.e., before or after the policy), and over or under the 110 gold coins (treatment and control groups, respectively).

**\*Table 2\***

Notably, marriage age for men and women was distributed differently in the sample. Figure 2 illustrates the distribution of age at marriage for men and women separately, based on the divorce type.

**\* Figure 2\***

The average age at marriage increases over time in the data. The marriages of most spouses who married at very early ages were registered before Iran's 1979 Revolution (30–40 years ago); consequently, divorce happens at older ages. Most divorces in this group were initiated by men. For women, the special shape of age distribution at the time of marriage can result from a trade-off between schooling and marriage at specific ages. Compared to women, marriage age for men follows a normal distribution and starts at a later age.

Figure 3 shows a normal age distribution at time of divorce that is almost the same for both men and women, although the age range is different.

\* Figure 3 \*

Age difference between spouses in the data sample decreased over time. Figure 4 shows that age differences are smaller in recent marriages.

\* Figure 4\*

The data also provide self-reported information about spouses' employment status and possibly measure wealth. This paper examines whether independent income can affect women's divorce outcomes and increase their probability of having an acceptable outside option. Among 807 women who reported their occupation, 439 were housewives and 368 were employed. When viewed according to which spouse initiated the divorce, 153 women in male-initiated cases reported working and 233 were housewives. In female-initiated cases, 215 women were employed and 206 were housewives, indicating a significantly higher rate of employed women in this scenario.

Children are an important factor in both the marriage and divorce markets. Even when children are old enough to choose their guardian, couples must consider the legal possibilities and their own responsibilities in terms of both cost and child support before requesting a divorce. For girls and boys younger than 7 years of age, guardianship is both the responsibility and the right of the mother. The father then takes guardianship and responsibility for children until they reach 9 and 15 years of age for girls and boys, respectively. In all instances, the father should pay child support unless negotiated otherwise. Because spouses can negotiate their custody rights and even cede custody in return for other possible divorce outcomes, mahr can actually help women as they negotiate post-divorce child custody.

### III. The Model

I use a model of collective bargaining in this paper to explain how mahr affects the joint utility of husband (H) and wife (W). In this model, both husband and wife face a set of possible goods with their budget, and they decide how to allocate their market and nonmarket resources to these goods. They choose the optimum level of consumption, which lies on their utility frontier line (i.e., the highest level of joint utility a couple can achieve in cooperative marriage, based on their budget constraint). Their joint decision is based on the following function:

$$\max \beta U(M)_W + (1 - \beta)U(M)_H \quad \text{s.t budget,}$$

where  $U(M)_W$  is the utility of the wife from marriage,  $U(M)_H$  is the utility of the husband from marriage,  $\beta$  assigns the wife's level of bargaining power in the household decision making, and  $1 - \beta$  is the bargaining power of the husband. Thus,  $0 < \beta < 1$ . The value of  $\beta$  is determined by factors like their share of value of nonincome earnings, the proportion of income each individual provides, and social norms (i.e., age, gender, education, etc.). Other important factors determining  $\beta$  in this model include mahr ( $\mu$ ), which establishes  $\beta$  in the Islamic marriage model, and the outside option (i.e., the highest utility that husband or wife can gain outside their marriage). The outside option might be the utility of remaining single after divorce, remarriage, or any other possible option in the event of a divorce. I assumed that the spouses' bargaining power is determined before marriage and does not change over time. Exceptional possibilities of change in this value include a sudden shock (e.g., an exogenous change regarding which spouse earns the family income, a sudden increase in the wealth of one partner, or any factor that changes the possible best option they face outside the marriage) to any of the factors that determine bargaining power. A unique  $\beta^*$  represents a couple's bargaining power. If the value of  $\beta$  is not correctly determined, the couple can renegotiate to shift the ratio to the correct level (i.e.,  $\beta^*$ ).

Mahr can be interpreted as a debt the husband must pay to the wife. It becomes the legal property of the wife the moment she asks for it, and she can decide how to spend it. Therefore, mahr has a positive effect on  $\beta$  and a negative effect on  $1 - \beta$ . Figure 5 shows how mahr shifts the bargaining power from husband to wife and therefore is their final point of equilibrium on the frontier.

\* Figure 5 \*

In Figure 5, the x-axis represents the utility of the husband and the y-axis represents the utility of the wife. The shape of the frontier line depends on the shape of the individual utility function and how it will be affected if they change their bundle of consumption. Point A on the graph represents the optimum joint utility that husband and wife face based on their bargaining power without mahr. When mahr is incorporated, the relative bargaining power of women increases from  $\beta$  to  $\beta'$ . Consequently, their joint utility is represented by point B on the graph. This increase in the wife's utility can be as large as the exact monetary value of her mahr.

No-fault, or one-sided, divorce is a legal right that enables each spouse to exit the marriage at any point with given conditions based on the law but without considering the cause or reason for divorce. The simple fact that a person who has this right might not find his or her marriage desirable anymore is a sufficient

ground for divorce. If the no-fault divorce option is available to both parties and the utility of either spouse is less than their highest utility outside the marriage, they can either renegotiate the allocation of goods within the household or exit the marriage. In other words, the outside option is the threat point for the marriage. When no-fault divorce is a legal option, this utility acts as a reservation utility level.

Figure 6 shows a basic model without mahr where no-fault divorce is possible for both parties.  $T_H$  on the x-axis represents the best outside option for the husband, and  $T_W$  on y-axis shows the best outside option for the wife. For the husband, any utility level to the right of  $T_H$  (i.e., area C or D) represents a higher utility for marriage compared to divorce. If the joint utility reaches the left side (i.e., area A or B), the husband should consider an option that moves him back to a positive net utility of marriage or choose divorce. This is also true for the wife: she would prefer divorce over marriage if the joint utility is in area A or D.

**\* Figure 6 \***

When the utility of marriage is in area A, where it is less than the threat point for both husband and wife, divorce is the final solution. If utility is in area C, both spouses would prefer staying in the marriage. If the equilibrium point is in area B, the husband would prefer divorce but the wife would have higher utility if she remains in the marriage. Thus, the husband could either get a no-fault divorce or negotiate with his wife if he believes their  $\beta$  does not represent their optimum bargaining power. Changing the value of  $\beta$  would shift both spouses to a point on the utility frontier where the husband's utility is at least as good as his threat point level while the wife stays in a higher level of utility compared to her threat point. If their joint utility is in area D, the no-fault divorce option allows the wife to choose divorce or the husband will agree to decrease his utility level by transferring it to the wife until she prefers staying in the marriage.

In a simpler model (i.e., both spouses have a right to no-fault divorce and mahr is not present), both spouses can exit the marriage at area B or D compared to the Islamic marriage model, where only men have the right to divorce without mutual agreement (Area A). Thus, the husband can request a divorce in area B without considering his wife's utility, but the wife cannot request for a divorce in area D unless she somehow gains the husband's agreement. Therefore, mahr becomes an essential factor in providing an exit option for women while making divorce costlier for men.

Table 6 shows all possible outcomes that a husband and wife might face. Based on their choice within the marriage as well as their outside option with 0 value of mahr ( $\bar{\mu}$ ),  $\alpha$  represents the fraction of mahr that husband is obligated to pay if they divorce and  $1-\alpha$  is the fraction of mahr that is forgiven (i.e., no longer

due to the wife). The largest value of  $\alpha$  equals 1 when the husband pays the full amount of the promised mahr. The smallest possible value of  $\alpha$  is 0 when the woman gives up all of her mahr.

**\*Table 6\***

Thus, the joint utility of marriage considers mahr. If the wife believes that the couple's joint utility does not reflect the mahr correctly, she can demand separate payment of her mahr (Table 6, column 2). On the other hand, the husband should consider the fact that he owes a debt to his wife, which he can choose to pay off. At that point, the wife can decide how to spend this money. As long as the value of mahr is at least as great as the shift of his utility to the left on the frontier line, the husband prefers to accept the switch in his bargaining power rather than pay the actual amount of mahr. If he decides to request a divorce, he should pay the amount of mahr debt ( $\mu$ ).

Based on institutional differences, husband and wife must take different actions when they study their situation concerning divorce. The husband has the right to initiate ending the marriage, a one-sided action. When he considers his options, he must confront the fact that he owes his wife some amount of mahr that he does not need to pay as long as he is married. In the absence of any policy or interference, if he asks for a divorce while his wife prefers staying married, he must pay the full amount of mahr aside from all other conditions that he might need to fulfill to gain a divorce (Figure 7). This effect on his threat point can be shown by subtracting the value of mahr from his outside option, which decreases the total value of divorce and shifts his threat point ( $T_H$ ) to the left by the values of the mahr ( $\mu$ ). Thus, his total net utility of marriage is  $U_{HM} - T_{HD} + \mu$ . If the result is negative, he will prefer divorce. After he pays the mahr  $p$ , the wife's outside option ( $T_W$ ) increases by the value of  $\mu$  because she will receive this money plus whatever utility she has outside of marriage. However, even a negative value of the wife's total utility after divorce ( $T_{WD} + \mu - U_{WM}$ ) will not affect the husband's decision about divorce.

**\* Figure 7 \***

Previously, men had to pay the full amount of mahr. A man who promised a value of mahr higher than his ability to pay would go to jail if his wife requested the money and he couldn't provide it independently or from outside resources. This creates a much higher value for the mahr and shifts his threat point ( $T_H$ ) almost to point 0, and his total outside option becomes  $T_{HD} - \omega + j$ , a high negative value. The new policy removed imprisonment for promised mahr values above 110 gold coins, thus withdrawing jail from the total utility function in binding cases. It also limited payments above the cap to the man's wealth ( $\omega$ ) rather than actual amount of mahr ( $\mu$ ). In other words, the policy changed mahr value in the utility functions of

both women and men to  $f_i(\mu|\omega)$ ,  $i=W$  or  $f_H(\mu|\omega) = \max(C, \omega)$  if  $\mu > C$ , respectively. When  $\omega < C$ , jail punishment is still possible if men cannot pay the cap value. In this scenario, the new law shifts  $T_H$  to the right when  $\geq C$ , increasing the likelihood that men will find the divorce option appealing. Even when men could provide the remaining mahr from outside options, such as family or friends, and jail was not a possible outcome before the policy, a man's  $T_H$  will shift to right if his wealth level is less than the promised amount of mahr. Therefore, it is less costly for men to provide the required mahr because payment depends only on his wealth level. This decreases the effect of mahr on the joint utility function of marriage, increases the probability that the husband will request a divorce, and decreases his overall mahr payment compared to the original promised value.

In the absence of the policy, when a woman considers her options she faces a different approach. If she requests a divorce, she must offer to forfeit part of her mahr. Her two best options are (i) getting the mahr value while still married if she thinks it is not correctly accounted for in the joint utility function, or (ii) requesting a divorce and giving up some part or all of her mahr. The husband either agrees to a divorce and pays the remaining mahr or rejects the offer and pays the full value of mahr. In this situation, a husband who wants to remain in the marriage must pay all of  $\mu$ . To decide if he should agree to divorce, he calculates the total value of his outside option ( $T_h - \alpha\mu$ ) and compares it with the value of being married while paying for the full amount of mahr ( $U_H(M) - \mu$ ). In other words, he looks at his total net value of being married:  $U_H(M) - T_{HD} - (1 - \alpha)\mu$  (Figure 8). Thus, his comparison is now between his utility of being married,  $U_H(M)$ , and his new outside option,  $T_{HD} + (1 - \alpha)\mu$ , which is to the right of his original threat point line,  $T_{HD}$ . As long as  $U_H(M) \leq T_{HD} + (1 - \alpha)\mu$ , he would accept his wife's offer and grant her a divorce. The highest value of an outside option that wife can provide for her husband using mahr is when she gives up all of her mahr and  $\alpha=0$ . If even after this offer the husband determines that the utility of marriage is larger than the total utility of divorce,  $U_H(M) > T_{HD} - \mu$ , he will not accept the offer. In this case, the wife's utility of marriage increases by the amount of  $\mu$  that was not already calculated in the original bargaining power of the couple. If  $\mu$  was fully calculated in the bargaining power before the transaction by eliminating this factor, in the long term their joint utility of marriage eventually will return to its original place. Even if the wife still faces a higher outside option, she will not be able to exit the marriage after the husband pays the full mahr value. The more significant the value of mahr, the higher the shift of the new outside option for the husband. Since higher mahr value decreases the right side of  $U_H(M) > T_{HD} - \mu$ , it increases the likelihood that the husband will find a level of  $(1-\alpha)$  appealing. The wife then considers the largest  $\alpha$  that makes her husband indifferent between the outside option and staying married or, in other words, the level of  $\alpha$  that causes  $U_H(M) = T_H + (1 - \alpha)\mu$ .

\* Figure 8\*

A third option for the wife involves renegotiating her bargaining power within the household. This situation can happen if the husband faces a high positive net utility of marriage and paying mahr is costly for him compared to what he can give up to increase his wife's utility of marriage. In other words, if the wife believes her mahr was not calculated in the value of  $\beta$  and she is facing a lower utility of marriage compared to her outside option, she can use her mahr and eventually both spouses might end up in area C, where they both have a positive value of being married without an actual transfer of mahr. This is especially the case when the husband is not able to pay the full value of mahr.

