# Betting the House: How Assets Influence Marriage Selection, Marital Stability, and Child Investments

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While marriage used to be practically universal, its popularity has significantly decreased while rates of non-marital fertility have risen. This paper posits that marriage serves as a contract to insure one partner's investments in children, as both parents benefit from child quality but costs are born mostly by the mother. We use a model to show that when husbands can "ante up" the marital home, they are able to elicit more optimal child investments by reducing the chance of divorce while providing consumption insurance to the wife, increasing the value of marriage. As easier divorce and paternity enforcement outside of marriage have reduced the relative strength of the marital contract, the division of assets post-separation has remained unique to marriage, enabling high-wealth individuals to "secure" their marriages while others choose non-marital fertility. The model predicts that individuals able to buy a home at the time of marriage will invest more in children, and that policy changes that eroded marriage's relative commitment value would have less effect on those with assets, both of which appear to hold in US data.

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# 1 Introduction

Marriage rates are decreasing all around the world, but there also seems to be a growing gap between socio-economic groups in terms of marriage rates. Why would some groups find marriage less and less attractive? What are the benefits that marriage grants that are not offered by cohabitation? This paper hypothesizes that marriage offers a way for couples to share the costs of investments in children, allowing higher levels of investment in this "public good." However, as divorce has become easier and non-marital contracting more secure, the commitment offered by marriage may be too limited to induce such investment, which comes at the cost of one partner's income.

Importantly, the convergence between marriage and non-marital contracting does not extend to the treatment of assets: only in marriage are assets divided upon separation. Thus, couples with assets who are able to invest in joint marital property can offer some "insurance" to the investing partner, even when divorce is easy. The existence of joint property in the form of a marital home provides both a disincentive to divorce for the richer partner, who has more to lose, and consumption insurance in the case of divorce to the poorer partner. Because of this additional commitment offered by assets, the poorer partner will be more willing to invest in child human capital at the cost of her own earning potential, thus raising the value of marriage. A model where assets "secure" marriage has clear predictions that we test empirically using various sources of US data.

Historically, marriage has served as a contract for having and investing in children, offering benefits beyond those available through non-marital fertility. On the father's side, only through marriage could paternal rights over children be established. On the mother's side, only through marriage could financial support be legally mandated (Edlund, 2006). Moreover, this financial support was guaranteed to be fairly long term, as divorce was difficult, and extremely rare (Kay, 2000). In the last 50 years, there has been a convergence between the benefits offered by marriage and non-marital fertility, both due to an increase in legal rights and responsibilities for non-married fathers, and an erosion of the commitment offered by marriage. First, starting in the 1960s, divorce rates began to increase, spurred on by state level legal changes that gradually made divorce easier, and created the concept of "no fault" divorce (Kay, 2000). Soon after, enhancement in non-marital rights and responsibilities (as part of the welfare reform in the 1990s) made the income sharing that would be guaranteed through marriage and non-marital fertility highly similar (Mayeri, 2016). The treatment of assets, however, remains starkly different: in non-marital fertility, assets are not treated as joint property, whether or not they were acquired during the course of the partnership.

We develop a model to explicate the role of assets in creating value from marriage. Our model is a simple framework where two individuals can decide to either stay single, engage in non-marital fertility, or marry. In the last two cases, the female partner must elect the level of investment they want to make into their child that can be enjoyed by both partners. Child human capital is, in essence, a public good, and thus we might expect under-investment since the decision is made privately by the mother. The principal difference between the two relationship types is how marital property is treated upon separation. We assume that in the case of a divorce, assets are divided more equally than income, while in the case of a separation from cohabitation, the property is given to the person whose savings were used to purchase it. This alters the marginal cost of the investment for the mother, providing "insurance"—in case of divorce, she will have more than her reduced income to fall back on, and her husband will additionally be disincentivized from divorcing

in the first place. This raises her incentive to invest substantially, making marriage more valuable for the couple ex-ante. The partner who will pay more for divorce is willing to enter into this arrangement because he wants to incentivize higher levels of investment from his spouse, thus receiving more value in expectation. Ex-post, however, he is unable to commit to not divorcing if the situation is not sufficiently desirable. The opposite holds in cohabitation where assets increase the probability of separation and do not offer insurance to the investing spouse.

This model produces a number of predictions. First, couples with higher assets are more likely to marry, will have higher child investments and will be less likely to divorce, conditional on child investment. Second, making divorce unilateral or enforcing non-marital fertility payments decreases the attractiveness of marriage to low asset individuals, but much less so for those with higher assets. We simulate the model to help provide a clearer view of empirical predictions and find that the magnitudes of the changes seem relevant to historical trends—a seemingly small change in the transfers available to unmarried mothers almost completely erases the value of marriage for low-wealth individuals.

We then extend the model to a setting where assets are growing over time and obtain that we may also observe that individuals with more growth potential delay marriage in order to secure higher investment marriages. Those with lower assets choose non-marital fertility early in life, since the returns to waiting are lower for that type of union. Thus, assets may also explain why current trends are often leading to simultaneously higher young non-marital fertility and more late marriages.