Without the new policy, a higher value of mahr increases the likelihood that the husband will agree to a divorce. If he cannot pay the full amount of promised mahr, he will agree because the alternative is staying in the marriage, forced to pay whatever ratio of mahr he can and going to jail. If negotiations fail and husband ends up in jail, the joint utility function will move away from its optimum level because he will not be able to provide income and participate in housework. This noncooperative situation is costly for both parties. At the same time, if the husband accepts his wife's offer, his area will shift far to the right, toward infinity, because his gains from agreeing to divorce are the utility of his outside option, a part of mahr, and his freedom. This is the opposite of going to jail and highly positive. Under the new policy, the maximum amount of mahr that a wife can forgive is her husband's wealth level rather than the  $\mu$  value. For the husband, when  $\mu > \omega$  the highest amount a wife can offer is  $U_H(M) = T_H + \omega$ . Therefore, if the promised value of mahr is above the cap, the distance between  $T_H$  and the original threat point caused by mahr decreases, reducing both  $\alpha$  and the probability of  $T_H + \bar{\mu} \geq U_H(M)$  that assures the possibility of divorce for women. Eliminating jail from possible punishment decreases the value of  $\bar{\mu}$  when the husband can't afford to pay the mahr even with outside resources.

If the marriage utility of both spouses is negative without considering mahr, both parties will mutually agree to a divorce. The presence of mahr makes no difference in the sense that the best outcome for both parties is divorce. However, in this framework it is a question of how much of the mahr will be transferred. If the husband's value of marriage is less than his threat point plus the entire amount of mahr, he will pay the full  $\mu$ . If  $T_H - \mu \leq U_H(M) < T_H$ , they will agree to a ratio of mahr based on their outside option and how much their utility will increase after they divorce.

If both spouses prefer the divorce option, the husband should request a divorce. In this case, both husband and wife must agree to exchange some amount of mahr (Figure 9). Since he has the power to initiate divorce, the husband offers the wife only the amount that keeps the wife indifferent between being married or

divorced. If their joint utility is a point in area A, the wife will accept the offer. If the joint utility function is in area  $A'$ , the husband cannot divorce without his wife's consent. In this situation, he should compensate her up to the level where he still prefers divorce over marriage. If he pursued a no-fault divorce, he would have to pay the full value of  $\mu$ . In this sense, he still benefits from divorce because he avoids paying the full value of mahr. Finally, if the equilibrium point of marriage is in area  $A''$ , the wife will agree to a mutual divorce if she receives the full amount of mahr. Like her husband, full payment will increase her preference for divorce and also make it more appealing than marriage.

\* Figure 9: \*

#### IV. Framework and Identification Strategy

The new policy can affect the couples in two ways: (i) asking for a divorce and determining whether it is feasible, or (ii) changing their divorce outcomes. Before the new policy, all cases were treated the same. Social changes and financial situation in the market effect people in the same direction. Decrease in real income in the society makes it harder for men to pay the requirements they need to pay such as mahr to break the marriage contract. In these situations, number of people with higher values of mahr or other payments decreases. Estimating the effect of the policy on number of divorce cases initiated by men and women is not now, marriages with promised value below 110 gold coins remain unaffected, while the upper bound for negotiation in cases with a promised amount above 110 shift to a husband's wealth level if he cannot afford to pay the total amount of promised mahr. To determine how the policy affects the results of divorce cases, I use difference in difference regression comparing control and treatment groups for all cases together and then for each divorce type separately. Thus,

$$\text{outcome}_i = \alpha_0 + \alpha_1 \text{Over110}_i + \alpha_3 \text{Over110}_i * \text{Policy}_i + T + x_{ci} + \epsilon_i,$$

where outcome is the length of divorce negotiation, the natural log of mahr payments, and the ratio of mahr payment over total amount of promised mahr. The dummy variable Over110 equals 1 if the total value of promised mahr exceeds 110 gold coins and 0 if the total value is less than 110. The new policy is a dummy variable that equals 1 if divorces were registered after the policy took effect and 0 if they were recorded before the policy. The  $x_i$  represents controls (e.g., the natural log of mahr value for each divorce case for this regression) and T represents year-fixed effects. This difference in difference assumes a common trend assumption.

## V. Results

As discussed in the model, the new policy should affect society in two ways: preferences about marriage or divorce (i.e., both spouses compare their options at every time point to decide whether they want to stay married or get divorced), and the possibility of divorce (whether they can act on their decision and get divorced) based on the exogenous shock in the market (e.g., legal limitations) that makes them reconsider whether to follow up on their decision or not. Conditions in the divorce market create a self-selection situation that resembles marriage market, where an individual looks at her best outcome of being married and decides whether she wants to marry or remain single. Under the new policy, couples might not divorce and may reconsider staying married if the outcome of divorce is worse detrimental. Similarly, divorce may now be more attractive to some people compared to the old policy.

Figure 10 shows the kernel density of the log of initial mahr promised, followed by the density of log of mahr paid. Data are sorted into two categories based on the spouse who initiated the divorce, and then further separated into three groups based on the date of divorce request and the date of the divorce. Line 1 (Request and Divorce BP) shows the kernel density of cases where both men or women requested and finalized their divorce before the policy changed. Clearly, women are generally more likely to request a divorce when their initial mahr value is high; for men, lower mahr value is more appealing. Line 2 (Request BP Divorce AP) shows the kernel density of cases where the request for divorce occurred before the policy change but the divorce itself was finalized after the new regulation. In this situation, divorce outcome improved for men, making it unlikely that they will drop their cases. For women, successful cases initiated before but finalized after the new policy were more likely to have a high initial value of mahr. Line 3 (Request and Divorce AP) shows all initial divorce requests and finalized divorces that occurred under the new policy. In this case, couples were aware of the new policy and its possible effects on their outcome and they decided accordingly. The data show an increase in the number of successful male-initiated divorce cases with higher initial values of mahr after enactment of the new policy. At the same time, the policy generated a huge drop in the value of mahr payments. This decline of mahr transfers was also visible in cases initiated before the new policy. For women, new cases have shifted toward higher values of initial mahr, but we observed no significant change in mahr transfers for successful cases.

\* Figure 10 \*

Figure 11 shows the proportion of mahr promised vs. mahr paid in each group. Male-initiated cases show a clear shift in the ratio of mahr payments when registration occurred after the policy. This decrease seems to exist for women as well, but to a lesser extent.

\* Figure 11 \*

To examine the relationship between the log of mahr promised and the log of mahr paid, Figure 12 used a second-degree polynomial regression function to compare patterns before and after the new policy in cases requested by men. These sets of graphs separate the cases into two groups: promised values over 110 and below 110, based on the cap. While the pattern for mahr values over time were steady, a huge drop in the log of paid mahr amounts under the new policy is notable (CI=95 percent). Cases below 110 gold coins (controls) showed no significant change.

\* Figure 12 \*

Figure 13 illustrates the same values for cases initiated by women. The policy did not significantly affect the log of mahr promised or mahr paid either over or under 110 gold coins.

Comparing Figure 12 and Figure 13, it is noticeable that paid values of mahr over 110 gold coins cases were lower on average than the cap in male-initiated cases that occurred before the policy change. Interestingly, such values were higher than the cap in female-initiated cases.

\* Figure 13 \*

Next, we used the first part of the identification strategy to separately assess the overall effect of the new policy on cases requested by men and women. We calculated a difference in difference to compare the change in outcome for all cases where promised mahr exceeded 110 gold coins before and after the policy change (treatment group) vs. promised mahr less than 110 (controls). Table 5 reports three different outcomes: (i) the ratio of mahr paid over mahr promised, (ii) the natural log of the mahr ratio as the outcome, and (iii) the natural log of mahr paid as the outcome variable. Odd-numbered columns are clustered based on divorce date, and we applied a time-fixed effect to all cases. All regressions were robust. Regardless of outcome definition, all cases having more than 110 gold coins show a significant decrease in mahr outcome under the new policy, with at least 95 percent probability. There is a positive relationship between mahr values and final payment, but a negative value between initial mahr values and the ratio that will be paid.

\*Table 5\*

Table 6 shows no substantial effect in divorce case initiated by women. The relationship between the value of mahr promised and mahr traded is the same in this case as it was for results of divorce cases by men.

Similar to Table 5, even-numbered regressions are clustered according to divorce month. All regressions are robust, and they control for the time factor.

\*Table 6\*

Looking at other possible effects from the policy, table 7 calculates the effects of the policy on negotiation process for male and female initiated divorces separately. Column 1 to 3 provides information on male initiated divorce cases, and column 5-6 estimates the effects on female-initiated cases. Interaction of policy dummy and cases over 110 gold coins are the main coefficient of interest. For male initiated divorce cases, a decrease in length of negotiation is observable while for female-initiated divorce cases there is an increase. However, none of the results are significant. It is possible that the small sample size does not allow us to capture the full effect of the policy on negotiation time but I cannot reject the possibility of an ambiguous effect on divorce process overall. For cases requested by men, with a decrease in divorce costs it is easier for them to get a divorce and it can cause the decrease in the process time. For all of the cases, the main source of the increase in the negotiation process is the disagreement over the real ability of men to pay mahr. Women must provide sufficient evidence about their husband's wealth. This policy might increase the possibility of asymmetric information about earnings within families and create incentives to conceal or transfer wealth by men. This is a lengthy process and hard to detect in cases appearing after the policy. Another path might be through the facts that for men with the ability to pay more than the cap, the main cost of negotiation has decrease which can increase the length of divorce cases, For women, on the other hand, negotiation is harder with a decrease on their total bargaining chips which can increase the process.

\*Table 7\*

Next, we calculated how policy affects the proportion of successful cases for men vs. women. Men were more likely to request a divorce when the mahr value was smaller, and increased mahr value of promised mahr shifted this probability toward women. Logically, there is a positive relationship between mahr and the relative bargaining power of women in divorce (Table 8). We observed a significant negative correlation between the value of mahr and the probability of men requesting a divorce. Under the new policy, the likelihood of male-initiated divorce increases substantially compared to women. The first and second regressions used a simple linear regression where the regression is robust, and column 2 is clustered by divorce date. The column 3 shows the results as a probit model, and column 4 shows the logit regression results. Both columns are robust and clustered by divorce date.

\*Table 8\*

## VI. Discussion and Conclusion

Mahr is an essential part of Islamic marriages, decided by agreement of both spouses and mentioned in the marriage contract. It has been a matter of discussion whether mahr plays any role in intrahousehold relationships and the bargaining power of women. Despite many debates among policymakers who believed that mahr does not affect women's bargaining power favorably within the family and that high mahr values only affect relationships negatively, both theory and the data presented here suggest different results.

In recent years, mahr values in marriage contracts have increased from a few dollars to as much as \$400,000 or more. Iran's escalating divorce rate, mahr negotiations, and increased numbers of mahr prisoners have added to the controversy.

The Iranian Parliament capped the binding level of mahr in the new policy, changing the divorce equation. Using the framework of the Iranian divorce system, this paper defines a model for divorce and compares that model with the available data.

Based on empirical findings from the available sample of data, the new policy significantly decreased the total amount of mahr paid to women when men initiate divorce. This decrease is not observable when women initiate divorce. However, this study observed a decline in the proportion of successful cases requested by women, likely due to the mixed effect of an increase in unsuccessful cases, small data samples, or the fact that the ratio between promised mahr over paid mahr was already close to its lowest threshold.

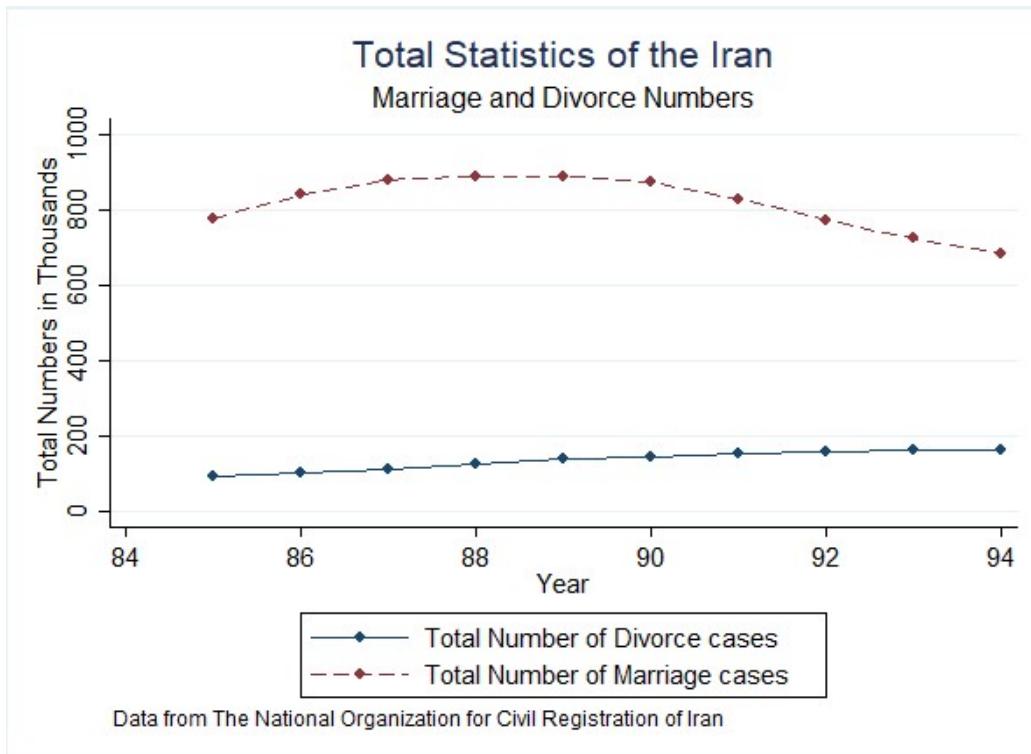
The problem of sample size for this paper prevents generalized comments or conclusions. The sample was gathered from only one city in Iran, and to the best of our knowledge, there are no other collected datasets available to study the full effects of the new policy on the whole country. However, our data followed the model and did not oppose the basic assumptions expected from this policy change. Although the small data sample used here is not representative of the whole country, it can provide valuable information about mahr's influence on women's bargaining power in the divorce market and the way the new policy affects this market. Because Shiraz encompasses both traditional and modern neighborhoods, office selection helped capture the overall effects of the law.

The new policy failed to fulfill its original purpose, and it might have caused many other adverse effects on families. For women who request a divorce, leaving a marriage contract can depend on initial mahr and determining how much they can give up to compensate their husbands. Because women agree to the

regulations and limitations of marriage regarding this mutually decided amount, the new policy can change intrahousehold relationships.

## Graphs and Tables

**Figure 1: Marriage and Divorce Numbers and Statistics (Iran)**

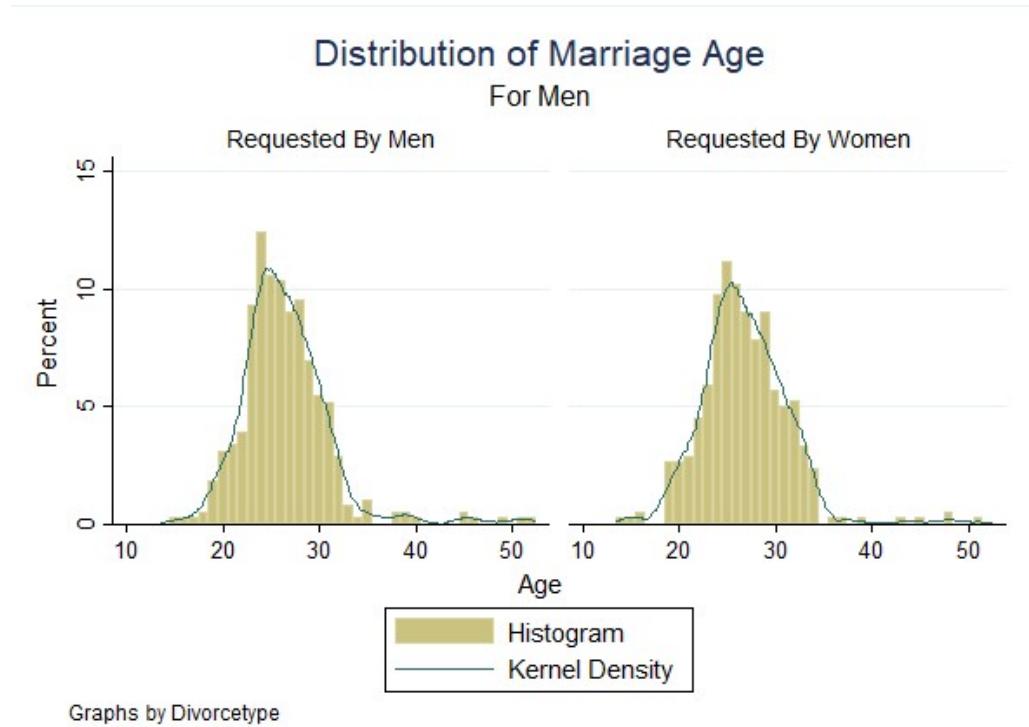
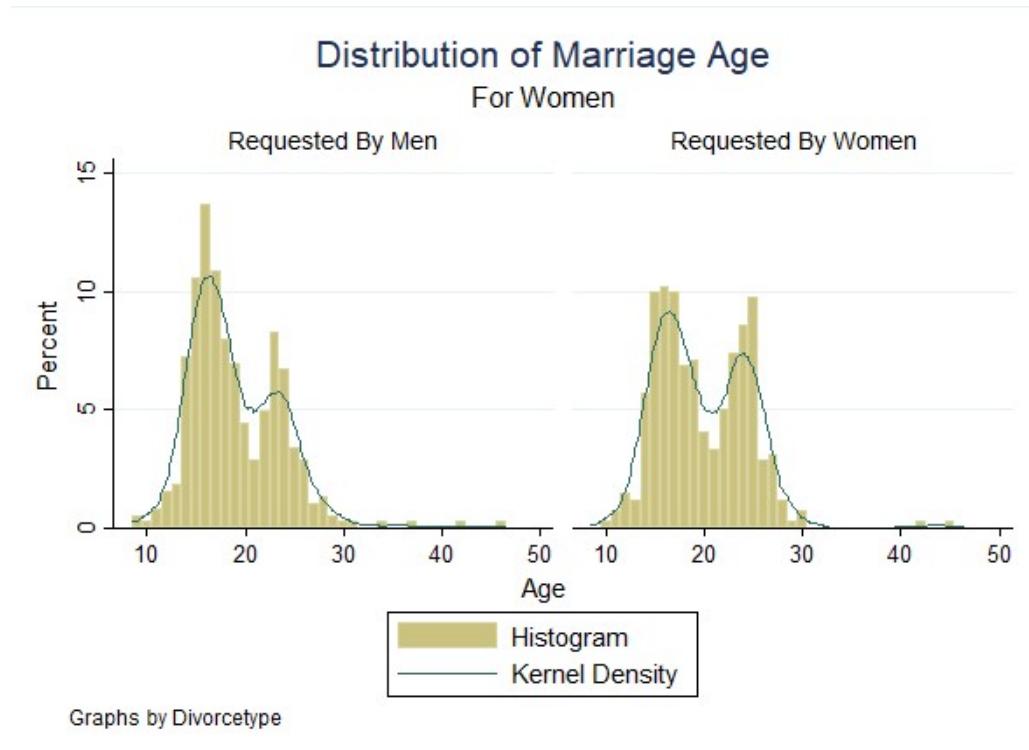


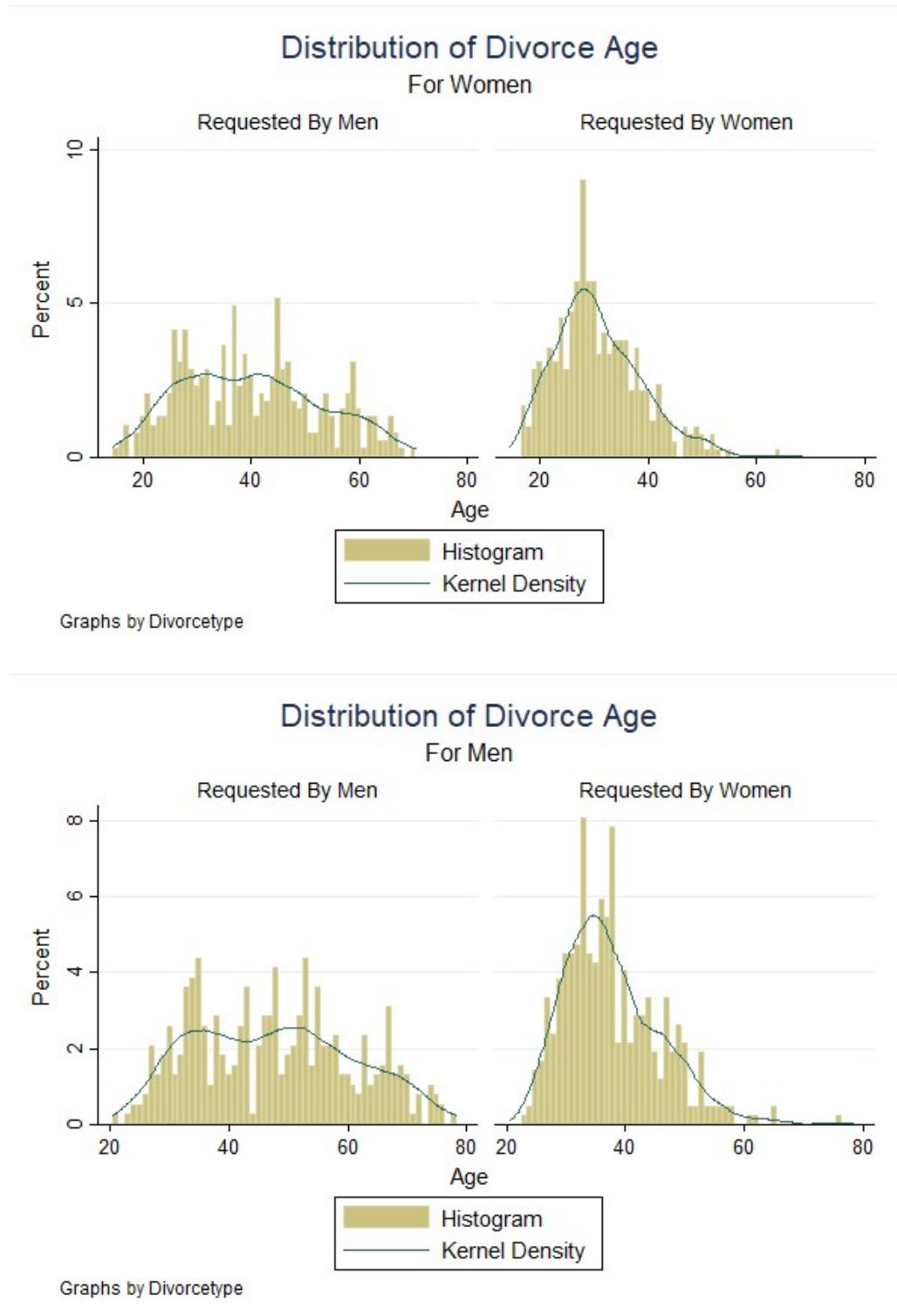
**Table1-Summary Data**

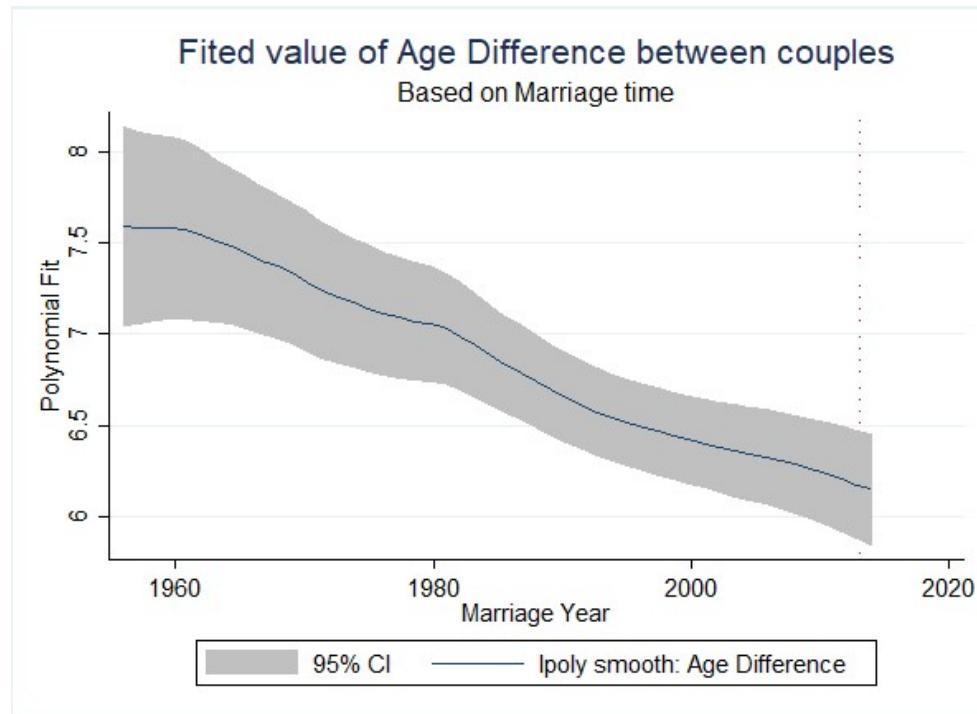
Variable	Male Initiated					Female Initiated				
	Obs	Mean	Std. Dev.	Min	Max	Obs	Mean	Std. Dev.	Min	Max
<b>Age_Men_Marriage</b>	387	26.42	4.61595	15	52	420	26.82	4.46	14	51
<b>Age_Women_Marriage</b>	387	18.99	4.660766	9	46	420	19.84	4.61	10	45
<b>Age_Men_Divorce</b>	387	47.54	13.19406	21	78	420	37.77	8.05	23	76
<b>Age_Women_Divorce</b>	387	40.1	12.7419	15	70	420	30.75	7.95	17	64
<b>Divorce_Process_Month</b>	387	20.28	4.818663	2	40	420	20.58	6.08	5	108
<b>Age_Difference</b>	387	6.979	3.346112	-3	32	420	6.574	3.46	-9	31
<b>Length of Marriage</b>	387	20.63	13.88908	0	55	420	10.45	7.65	0	44
<b>Mahr</b>	387	197.7	294.2028	0	1562	420	276.3	330	0	1480
<b>Mahr_paid</b>	387	111	192.4303	0	1562	420	113.7	158	0	1365
<b>Log Mahr</b>	387	4.003	1.805373	0	7.35	420	4.642	1.63	0	7.3
<b>Log Mahr_paid</b>	387	3.575	1.656684	0	7.35	420	3.859	1.54	0	7.219
<b>Mahr_Ratio</b>	387	0.814	0.322777	0	1	420	0.668	0.38	0	1

**Table 2- Number of cases**

Mahr level	Requested by Men			Requested by Women		
	Before Policy	After Policy	Total	Before Policy	After Policy	Total
<b>Under 110</b>	131	107	238	133	61	194
<b>Over 110</b>	94	55	149	138	88	226
<b>Total</b>	<b>225</b>	<b>162</b>	<b>387</b>	<b>271</b>	<b>149</b>	<b>420</b>