Our model matches some stylized facts of the marriage markets. Indeed, we document in Lafortune and Low (2017) that higher assets individuals are more likely to marry in the United States than those with lower assets. To do so, we used the panel nature of the Survey of Income and Program Participation (SIPP) to show that single individuals who have more assets in the first wave are more likely to marry in subsequent periods. While assets are clearly correlated with a number of other characteristics, we showed that even conditional on confounding factors such as wages, education, and race, there is still a strong differential pattern among those with more assets. Table 1 shows that initial asset holding on the part of men aged 21-35 is a good predictor of subsequent marriage behavior in the 2008 SIPP. Unmarried men who hold financial assets of some kind in the first wave are more likely to marry over the subsequent 4 years of the SIPP, as well as marry sooner.

Table 1: Marriage Rates and Time to Marriage Relationship to Asset Holding in 2008 SIPP

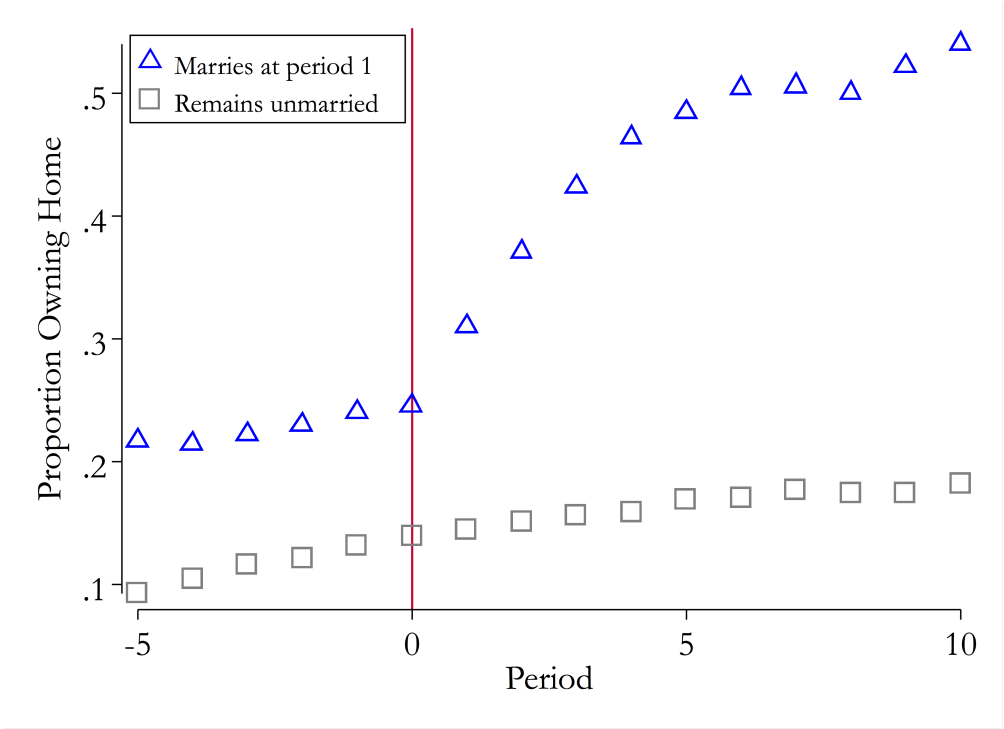
| Dependent variable: | Ever Married | | Time to Marriage | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Assets | 0.0389*** | 0.0174* | -0.352*** | -0.174** |
| | (0.00995) | (0.00943) | (0.0931) | (0.0854) |
| State FE | YES | YES | YES | YES |
| Controls | | YES | | YES |
| Observations | 5163 | 5163 | 5163 | 5163 |
| R-Squared | 0.104 | 0.116 | 0.651 | 0.656 |

Why would pre-marital assets predict marriage behavior? Although divorce laws only specify the division of joint marital property, premarital asset-holding is a good predictor of acquiring such joint property. Those who possess pre-marital financial assets will be more likely to be able to put a down payment on a home upon

marriage. Subsequent mortgage payments are then accumulated into a joint asset that can be divided upon divorce, unlike rent payments for non homeowners. Joint assets are be divided either evenly (in community property states) or "equitably" (Kay, 2000) upon divorce. Since child custody is often given to mothers, the family home is also more often allocated to the mother (Weitzman, 1981). We thus focus on home ownership as a key conduit for marital commitment in our model.

Figure 1 shows home acquisition rates for men aged 21-35 who marry versus those who remain unmarried. Although there is some selection evident in the pre-period (with those who go on to marry having slightly higher rates of home ownership, most likely because they are older), at the time of marriage, period 1, home acquisition rates spike precipitously for those who marry, while remaining flat for those who do not.

Figure 1: Association Between Marriage and Home Purchase




Having generated a model that can explain some stylized facts from current marriage markets, we then turn to testing its implications more directly in data. First and foremost, the model predicts that the relationship between assets and marriage we document is driven by greater child investment for individuals able to purchase a home. We test this directly using variation in home prices at the time of marriage and the American Community Surveys (ACS). Importantly, we wish to disentangle the selection of people who wish to invest in children heavily, and thus purchase homes as an input, from the causal impact of the ability to own a home on child investment. Thus, we use a "shock" to local economies that influence the ability of new couples to purchase a home. We contrast the outcomes of marriages of couples who were married at the same time but in states that were facing different housing prices. We first show that when individuals marry at a higher housing price period, their likelihood of owning a home is lower. As predicted by the model, households who are thus exogenously induced (by lower housing prices) to be more likely to own a

home at the time of the marriage are more likely to invest in their children, as measured by the number of young children in the household and by the decreased probability of grade retention amongst these children. Supporting this story, we see that in these same households, women's working hours decrease relative to men's, suggesting that couples are more able to specialize, exactly as predicted by our framework.