**Figure 2: Age Distribution at Marriage**

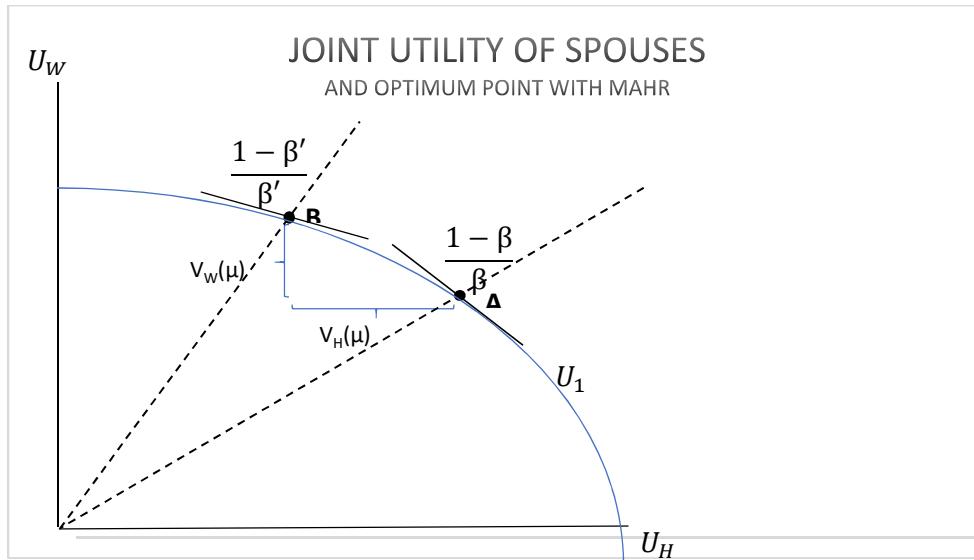
**Figure 3: Distribution of Divorce Age (Women)**

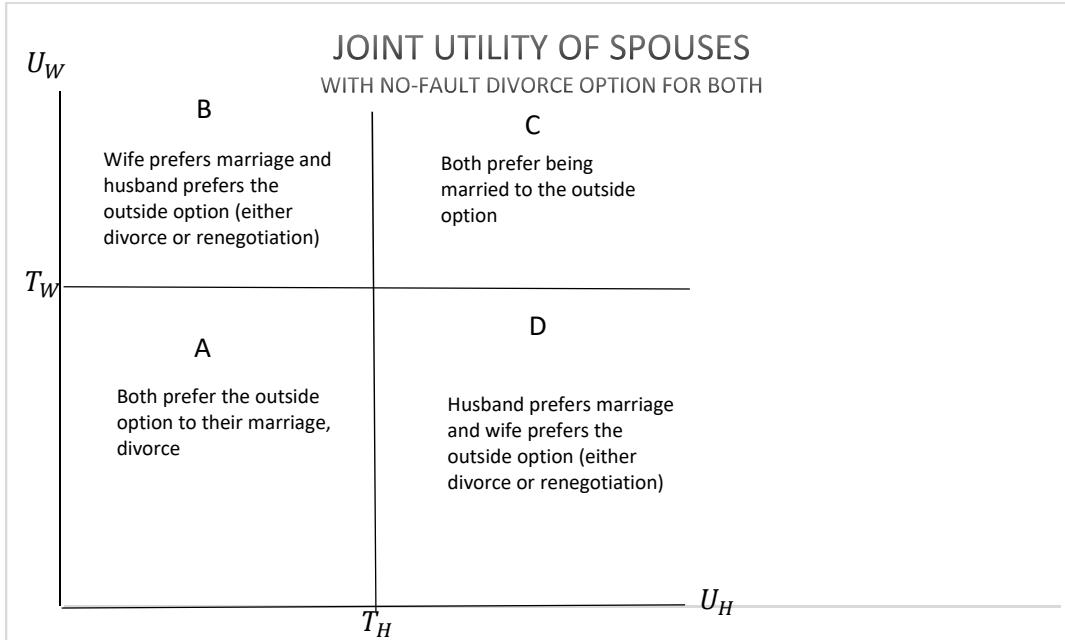
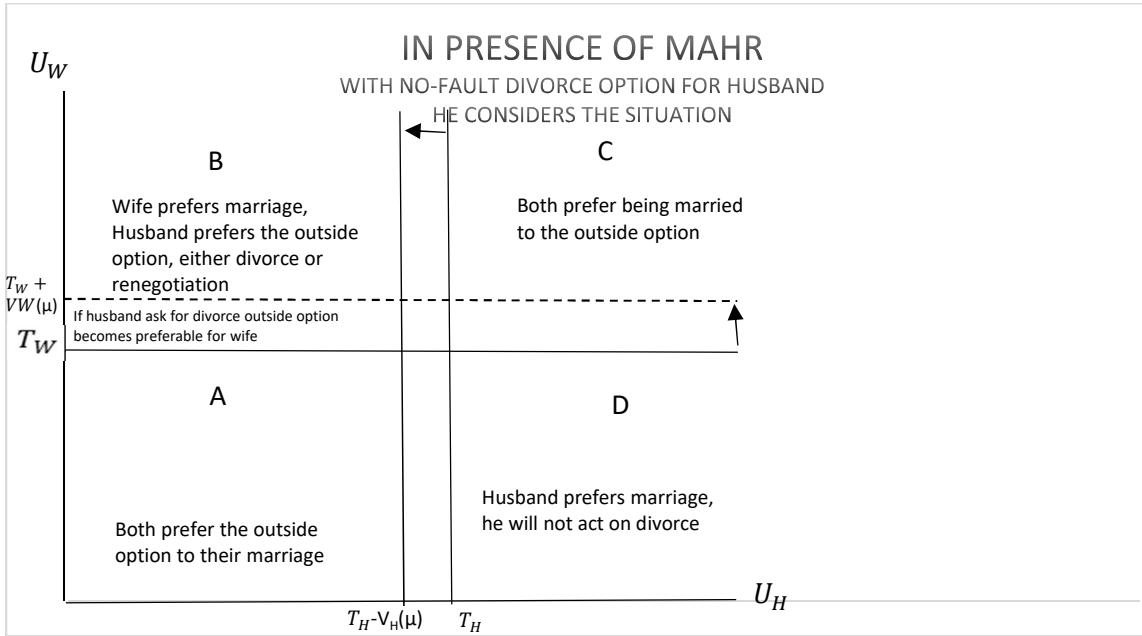
**Figure 4: Fitted Value of Age Difference (Based on Length of Marriage)****Table 3, Summary Information on Children**

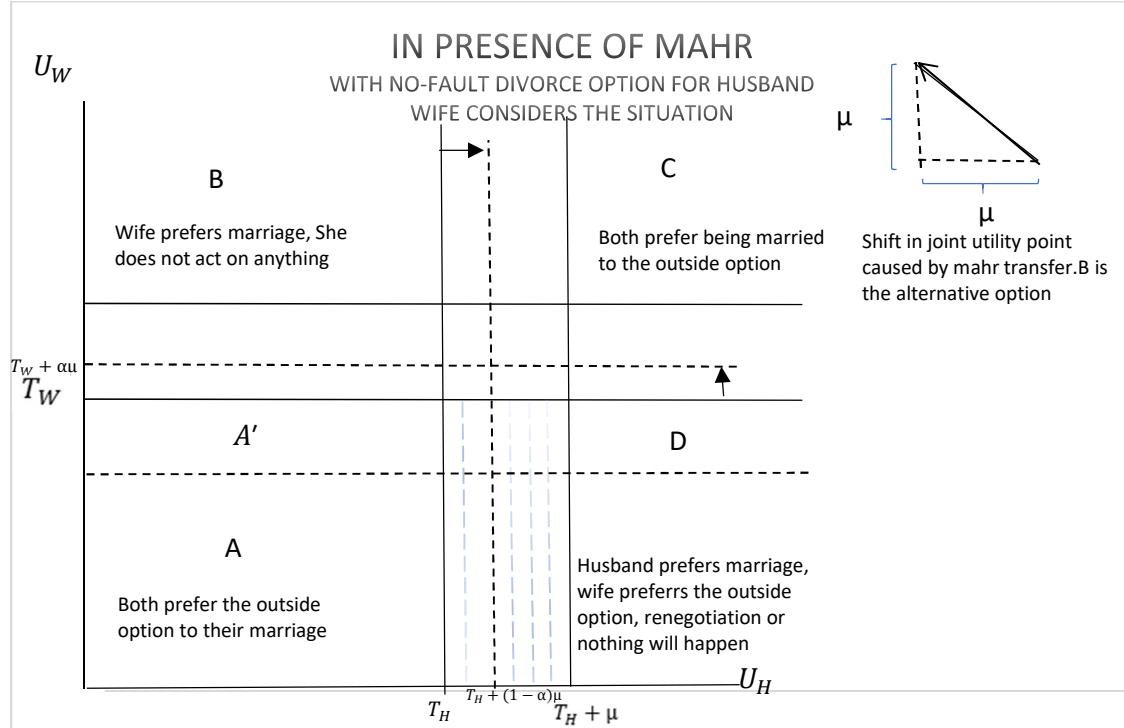
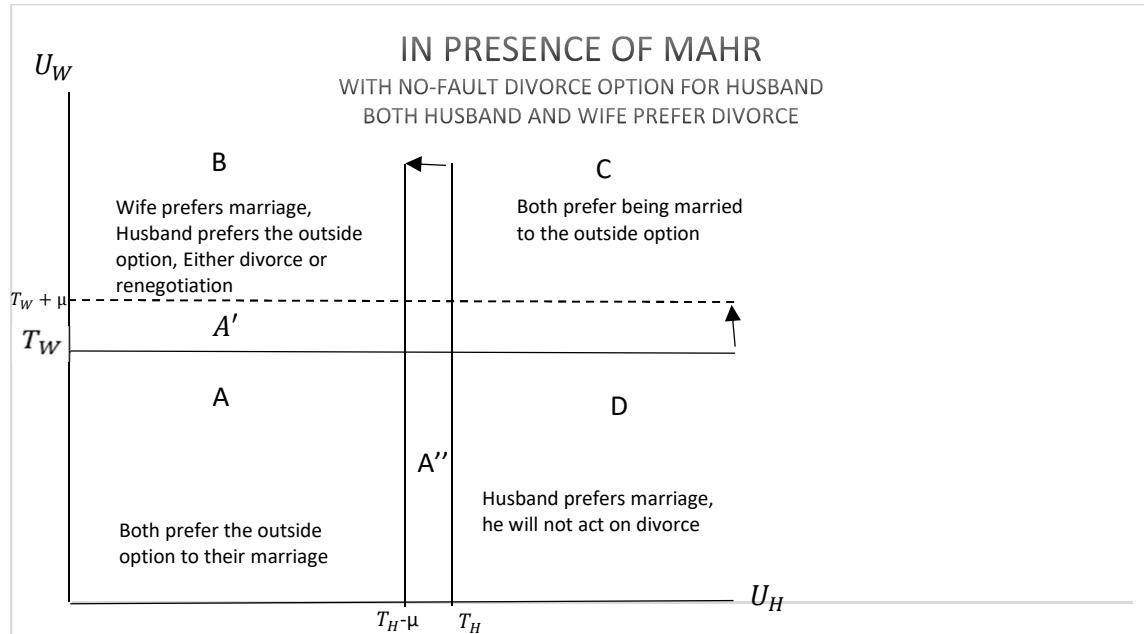
	All		Requested by men			Requested by women					
	Girls	boys	All	Girls	boys	All	Girls	boys	All		
<b>Number of families with</b>	287	281	498	127	99	201	160	182	297		
<b>Total number of</b>	309	297	606	136	102	238	173	195	368		
<b>Number of cases at least 1 child living with mother</b>	285	138	396	126	51	166	159	87	230		
<b>Number living with mother</b>	306	149	455	135	52	187	171	97	268		
Ratio of children living with mothers over all	0.990	0.502	0.751	0.993	0.510	0.786	0.988	0.497	0.728		
<b>Number of cases at least 1 child living with father</b>	3	145	147	1	50	50	2	95	97		
<b>Number living with father</b>	3	148	151	1	50	51	2	98	100		
Ratio of children living with mothers over all	0.010	0.498	0.249	0.007	0.490	0.214	0.012	0.503	0.272		
		All			Requested by men			Requested by women			
<b>Number of families with independent children</b>	114			33			81				
<b>Number of families with no children</b>	132			110			22				
Note: Table provides the summary information of guardianship of children and number of families with independent children and without children from the total 797 cases that provide information about children.											

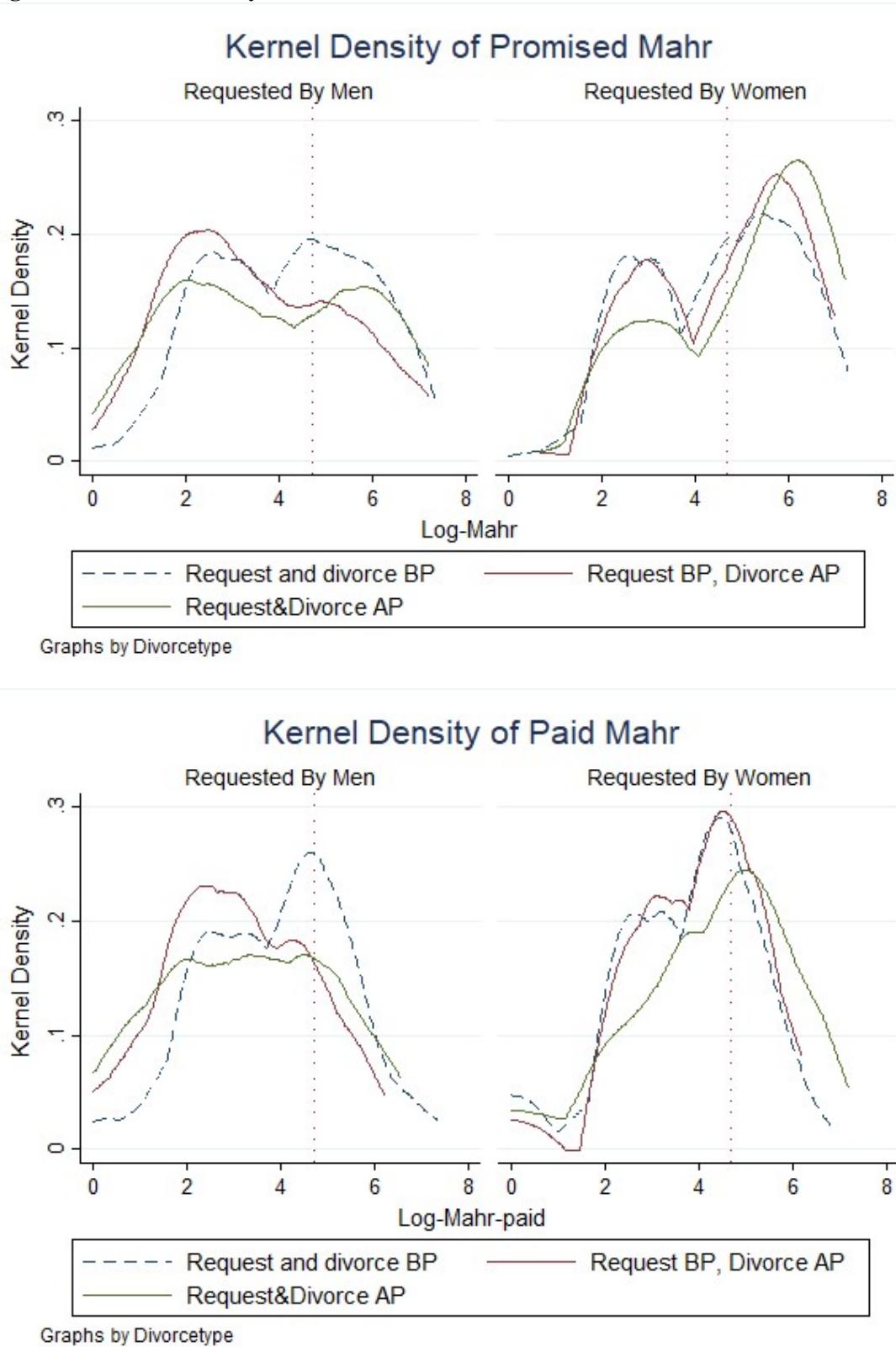
**Table 4- Divorce outcomes**

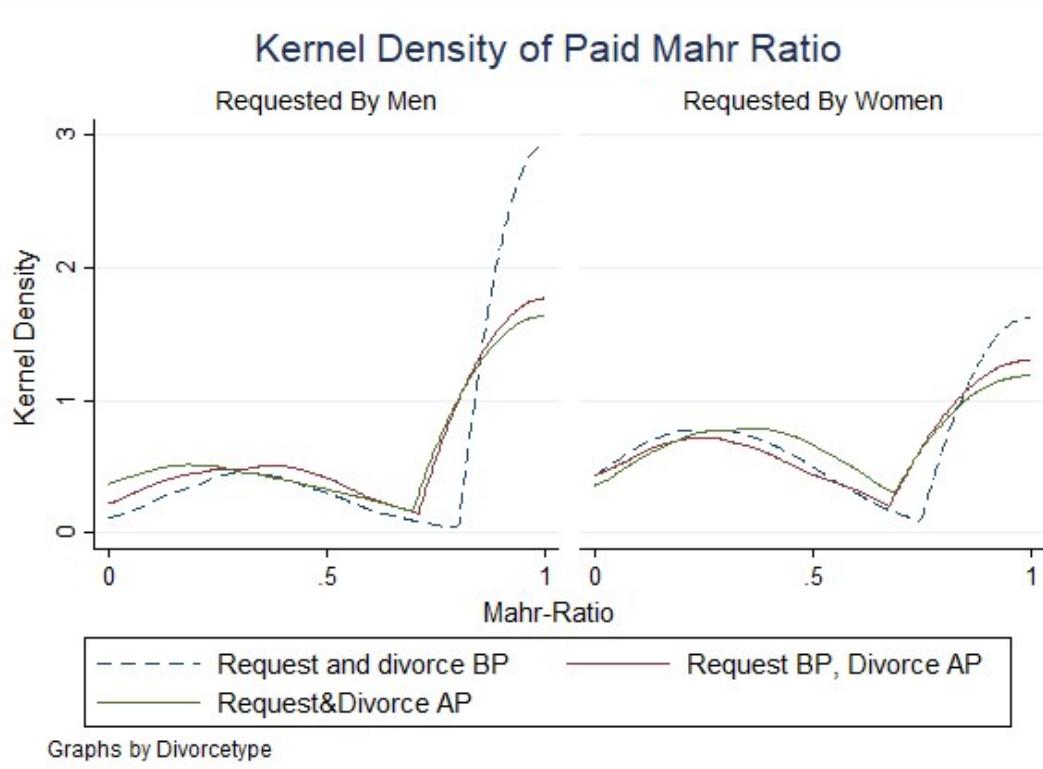
		Utility		
		Marriage	Marriage with Renegotiation	Divorce
Wife	No Mahr	$U_{WM}$	$U_{WM}$	$T_W$
	Mahr	$U_{WM} \bar{\mu}$	$U_{WM} + \bar{\mu}$	$T_W + \alpha\bar{\mu}$
Husband	No mahr	$U_{HM}$	$U_{HM}$	$T_H$
	Mahr	$U_{HM} \bar{\mu}$	$U_{HM} - \bar{\mu}$	$T_H - \alpha\bar{\mu}$

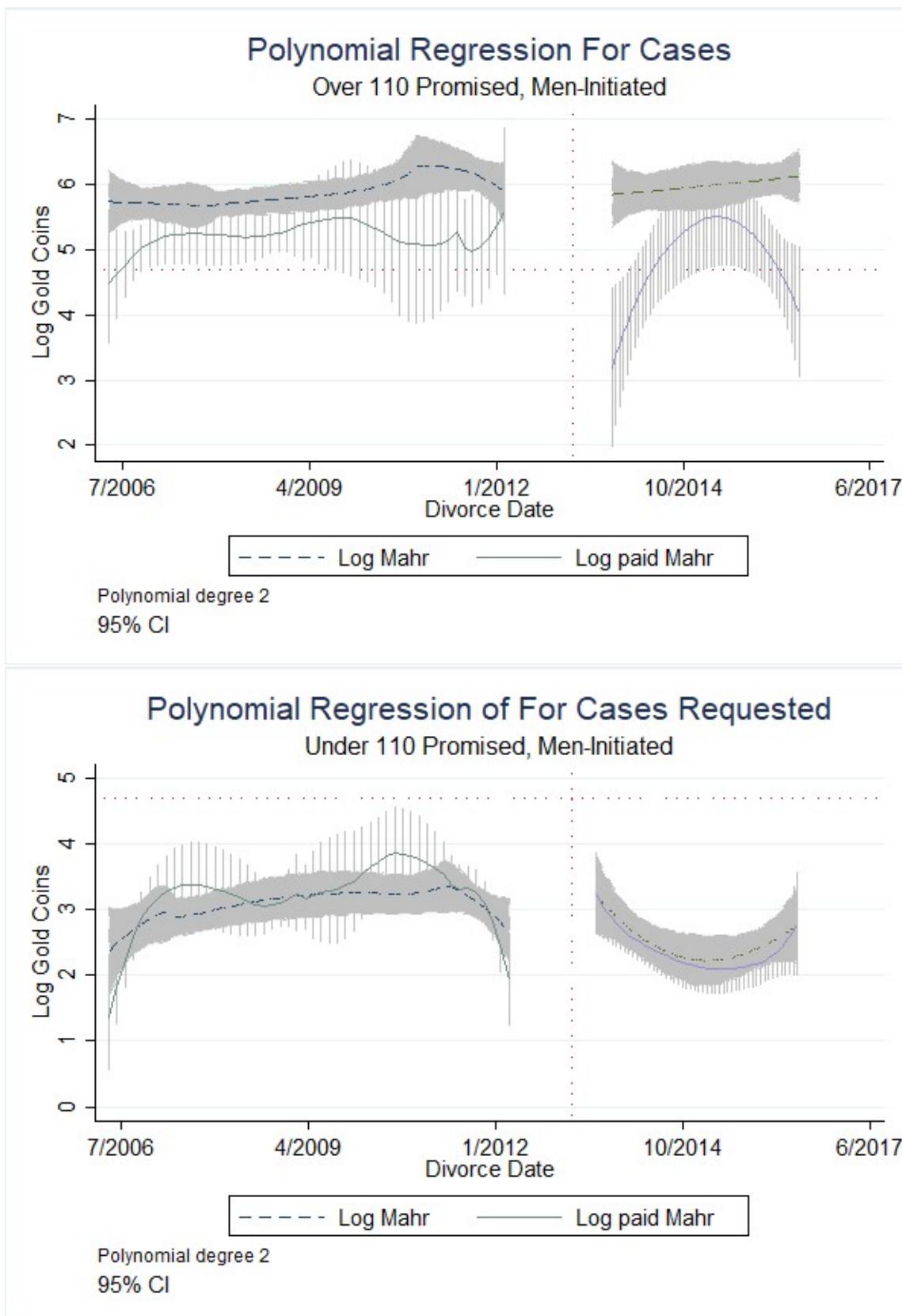
**Figure 5: Join Utility of Spouses and Optimum Point with Mahr**

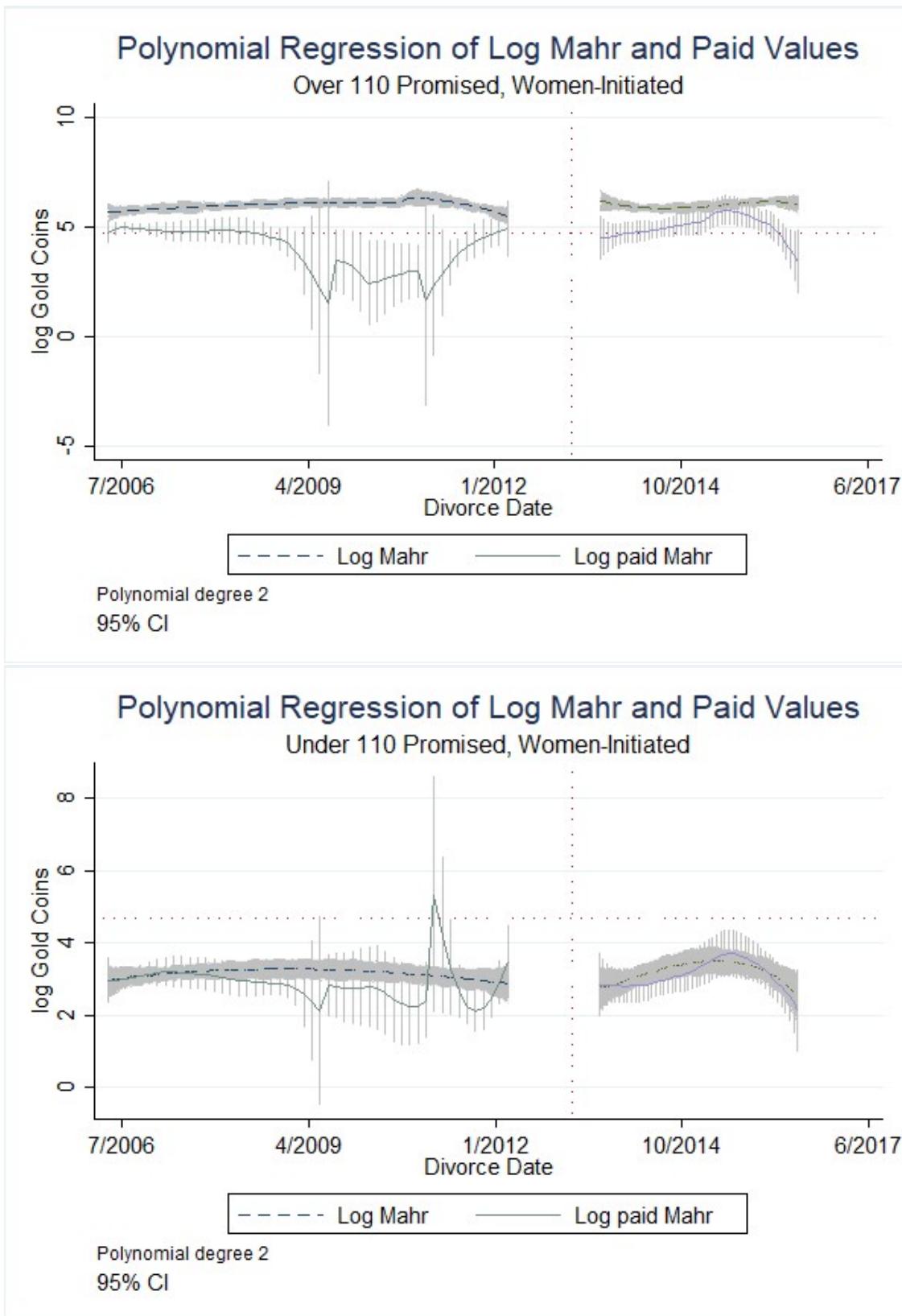
**Figure 6: Joint Utility of Spouses (No-Fault Option for Both)****Figure 7: When Husband Considers the Divorce Option**