We then examine the model's predicted impact of policy changes that shrank the contractual difference between marriage and cohabitation, by making marriage more tenuous and cohabitation more secure. We use SIPP data to examine the impact of policies increasing the rights and responsibilities of non-marital fathers. In particular, we look at in-hospital voluntary paternity establishment (IHVPE) legislation, which made non-marital fertility more similar to marriage in terms of income sharing but not in terms of asset-sharing. We test whether the introduction of these laws, whose timing differed by states, influenced the relationship between assets and marriage. Our model predicts that as non-marital fertility becomes a stronger alternative, the relationship between assets and marriage should strengthen. Our results show that indeed, the introduction of IHVPE policies decreased marriage rates, as in Rossin-Slater (2016), but marriage rates were actually strengthened for those with assets. This indicates that individuals with and without assets may have opposite results to policy changes, since the value of marriage will be impacted differently.

We then look at changes in the ease of divorce. Our model suggests that when one partner has the power to divorce in the case of a bad shock, the relationship between assets and marriage becomes stronger, because marriage otherwise loses commitment value. We use the Panel Study of Income Dynamics (PSID) to study how pre-marital asset holdings affects the impact of the phasing in of unilateral divorce laws on the probability of marriage. We find that unilateral divorce decreases marriage rates, but much less for those who had assets than those who did not.

Our theoretical and empirical findings provide some insight into the relationship between marriage and child investments. The fact that children of married parents receive more investment than those of unmarried parents has been relatively well established. However, it is unclear whether this comes from the fact that parents who care more about their children select more into marriage or whether marriage in itself makes parents invest more in their children. Our model suggests that individuals who can make more valuable investments in their children are the ones selecting marriage in larger numbers, but that the guarantees offered by marriage for those with assets are also a key factor that makes marriage able to foster higher child investments. Our empirical work finds a causal relationship between joint asset ownership and investment.

This idea is highly consistent with the suggestion raised by Lundberg, Pollak and Stearns (2016) that marriage has remained valuable for those seeking to invest highly in children, because marriage provides a framework to contract over such long-term investments. However, the source of differentiation here stems not from *desire* to invest in children, but in the *ability* to insure such investments for the partner who makes them, in the case of marriage dissolution. Couples who possess assets have this ability, since assets will be divided at the time of divorce. Couples who have only their earnings cannot insure the spouse who endogenously becomes lower earning through parental investments, and therefore will not be able to harvest this value of marriage, and thus may choose non-marital fertility instead, if it is a good substitute for marriage on dimensions other than asset division.

At the same time, it explains in part the strong relationship observed between housing purchases and marriage. Housing is a large portion of American wealth: principal residences make up 66% of the wealth

held by middle-income Americans (Wolff, 2012). Why would Americans choose to invest so heavily in an illiquid asset that suffers large price shocks? Our model implies that the illiquidity may actually be an appealing feature of home ownership in terms of its ability to secure the marriage contract. Although in the case of divorce the investment in an "at risk" asset may seem suboptimal, ex ante it provides value by reducing the cost of investments that benefit both spouses. Thus, the husband prefers to "tie his house to the mast" in order to enter a more binding contract, and thus reap more value from the marriage.

This research has implications for the source of the "marriage gap" between socio-economic and racial groups, indicating that wealth inequality, rather than tastes, could be a potentially important driver. Our research also suggests a channel through which inequality could persist across generations, since those with higher assets are able to elicit higher investments in children, which will then lead to higher human capital in the next generation. And, because of the importance of home ownership as the key asset that couples tend to accumulate and divide upon divorce, it implies that access to credit affects much more than where people live, but also what kind of partnership they choose and human capital investment in the next generation.

This paper relates to the literature on out of wedlock childbearing, the purpose and history of marriage, and changing divorce and child-support policies over time. Many authors have explored the reasons for declining marriage rates, and accompanying increases in non-marital fertility. Akerlof, Yellen and Katz (1996) provides a simple model where following the introduction of abortion, the expectation of "shotgun" weddings stemming from pregnancy would decline. Mechoulan (2011) links declining marriage rates among black women to black male incarceration. Duncan and Hoffman (1990) introduce a model where marriage-dependent welfare benefits may incentive out-of-wedlock birth, while Rosenzweig (1999) provides empirical support that AFDC benefits are linked to lower marriage rates. Nechyba (2001) provides a model where changing social approval for out-of-wedlock childbearing can result in increasing rates of non-marital fertility even as AFDC benefits fall. Neal (2004) provides a model including unmarried singlehood as a choice. We highlight the role of assets in the decision to opt for one type of relationship or another.