**Figure 8: When Wife Considers the Divorce Option****Figure 9: Mutual agreement for divorce**

**Figure 10: Kernel Density of Promised & Paid Mahr**

**Figure 11: Kernel Density of Paid Mahr Ratio**

**Figure 12: Polynomial Regression of Log Mahr and Paid Values (Men)**

**Figure 13: Polynomial Regression of Log Mahr and Paid Values (Women)**

**Table 5: Male-Initiated Divorces**

	(1)	(2)	(3)	(4)	(5)	(6)
	Mahr Ratio	Mahr Ratio	Log Ratio	Mahr Ratio	Log Mahr paid	Log Mahr paid
<b>OVER_110</b>	-0.21*** (0.0485)	-0.21*** (0.0478)	-0.28** (0.0932)	-0.28** (0.0921)	-0.22 (0.1851)	-0.22 (0.1862)
<b>Policy* Over_110</b>	-0.15* (0.0666)	-0.15* (0.0586)	-0.37* (0.1537)	-0.37** (0.1329)	-0.53* (0.2560)	-0.53* (0.2493)
<b>Policy</b>	-0.02 (0.0617)	-0.02 (0.0538)	-0.06 (0.1101)	-0.06 (0.0979)	0.06 (0.2340)	0.06 (0.2131)
<b>Mahr</b>	-0.00** (0.0001)	-0.00** (0.0001)				
<b>log Mahr</b>			-0.10*** (0.0236)	-0.10*** (0.0249)	0.85*** (0.0457)	0.85*** (0.0450)
<b>_cons</b>	0.96*** (0.0409)	0.96*** (0.0277)	0.26** (0.0860)	0.26** (0.0827)	0.20 (0.1566)	0.20 (0.1532)
<b>Time effects</b>	fix Yes		Yes	Yes	Yes	Yes
<b>Cluster</b>	No	Yes	No	Yes	No	Yes
<b>N</b>	387	387	375	375	387	387
<b>R-sq</b>	0.38	0.38	0.39	0.39	0.73	0.73
<b>Standard errors in parentheses</b>						
<b>= " * p&lt;0.05      ** p&lt;0.01      *** p&lt;0.001 "</b>						

Note: Comparisons are only for cases in which divorce was initiated by men. Comparison is between the control group, cases with initial value below 110 gold coins and treated group with above this value. Policy\*OVER110 is the variable of interest. Clustering is based on the month of divorce.

**Table 6: Female-Initiated Divorces**

	(1)	(2)	(3)	(4)	(5)	(6)
	Mahr Ratio	Mahr Ratio	Log Mahr Ratio	Log Mahr Ratio	Log Mahr paid	Log Mahr paid
<b>OVER_110</b>	-0.33***	-0.33***	-0.20	-0.20	-0.31	-0.31
	(0.0466)	(0.0397)	(0.1299)	(0.1233)	(0.2243)	(0.1694)
<b>Policy*Over110</b>	0.02	0.02	0.06	0.06	0.12	0.12
	(0.0576)	(0.0672)	(0.1155)	(0.1247)	(0.2090)	(0.2468)
<b>Policy</b>	-0.18**	-0.18*	-0.23*	-0.23*	-0.63*	-0.63*
	(0.0658)	(0.0681)	(0.1168)	(0.1135)	(0.2510)	(0.2623)
<b>Mahr</b>	-0.00***	-0.00***				
	(0.0001)	(0.0001)				
<b>Log Mahr</b>			-0.27***	-0.27***	0.71***	0.71***
			(0.0409)	(0.0376)	(0.0645)	(0.0557)
<b>_cons</b>	1.03***	1.03***	0.92***	0.92***	1.07***	1.07***
	(0.0239)	(0.0183)	(0.1345)	(0.1328)	(0.2098)	(0.2084)
<b>Time fix effects</b>	Yes	Yes	Yes	Yes	Yes	Yes
<b>Cluster</b>	No	Yes	No	Yes	No	Yes
<b>N</b>	420	420	398	398	420	420
<b>R-sq</b>	0.45	0.45	0.46	0.46	0.53	0.53

**Standard errors in parentheses**

=\*\* p&lt;0.05      \*\* p&lt;0.01      \*\*\* p&lt;0.001"

Policy\*OVER110 = variable of interest

Note: Comparisons are only for female-initiated divorce cases. Comparison is between controls (initial value below 110 gold coins) and treatment (above 110 gold coins). Clustering is based on divorce date.

**Table 7- Effect on the negotiation process**

	(1)	(2)	(3)	(4)	(5)	(6)
	Divorce process	Divorce process	Divorce process	Divorce process	Divorce process	Divorce process
<b>Policy*Over110</b>	-0.73	-0.69	-0.78	1.67	1.64	1.67
	(0.9187)	(0.9220)	(0.9391)	(1.0816)	(1.0798)	(1.0888)
<b>OVER 110</b>	0.16	0.43	-0.13	-1.26	-1.75	-1.35
	(0.6278)	(0.8046)	(0.9973)	(0.8473)	(0.9417)	(0.9554)
<b>Mahr</b>		-0.00			0.00	
		(0.0013)			(0.0009)	
<b>Log Mahr</b>			0.10			0.03
			(0.2631)			(0.2765)
<b>_cons</b>	20.89***	20.89***	20.61***	22.58***	22.57***	22.48***
	(0.5482)	(0.5501)	(0.8688)	(1.2725)	(1.2740)	(1.8041)
<b>N</b>	387	387	387	421	421	421
<b>R-sq</b>	0.14	0.14	0.14	0.06	0.06	0.06
<b>Standard errors in parentheses</b>						
=** p<0.05	** p<0.01	*** p<0.001"				

Note: Column 1-3 looks at the effect of the policy on negotiation time in terms of month on male initiated cases. Column 4-6 calculates the effect on female initiated divorces.

**Table 8: Divorce Cases Requested by Men Compared to Women**

	(1)	(2)	(3)	(4)
<b>Log Mahr</b>	-0.05***	-0.05***	-0.14***	-0.22***
	(0.0097)	(0.0095)	(0.0254)	(0.0411)
<b>Policy</b>	0.20**	0.20***	0.52***	0.85***
	(0.0736)	(0.0421)	(0.1135)	(0.1856)
<b>Fixed effects</b>	Yes	Yes	Yes	Yes
<b>Cluster</b>	No	Yes	Yes	Yes
<b>_cons</b>	0.60***	0.60***	0.25	0.39
	(0.0607)	(0.0517)	(0.1365)	(0.2176)
<b>N</b>	807	807	807	807

**Standard errors in parentheses**

=\*\* p<0.05      \*\* p<0.01      \*\*\* p<0.001"

Note: The dependent variable is a dummy equal to 1 if divorce is requested by the man and 0 by the woman. Columns 2-4 are clustered based on the divorce month. Column 3 is logit and column 4 is a probit regression.



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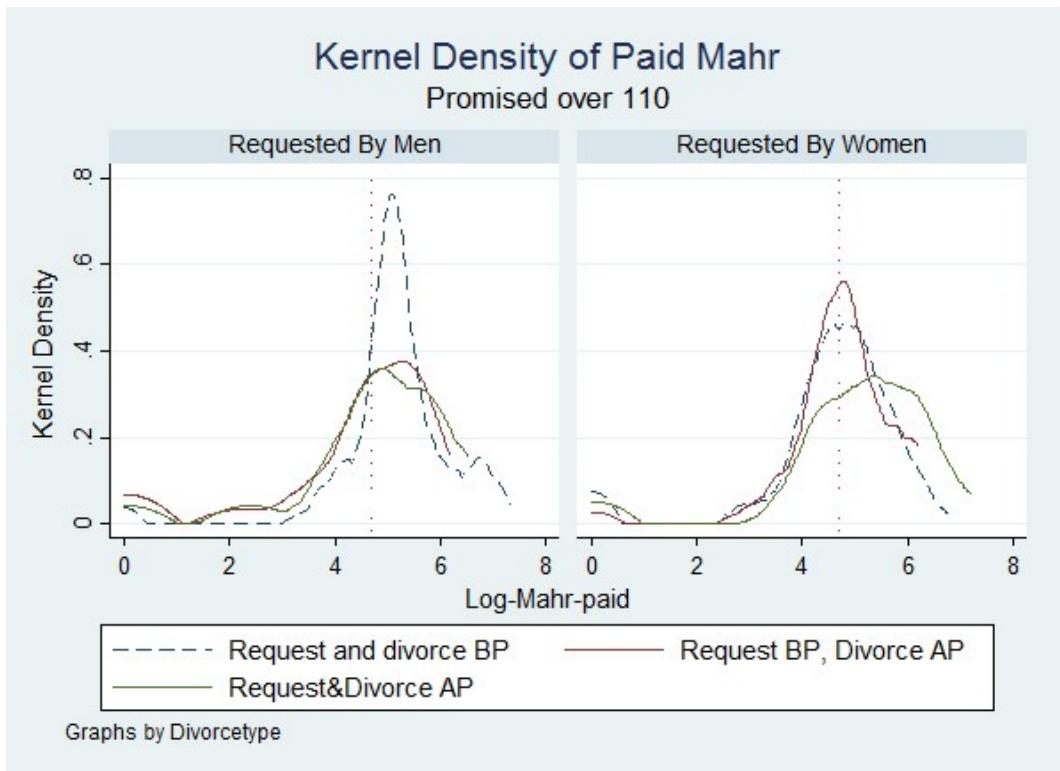
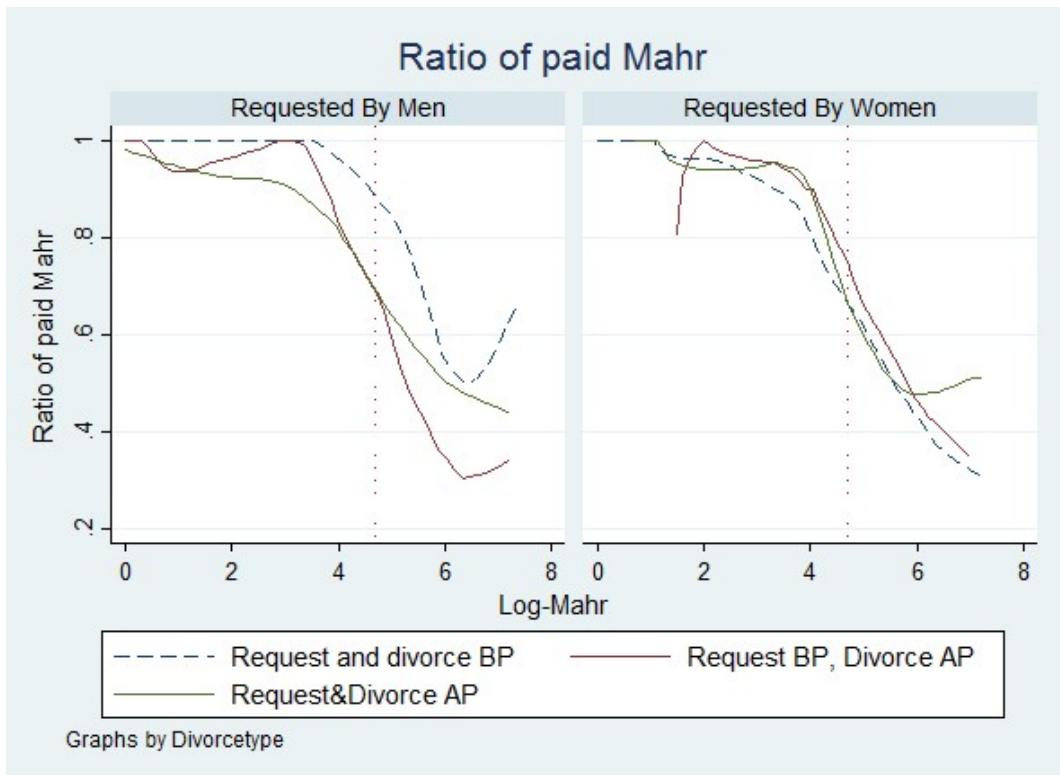
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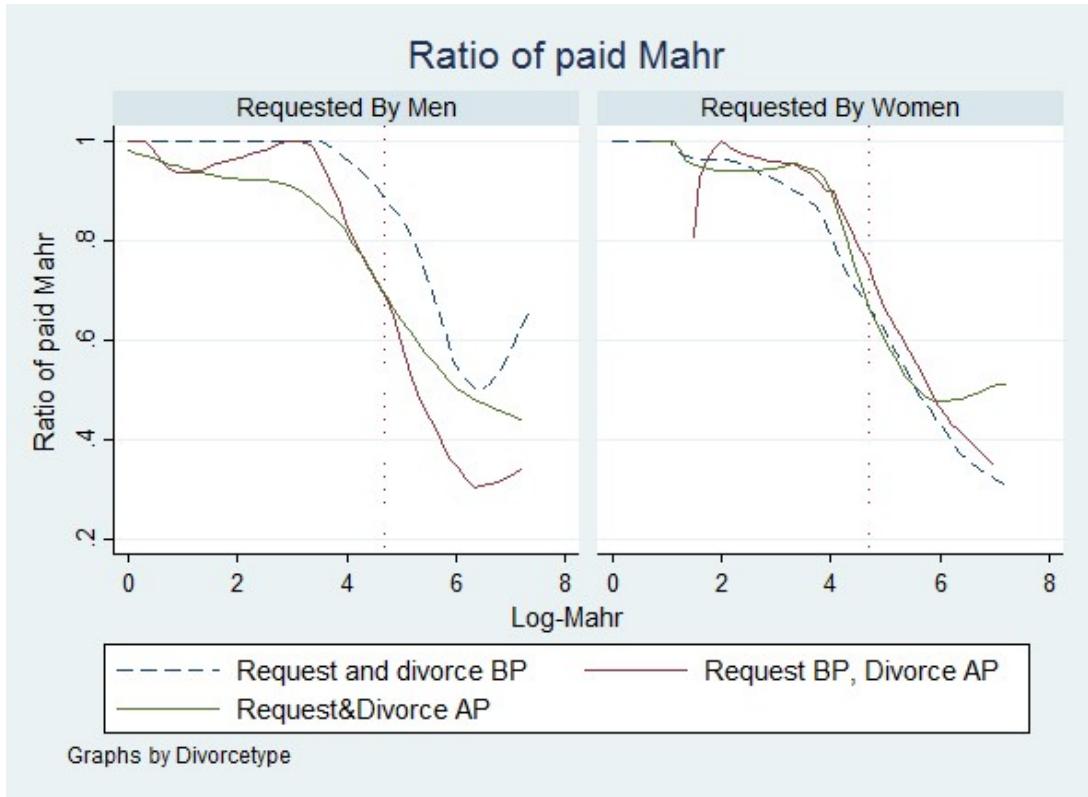
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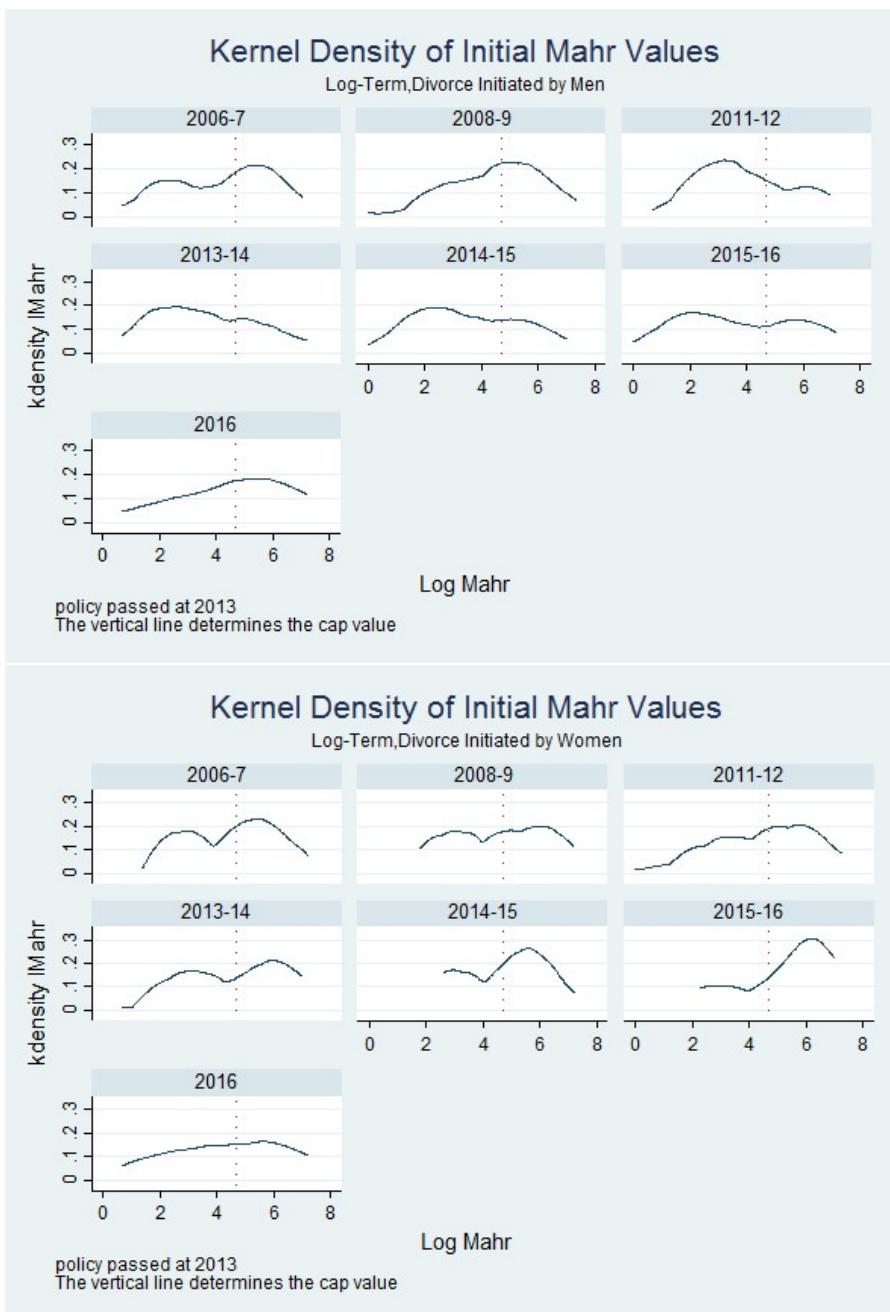
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## Appendix 1





## Density graphs



## Appendix 2

### A game theory approach

In our framework, we look at choices in each family separately. Within the family, husband (H) and wife (W) are the two parties who individually decide whether they want to continue their marriage or initiate a divorce process while maximizing their pool utility function in the form of

$$\text{Max } \theta U_{MW} + (1 - \theta)U_{MH},$$

subject to the family's budget constraint.

$0 < \theta < 1$  is determined by the bargaining power of couples within household. Each has different objectives in their calculation, such as the value of their children, individual earnings, possible future inheritance, or any other related factors. The utility function of marriage ( $TU_{Mi}$ ) accounts for everything each individual ( $i$ ) gets from the marriage.  $T_{Di}$  is the overall value of divorce for  $i$ . In other words, when considering the best option out of marriage, the threat point for divorce. If  $TU_{Mi} > T_{Di}$ , individual " $i$ " will consider the divorce option or the couple will need to agree on a reallocation of the goods within the household.  $U_{Di}$  accounts for the highest utility of divorce for each spouse, based on the mentioned aspects in the absence of mahr ( $\mu$ ) in the market and  $U_{Mi}$  accounts for the highest utility of divorce for each spouse, based on the mentioned aspects in the absence of mahr ( $\mu$ ) in the market

Some factors to consider if they aim for divorce include the cost of the divorce process such as legal expenses and attorneys (C). These changes are different for each spouse, especially based on the expected length of process, who initiates the divorce, and the reason for any failed request.

We assume that each spouse calculates the highest utility they can gain in the absence of mahr ( $\mu$ ). In this situation, husband and wife are in equilibrium as long as they both have a higher utility of marriage vs. divorce:  $TU(M) > TU(D)$ . If this holds, they will not consider the divorce option. If either has a higher utility of divorce, he or she will consider entering the divorce process. The distribution of utilities depends on the intrahousehold bargaining power of each spouse and their alternative option (divorce).

If either spouse decides to request a divorce after considering her or his utility function and possible costs, they negotiate mahr based on the utility that it provides for them. Because the husband is required to pay the mahr, his wealth level affects the negotiation process. In other words, the power of mahr in negotiation is conditional on its relative value compared to the husband's wealth. Generally, we can have three possible situations between the husband's wealth constraint and mahr.

The highest level that men can pay is their wealth ( $\omega$ ) plus the total amount they can borrow from formal resources like a bank or informal funds such as family or friends, ( $L$ ). A man's cost of providing  $L$  is higher than to his personal  $\omega$  because he must pay interest on it.

$$1: \omega + L > \omega > \mu$$

$$2: \omega + L > \mu > \omega$$

$$3: \mu > \omega + L > \omega$$

Hypothesis theory states that the value of mahr has a positive effect on women's bargaining power in both intrahousehold relationships and divorce cases, and causing a negative effect for men. The value of mahr can determine (i) whether husband and wife will decide to file for divorce and (ii) what the divorce outcome or alternative marriage utilities will look like.

The final assumption is that both parties are aware of each other's utility function in and out of marriage and use this information to maximize their own position. The husband decides whether to divorce. He studies his own situation independent of wife's utility function and determines whether to divorce or not. Since the right to divorce resides with the husband, a wife who wants to leave the marriage must ask her husband to divorce her. Women often pay some compensation in return, usually by giving up a part of their mahr. In this situation, the marriage is dissolved only if the husband agrees to the request (Khul divorce) (Osanloo 2009).

If either spouse decides to start the divorce process, they both must pay some cost for the divorce request  $C(D)$ , and they might face additional cost for starting the process are reallocating utilities if the divorce is unsuccessful. The costs for requesting a divorce are higher for wife compared to the husband (Chowdhury, 2017).

The table below compares the utility of marriage or divorce for each spouse and shows who would consider filing for divorce in different scenarios. If both couples have a higher value of divorce compared to marriage, the husband should file for divorce.

	Wife: $TU(M) > TU(D)$	Wife: $TU(M) < TU(D)$
Husband: $TU(M) > TU(D)$	Neither requests divorce	Wife requests divorce
Husband: $TU(M) < TU(D)$	Husband requests divorce	Husband requests divorce

Absent any policy or intervention, the husband must pay the full value of mahr ( $\mu$ ) if his wife asks for it. The punishment of not paying the full amount is jail (J), increasing the husband's cost from just the monetary payment. After the new policy, a husband must pay the full amount of mahr, up to the cap, CAP (110 gold coins). Payment of the rest depends on the husband's wealth and his ability to pay ( $\omega$ ). New regulations also remove imprisonment when the value of mahr exceeds 110 gold coin values and allow the husband to pay the mahr in installments.

Since only the husband can decide on divorce, there are different approaches for cases where the husband files for divorce vs. situations where the wife files for divorce. Each follows a different structure and outcome depends on the the original value of mahr and the husband's wealth.

First, the husband's utility of divorce is higher than his utility of marriage excluding mahr, and the wife's utility of marriage is higher compared to divorce. Next, I observe the opposite scenario, where the husband has a higher utility of marriage vs. divorce but wife prefers divorce to marriage. Finally, I explain the situations where both couples prefer divorce over marriage.

Based on wealth constraint, I categorize each case in into 3 scenarios and compare the outcome before and after the policy to determine how the policy affects the probability of getting a divorce and the total exchanged amount of mahr in each case.

- **Case-1**

When the wife faces a situation where  $U_W(M) > U_W(D)$  and the husband prefers divorce,  $U_H(M) < U_H(D)$ . In the first scenario, the husband is considering divorce while the wife prefers to stay married.

1.  $\omega + L > \omega > \mu$

- i. Before policy

If husband has a higher wealth level compared to mahr, he chooses divorce when  $U_H(D) - C_H - \mu > U_H(M)$ . In other words, he will choose divorce if

$$U_H(D) - U_H(M) > C_H + \mu$$

In this situation, the wife faces a payoff totaling  $U_W(D) - C_W + \mu$ , which might be larger or smaller than  $U_W(M)$ . As mentioned previously, the cost of divorce for women is higher, especially if the decision to divorce is not mutual. Thus, it is more likely that the wife's outcome will be worse, and the result does not adhere to a Nash equilibrium. There is a positive relationship between the amount of mahr in this situation and the probability of a better payoff for the wife.

- ii. After policy

Men choose based on their best option, and nothing is affected in their decision-making. The payoff for both spouses and the probability of requesting a divorce stays the same.

### iii. Policy effect on outcome

The policy does not affect this scenario. The likelihood of divorce request and paid amount when divorce happens stays the same.

## 2. $\omega + L > \mu > \omega$

### i. Before policy

In this scenario, the husband faces a constraint, but he can provide the total amount of mahr by borrowing money from other resources, avoiding the high cost of not paying the mahr. Similar to the first scenario, the husband will request a divorce as long as  $U_H(D) - U_H(M) > C_H + \mu$ , and the wife's payoff remains the same.

### ii. After the policy

If the total amount of promised mahr is less than 110 gold coins, everything stays the same. When the amount of promised mahr exceeds 110, the husband must pay a maximum of 110 or their wealth,  $\omega$ . In other words, if the husband compares  $U_H(D) - U_H(M) > C_H + \max(110, \omega)$ , then  $\max(110, \omega) < \mu$  makes it more likely that his utility of divorce will be higher. Women, on the other hand, face a decline in the amount they receive and face  $U_W(D) - C_W + \max(110, B)$ .

### Policy effect on outcome

The likelihood of the wife having a positive payoff after divorce goes down. The total amount of mahr paid in this scenario should show some decrease because cases in favor of divorce still find the divorce option better than staying married. Overall, the husband's probability of asking for divorce goes up with  $U_H(D) - U_H(M) > C_H + \mu > C_H + \max(110, B)$ .

## 3. $\mu > \omega + L > \omega$

### i. Before policy

In this scenario, the value of promised mahr is more than the husband can afford. Because of this wealth constraint, he will face imprisonment if he requests a divorce. Thus, the husband's outcome is better if stays married. Because the wife's utility of marriage is already higher than divorce, staying in the marriage is a better outcome for her as well

### ii. After the policy

The new policy eliminated imprisonment for mahr values that exceed 110 gold coin. Therefore, the husband's decision be the same as in the first scenario, without considering  $\omega$ . In this new situation, the husband will divorce if  $U_W(D) - C_W + \max(110, B) > U_W(M)$  when initial mahr is higher than 110. Nothing changes if mahr is less than 110 . Women in this new situation will be paid like the first two scenarios, with final payoff of  $U_W(D) - C_W + \max(110, \omega)$ .