In terms of the effects of child-support enforcement, most of the existing literature considers its impact on men, and thus that it decreases the appeal of non-marital fertility compared to marriage (Aizer and McLanahan, 2005; Tannenbaum, 2015). However, this does not consider that it also makes fertility outside of marriage a better substitute for marriage, providing both some of the costs and some of the benefits. An exception is work by Rossin-Slater (2016), which demonstrates that establishing paternity officially at a time of the child's birth can cause marginal individuals to substitute away from marriage, finding empirically that in-hospital voluntary paternity establishment (IHVPE) both increased investment from unmarried fathers while decreasing marriage, and therefore investment from fathers who would have married. We compliment this evidence by emphasizing the potential interaction between these policies and assets levels.

Finally, in terms of studying the impact of increased ease of divorce, many papers have demonstrated its effects, starting with Friedberg (1998), who shows that unilateral divorce substantially increased divorce rates. Wolfers (2006) demonstrates that in an efficient bargaining model, we may not expect increases in divorce following such a policy change. Voena (2015) provides a model, however, where changes to divorce policy can affect divorce rates and household decisions, due to an inefficient autarky period prior to divorce. We emphasize the interaction between divorce law and assets levels.

The rest of this paper is organized as followed. In Section 2, we develop a theoretical framework to

explain why assets may matter in marriage decisions. We then present our empirical strategy and results in Section 3. The final section concludes.

# 2 Model

## 2.1 Setup

We present a simple model where assets used to purchase a home are treated differently in marriage than in non-marital fertility. In the case of marital dissolution, the marital home is divided, or often granted to the mother, whereas when a non-marital relationship breaks up, the mother has no claim to any property.

Individuals live for two periods, and care about child quality and consumption. They can choose to be single, co-habitate and have a child, or marry and have a child. Individuals need to invest in children in the first period, but face uncertainty about their second period utility due to the possibility that a relationship dissolves. Each party's expected second period utility is a weighted average between their utility in case the relationship continues and the utility in the case it breaks up. In the first period, individuals select the type of relationship they prefer ($m$ for marriage, $c$ for cohabitation, $s$ for singlehood), and then select the level of investment to make in any resulting children. Because in this model women are assumed to be lower-earning, which is true on average, we assume the mother is the one to invest in children.[1]

Let $\Omega_i$ represent the earnings of the female partner and $\Omega_j$ represent the earnings of the male partner. Assume that the distribution of $\Omega_j$ stochastically dominates that of $\Omega_i$. Assume for now assets, represented by $A_j$, take on a binary value, either 0 or sufficient for home ownership. One can think of this as whether the male partner has enough assets at the time of partnership selection to place a down payment on a home. If so, there will be a marital home to divide upon divorce.

If individuals decide to remain single, each consume their own income and they have no children. Thus, the woman's payoff is $2u(\Omega_i)$ and that of the man is $u(\Omega_j) + u(\Omega_j + A_j)$.

If they choose to enter a relationship, as long as the partnership remains intact earnings are divided between both partners according to a sharing rule. If a partnership dissolves, however, each party's consumption becomes more dependent on their own earnings. The higher-earning partner, here, the man, may make a transfer to the lower-earning partner, but we assume this does not make up for the loss of full income sharing.

Investment in children, $\tau$, returns better quality children, which in turn creates utility gains for parents, but at the cost of time, which could otherwise be used for career investment. As a result, the higher is the level of investment, the higher the child quality, but also the lower the mother's earnings in the second period. Child quality, $Q_r$, depends on this investment, as well as the parents' endowments. We assume that $Q_r$ is independent of asset value. This is a simplification but it helps emphasize the commitment role of assets instead of the other benefits that home purchase may generate for couples.

Essentially, investment in children is a public good, but the costs are born privately by the mother. The amount of investment can represent the decision of both how many children to have and how much parenting

[1] This could also represent the fact that pregnancy, birth, and breastfeeding all must necessarily be done by the mother, and therefore mothers are generally allowed and expected to take longer parental leaves than fathers.

time to spend with each child, since each one would decrease the mother's time to make earnings-increasing career investments.

Utility is linear in child quality, $Q$, and may be concave in consumption. A woman's utility, in a relationship of type $r$, is:

$$u(c_{1i}(\Omega_i, \Omega_j)) + 2Q_r(\tau, \Omega_i, \Omega_j) + \tilde{u}^r_{2i}(\Omega_i, \Omega_j, \tau, A_j) - C_r$$

where $C_r$ is the cost of entering relationship $r$ and $\tilde{u}^r_{2i}$ is the expected second period consumption utility, which is:

$$p_r(\Omega_i, \Omega_j, \tau, A_j)u^r(c_{2Ri}(\Omega_i, \Omega_j, \tau, A_j) + (1 - p_r(\Omega_i, \Omega_j, \tau, A_j))u^r(c^r_{2Si}(\Omega_i, \Omega_j, \tau, A_j))$$

where $p_r$ represents the probability that the relationship lasts in the second period. This probability may depend on the relative endowments of the parties, the investment, and the level of assets.