### iii. Policy effect on outcome

In these cases, the probability of divorce in the past was almost 0 due to the costly factor of imprisonment. In contrast, the new policy significantly increases the possibility of divorce for them. Previously, men would not request divorce because they were not able to pay the total amount of mahr; under the newpolicy, they pay only  $U_W(D) - C_W + \max(110, \omega)$ . With the payoff cases under this new condition and adding up the cases with high  $\mu$  that now only pay the  $\max(110, \omega)$ , we can expect to see new set of payments  $\max(110, \omega)/\mu$  from this set.

Before the policy, the probability that men would request a divorce was lower higher the amount of mahr. The new policy changed this relationship because payment is now independent of the promised value of mahr and conditional on  $\omega$  for cases above 110 gold coins.

The new policy does not affect cases when originally promised mahr is less than 110. When promised mahr exceeds 110, the total number of successful cases should increase and the proportion of mahr payments should decrease compared to original value.

- **Case-2**

We analyze the situation where men have an overall higher utility of staying married compared to getting a divorce without considering mahr, whereas women have a higher utility of divorce. In this situation, women need to request divorce. Men can decide whether to accept this request in exchange for forgiving a part of mahr or reject it and pay the whole amount.

**Proposition:** The wife knows the husband's budget constraint, wealth level, and utility function, and she decides accordingly.

**Proposition:** The wife suggests the proportion of mahr that she is willing to give up and the husband can decide to accept or reject her offer, based on value. I assume that the wife offers to give up the lowest amount of mahr that will keep the husband indifferent between marriage and divorce. In other words, the

wife will choose the level of  $\alpha\mu$  such that  $U_H(M) - U_H(D) = (1 - \alpha)\mu$  and the husband will accept the offer.

### 1. $\omega + L > \omega > \mu$

#### i. Before policy

If the husband accepts the wife's request, her payoff will be  $U_W(D) - C_W + \alpha\mu$ . She will ask for a divorce as long as the payoff is bigger than  $U_W(M)$ . Husband will accept the request if  $U_H(D) - C_H - \alpha\mu > U_H(M) - C_H - \mu$ . In other words,

$$U_H(M) - U_H(D) < (1 - \alpha)\mu$$

If the husband's value of marriage is higher than total mahr, or  $U_H(M) - U_H(D) > \mu$ , he will never agree to divorce. If his utility difference is less than total mahr, he will agree to divorce and the proportion of mahr he will pay will depend on the difference in his utility of divorce and marriage and the original amount of mahr.

Looking at  $U_H(M) - U_H(D) > \mu$ , if the right side increases and everything else remains constant, the probability that this equation holds will decrease, making it more likely that the husband will accept the divorce request. Both scenarios result in a Nash outcome.

#### ii. After the policy

Since man's ability to pay is already higher than the mahr value, the probability that the wife will request a divorce and the husband will accept her request remains the same.

#### iii. Policy effect on outcome

The policy does not affect this scenario. Paid amount of mahr and probability of divorce remain the same.

### 2. $\omega + L > \mu > \omega$

#### i. Before policy

Similar to Case-1, the husband can pay the mahr with the help of external resources. The husband will decide based on his utility function; as long as the value of his marriage is larger than the total value of divorce plus total mahr, he will accept the divorce request. The wife's request for divorce is also similar to that in Case-q. Payoffs are  $U_H(D) - C_H - \min(\alpha\mu, \omega)$  for husband if he accepts the divorce request and  $U_W(D) - C_W + \min(\alpha\mu, \omega)$  for the wife.

#### ii. After the policy

After the policy, they both face the same outcomes. The husband must pay a maximum of  $U_H(D) - C_H - \min(\alpha\mu, \omega)$  if he accepts the divorce. In this situation, he will accept the divorce request only if his value of the marriage is less than his total wealth plus the value of divorce in other words he should have a payoff of  $U_H(D) - C_H - \min(\alpha\mu, \omega) > U_H(M) - \omega$  or  $U_H(D) - U_H(M) > C_H - \omega + \min(\alpha\mu, \omega)$  which is less

likely compared to  $U_H(D) - U_H(M) > C_H - \mu + \min(\alpha\mu, \omega)$ . Wife also is facing a lower payoff:  $U_W(D) - C_W + \min(\alpha\mu, \omega)$ .

### iii. Policy effect on outcome

Before the policy change, the net value of divorce for men was  $U_H(D) - U_H(M) - C_H - \mu + \min\{\omega, (\alpha)\mu\}$ . Afterward, it is  $U_H(D) - U_H(M) - C_H - \omega + \min((\alpha)\mu, \omega)$  when original mahr values exceed 110 and total wealth of husband. The value of divorce for men decreases after the policy based on the assumptions of this category, and the probability that they will accept the divorce request decreases as well. However, this affect will not decrease the average value of paid mahr over promised values in successful cases. In fact, because some women received low levels of  $\alpha\mu$  before the policy (e.g., they gave up almost all their mahr), they might face rejection of their offer under the new policy. This can cause an observable increase in total amount of paid mahr in successful cases. As a result, effect on the proportion of paid mahr is ambiguous.

## 3. $\mu > \omega + L > \omega$

### i. Before policy

When the value of mahr is higher than the total amount that a husband can pay, he will accept his wife's divorce request; otherwise he will face the heavy cost of imprisonment. In this situation, women can ask for the highest amount of money that man can pay. The payoff for men is  $U_H(D) - C_H - \omega$  compared to  $U_M(M) - C_H + J$ . For women, the payoff will be  $U_W(D) - C_W + \omega$ .

### ii. After the policy

There are no changes for cases below 110. If promised mahr exceeds 110, women cannot use imprisonment as leverage. Similar to Scenario 2, if women request a divorce, they will face a payoff of  $U_W(D) - C_W + \min(\alpha\mu, \omega)$  and for men to accept,  $U_H(D) - C_H - \min(\alpha\mu, \omega) > U_H(D)$  must hold.

### iii. Policy effect on outcome

If  $\alpha\mu < \omega$ , the paid value of mahr will decrease and otherwise there will be no change in amount of paid mahr in cases that still can happen after the policy. This will substantially decrease the probability of divorce. Breaking the relationship between promised mahr here and paid mahr might increase or decrease the proportion of observed mahr payments. Divorce cases where the mahr is very large compared to the wealth of husband have a very low ratio of paid mahr to total mahr will end will not succeed. In this situation, the total amount of mahr payment might increase.

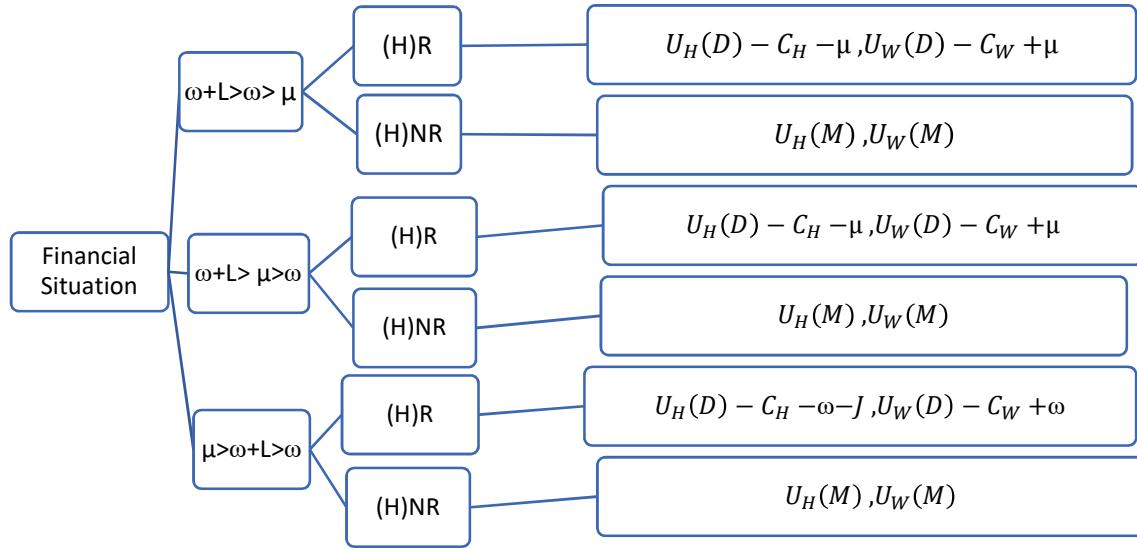
The overall probability of divorce initiated by women will decrease, but the effect on the final proportion of paid mahr proportion will be ambiguous.

- Case-3

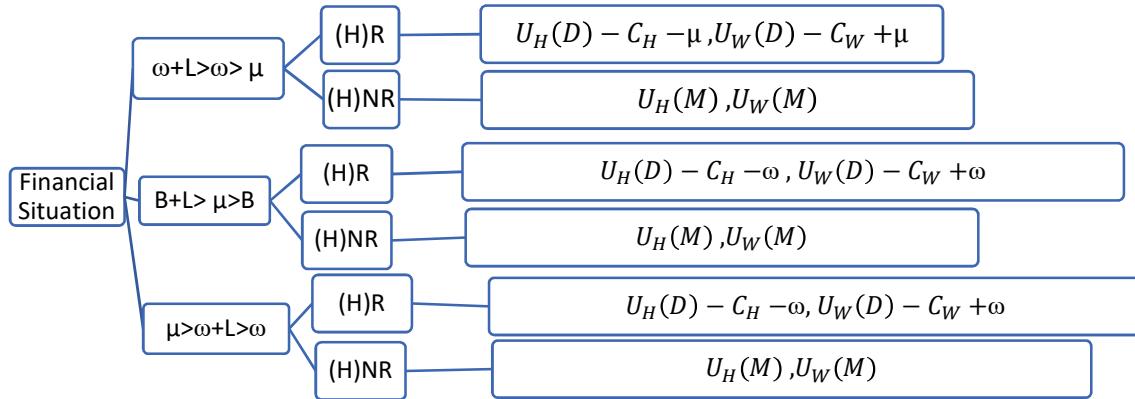
This case is a subsample of Case-1 because the husband requests the divorce. However, divorce will give both parties will have a positive payoff, and extra costs are minimal. Because the situation is cooperative a gives the best outcome to both spouses, the results are Nash. The policy change will not affect the number of cases in this situation, but it might decrease the ratio of mahr for the wife if  $\omega + L > \alpha\mu > \omega$ . In this case, the parties will decide on value of  $\alpha$  based on their intrahousehold bargaining powers.

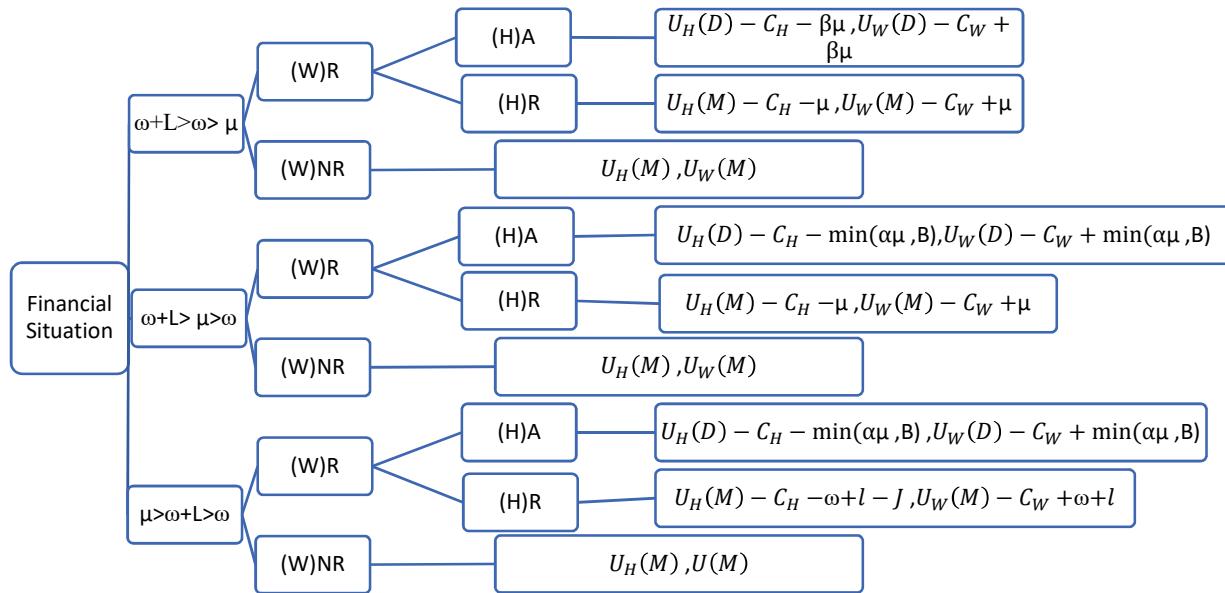
The fact that men and women were aware of the outcomes and decided accordingly can explain why the number of prisoners did not decrease over time even after the policy and there was only a one-time drop in the statistics.

The new policy will not affect their decision regarding divorce, but the negotiation over the rate of mahr they exchange will change from  $0-\mu$  to  $0-\omega$  if  $\mu < \omega$ , decreasing the final payment.

**Chart 1A: Payoffs for Husband's Decisions before the New Policy (Case-1)**

R= request for divorce, NR=not requesting divorce

**Chart 1B: Effect of the New Policy on Mahr Values and Wealth Over 110 Gold Coins**

**Chart 2A: Wife's Payoffs Before the New Policy (Case-2)**

A=accept the divorce offer, R= reject the divorce offer

**Chart 2B: Effect of the New Policy on Mahr Values and Wealth Above Gold Coins**