A man's utility in a partnership of type $r$ is given by

$$u(c_{1j}(\Omega_i, \Omega_j)) + 2Q_r(\tau, \Omega_i, \Omega_j) + \tilde{u}^r_{2j}(p, \Omega_i, \Omega_j, \tau, A_j) - C_r$$

and his expected utility in the second period is given by

$$p_r(\Omega_i, \Omega_j, \tau, A_j)u^r(c_{2Rj}(\Omega_i, \Omega_j, \tau, A_j) + (1 - p_r(\Omega_i, \Omega_j, \tau, A_j))u^r(c^r_{2Sj}(\Omega_i, \Omega_j, A_j)).$$

## 2.2 Child Investment

The female partner chooses her level of investment, in the case of either non-marital fertility or marriage, to maximize her own utility. Naturally $\frac{\partial Q_r}{\partial \tau} > 0$, child quality is increasing in investment. Because $\tau$ represents a time investment that displaces human capital investments, it reduces the woman's earnings in the second period, and thus expected second period consumption is decreasing in $\tau$. The first order condition can therefore be represented as

$$\frac{dQ_r}{d\tau} = -\frac{1}{2}\frac{d\tilde{u}^r_2}{d\tau}.$$

Note this condition intuitively simply requires that the marginal benefit of investing in children be equated to the expected marginal cost.

Child quality benefits both husband and wife equally but the costs are differently shared depending on whether the couple remains together. In the case where the union remains, the costs are born by the wife through a share $\beta$, where $\beta < 0.5$. In the case of a divorce, the woman pays all the costs, as we assume any transfer she receives from her former partner is not tied to the level of investment.[2] Thus, in the case of divorce she consumes half the benefits of her investment in the child but pays the full cost. In the case of remaining married, she consumes half the benefits but pays somewhat less than half of the costs, depending

[2]It would be straightforward to also make it tied to the level of investment (e.g., set by the court based on each party's income) as long as it did not fully absorb the cost of investment, as is naturally the case if transfers occur for a limited number of periods, whereas the foregone human capital investment affects permanent income.

on the value of $\beta$. Thus, her optimization problem includes a weighted average of a scenario where she would significantly under-invest, compared to the optimum, and one where she would slightly over-invest. If incomes while married were to be shared equally, it is clear to see women shoulder a disproportionate share of the cost of investment in children, since they face a weighted average of a scenario where they bear the full cost and one where they bear half. They would thus clearly underinvest in children relative to the efficient level. More generally, as long as $\beta$ is not too small (and the probability of divorce sufficiently large), we can assume she under-invests relative to the social optimum.[3] This will imply that if $\tau$ is increased, a union will become more attractive since it will make the investment closer to the social optimum, thus making the joint utility of the relationship increase.

## 2.3 Partnership dissolution

In addition to examining the role of assets in marriage formation, our model is designed to capture the potential impacts of two policy changes that made marriage and cohabitation more similar: a switch from bilateral divorce to unilateral divorce, and strengthening of non-marital parental obligations.

In the "old state" of bilateral divorce, both parties needed to be in agreement for a divorce to be granted, meaning divorce would only occur if both partners preferred it to marriage. As a result, husbands who experienced a shock that caused them to want to divorce would need to negotiate a transfer to wives in order to obtain her agreement. In the "new state" of unilateral divorce, only one of the parties need to want to obtain divorce to petition for it. Since there will not be full commitment when the relationship breaks down, we assume each decision is made individually, rather than jointly (see, for example, Voena 2015). Given that men have more to gain from divorce than women, they are the ones who will petition for it. With unilateral divorce, there is no need to "compensate" the other partner. In cohabitation, we will assume all separation is of this unilateral type. In either marriage or cohabitation, higher investment in children, $\tau$, will potentially increase men's desire for separation as it makes income sharing with their partner more costly in the second period.

Other than the cost of entry and the separation regime, we assume that marriage and non-marital fertility differ only in the consumption levels of partners upon separation, which may also influence the probability of separation. Because the transfer made from the higher earning spouse to the lower earning spouse may be higher in the case of formal marriage than in divorce, a cohabitating man's consumption upon separation may be larger that of a married man upon divorce, for the same levels of endowments and investments. Symmetrically, we will also assume that a cohabitating woman's consumption upon separation may be lower than that of a married woman upon divorce. This is because courts may be less likely to enforce parental obligations (child support) on cohabiting partners than on divorcees. If divorce is endogenous, this will imply that the separation probability in non-marital unions will be higher than the divorce probability in marriage. A policy change that increased the parental obligations of non-marital fathers would translate as equalizing the levels of these transfers.

[3] Additionally, if $\tau$ increases the probability of divorce, this effect represents another cost of investment to women, reinforcing that her choice of $\tau$ will be below the social optimum.

## 2.4 Selection into marriage

Assuming that $C_m > C_c$, and that differential consumption between cohabitation and marriage and child quality are increasing in parental endowments, we will find that those with the lowest levels of endowments will choose singlehood, followed by cohabitation and then by marriage. This is because the benefits of non-marital fertility and marriage will be increasing in parental endowment but the cost of entering each type of union is fixed.

What is the role of assets in our model? Recall that a woman's investment decision sets

$$\frac{dQ_r}{d\tau} = -\frac{1}{2}\frac{d\tilde{u}_2^r}{d\tau}.$$

Therefore, anything that reduces the negative impact of investment on the second-period expected utility will increase the woman's willingness to invest. Assets can do this through two channels. First, the presence of assets increases second period consumption for a woman in the divorced state. If utility is concave, this will reduce the impact of $\tau$ on second period utility in the "bad" state of the world, because the baseline level of consumption is higher, thus reducing the cost of the investment. Second, because the man needs to share his assets in the case of divorce, if we allow divorce to be endogenous, the presence of assets will reduce the man's desire to divorce, therefore shifting weight toward the "married" scenario where the cost of $\tau$ is shared between husband and wife.

Therefore, we assume that $\frac{\partial^2 \tilde{u}_{2i}^m(\Omega_i,\Omega_j,\tau,A_j)}{\partial A_j \partial \tau} > 0$, that is that the marginal cost of investing in children while in marriage is lower when assets are sufficiently high to purchase a house. In the case of cohabitation, on the other hand, assets are not shared upon separation, and thus we will assume that $\frac{\partial^2 \tilde{u}_{2i}^c(\Omega_i,\Omega_j,\tau,A_j)}{\partial A_j \partial \tau} \leq 0$. This will lead higher asset individuals to gain more from marriage, and marry at higher rates.

**Proposition 1** *The presence of sufficient assets to own a home, $A_j > 0$, increases the appeal of marriage, increases child investment in marriage and potentially may reduce divorce.*

**Proof.** For married couples, $\tau$ is non-decreasing in $A_j$ since the wife's utility is submodular in $\tau$ and $A_j$. Higher $\tau$ increases the overall utility, since $\tau$ is "too low" for the social optimum. Furthermore, if divorce is endogenous, $A_j$ will lower it, thus raising the benefits of marriage. For cohabiting couples, $\tau$ is non-increasing in $A_j$ since the woman's utility is supermodular in $\tau$ and $A_j$. $A_j$ will, if anything, increase the probability of separation in that context. This means that the difference in total utility between marriage and non-marital fertility is also increasing in assets, and therefore more couples with sufficient assets for home ownership will choose marriage. ■

## 2.5 Comparative Statics

In the United States, several changes to the policy environment have made cohabitation more similar to marriage, which Lafortune and Low (2017) argue has eroded the value of marriage. These policies have reduced the commitment value of marriage while raising the commitment possible with non-marital fertility.

With lower commitment, women are less willing to invest in children in marriage, which makes the benefits of marriage relative to cohabitation lower. With sufficient assets to buy a home, however, marriage

may still offer sufficient commitment to offer benefits. Thus, the impact of divorce legislation will depend on whether the household has assets or not.

**Proposition 2** *Moving from bi-lateral divorce to unilateral divorce will lower child investment in marriage. It may or may not increase divorce. It will make marriage less attractive for all, particularly for those with lower assets.*

**Proof.** The expected costs faced by a women who increases $\tau$ are larger with unilateral than with bilateral divorce. In the case of bilateral divorce, a man receiving a shock that makes his divorced utility higher than his married utility needs to transfer to his wife sufficient income to make her also prefer divorce. This means a larger shock is required, and thus less divorce occurs. Secondly, if divorce does go through, the transfer raises consumption for the woman in the second period, reducing the negative impact of investment. Switching to unilateral divorce thus lowers investment, especially for couples without assets, because those with assets prefer marriage more strongly to begin with, and are also less affected by the loss of compensating transfers, since they are guaranteed assets in second period utility. ■

In the past, one form of commitment offered by marriage was the expectation of income flows from the higher-earning partner upon marital dissolution, which was not offered by non-marital fertility. The movement to formalize non-marital paternity contracts altered this substantially. Once paternity could be established and enforced outside of marriage, even unmarried mothers could expect income transfers in the form of child support in the case a partnership dissolved. Because the division of assets, especially the marital home, continued to be a unique feature of the marriage contract only, this legislation might be expected to have different impacts for couples with sufficient resources to buy a home compared to those without.

**Proposition 3** *An increase in the paternity enforcement rights of cohabiting couples will decrease the attractiveness of marriage, particularly for those with lower levels of assets.*

**Proof.** Upon separation, a woman who splits from a non-marital relationship is worse off than one who divorces from a marriage. The increase in paternity enforcement rights reduces this gap. It may also makes separation less attractive to her partner, who now may be unable to benefit as much as before from the separation. Both imply that the marginal cost of investing in a child within a non-marital relationship will fall when paternity enforcement rights are stronger. This increase in child investments will make non-marital fertility more attractive compared to marriage. However, since marriage is more attractive to couples with assets, this increased attractiveness of non-marital fertility will make more couples without assets switch from marriage to non-marital fertility. ■

## 2.6 Simulations

Given the generality of our model, in Appendix A, we develop a simple example that illustrates that a simple utility form can satisfy our assumptions, and provide the predictions above. In this section, we simulate this example model to illustrate our results more directly, as well as shed additional insights that can be used in the empirical section.

We use the function for child human capital $h(\tau) = \tau/\tau + 4$. We also assume for simplicity that $\Omega_i = 0.8\Omega_j$ for all couples and that $\Omega_j$ are drawn from a uniform distribution between 0.001 and 1. We assume

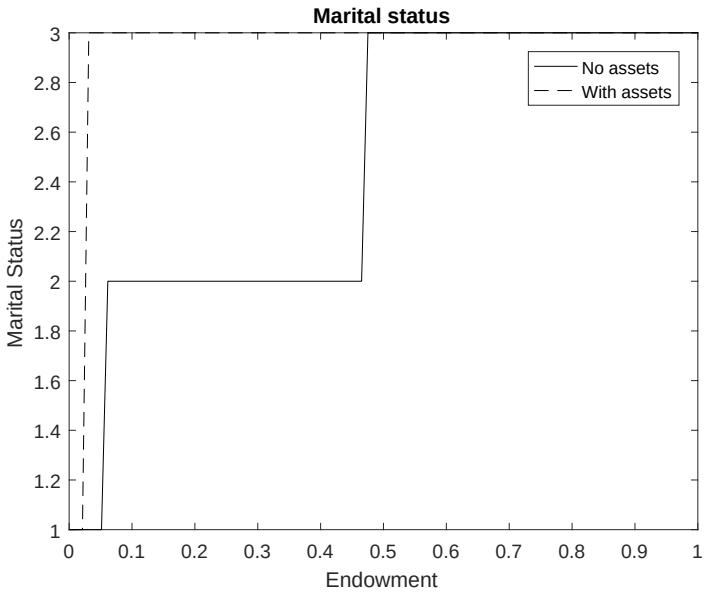
assortative matching. We then assume that $\phi$ is also drawn from a uniform $[-0.5, 0.5]$ distribution and that when couples have assets, they have 0.35 units. We initially set our parameters to the following values:

$$\begin{aligned} C_c &= 0.4 \\ C_m &= 0.45 \\ \beta &= 0.45 \end{aligned}$$

We first assume that there are no income transfers upon separation from a cohabiting union but there are some from a marital union. Figure 2 shows how, in this context, assets are a determinant of partnership selection, by showing the CDF of selection into a "type 2" partnership—cohabitation—versus "type 3"—marriage. While income is the most important element for explaining these choices, having more assets decreases the attractiveness of non-marital fertility compared to marriage. For those with assets, non-marital fertility disappears at all endowment levels, selecting between singlehood and marriage only (which matches anecdotal evidence). On the other hand, for those with no assets, marriage is only selected in about half of the couples.

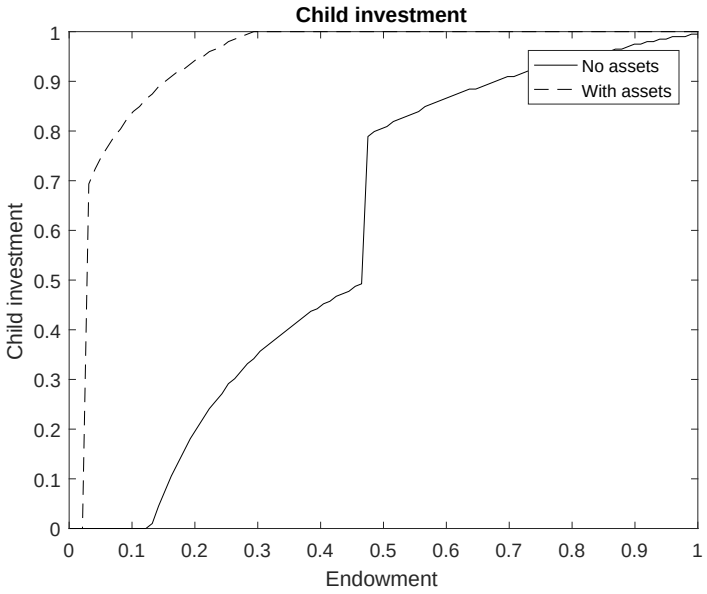
We next explore how this translates into differential levels of investments in children. Figure 4 shows the child investment by assets and income. We observe that couples with assets invest substantially more in their children than those without assets. This is the case even when the income level allows those who do not own assets to marry. Child investment remains about 20 percent lower than in marriage at that point. Notice as well that married mothers with assets completely sacrifice their earning potential in the second period by investing fully in their children.

Figure 2: Marital status by assets and income, baseline scenario



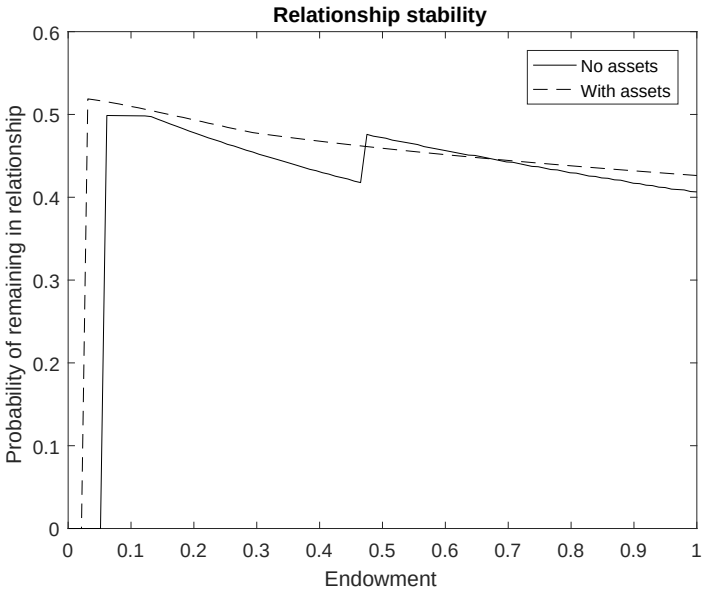

Finally, our last figure shows the probability of remaining within a given union, again depending on endowments and assets level. We find here that the difference between those with and without assets is

Figure 3: Investment levels by assets and income, baseline scenario



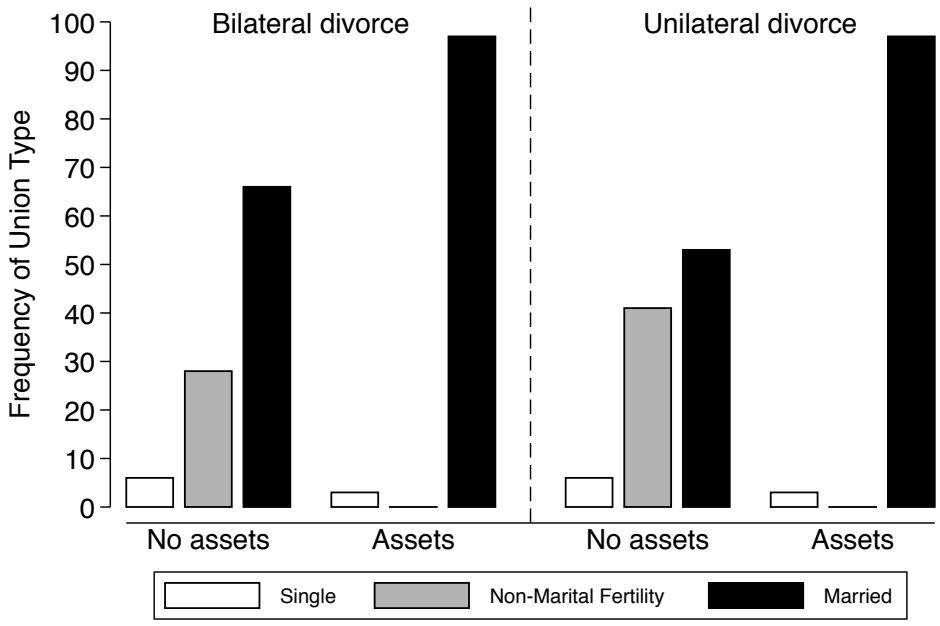

less clear than in previous results. This is because the divorce probability is lower for those with assets conditional on the level of investment. However, as we have shown, those with assets invest much more than those without and this, in unilateral divorce, increases the probability of divorce (because the lower-earning wife is a "costly burden" in the second period). These two forces go in opposite direction and make the probability of staying together cross in our setting over a small portion of the graph. Nevertheless, conditional on getting married, we observe that couples with assets have a higher probability of remaining together than those who do not.

Figure 4: Probability of union stability by assets and income, baseline scenario



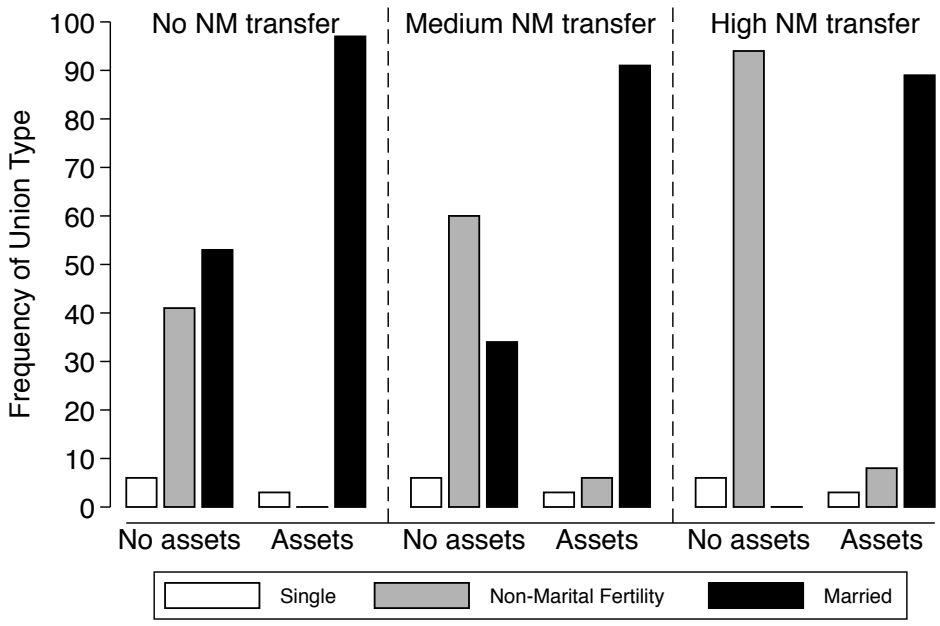

We then turn to exploring the comparative statics we presented in the main model. We first look at the impact of unilateral versus bilateral divorce. Figure 5 shows what happens to our baseline results when we make divorce bilateral instead of unilateral. Historical trends suggest a lower importance of assets in predicting marriage when the bilateral divorce regime was in place. Indeed, in the left-hand side of Figure 5, we see much lower non-marital fertility under bilateral divorce, as marriages are more stable, which incentivizes women to sacrifice their second period income and invest more in their children. More importantly, this difference us concentrated entirely amongst those without assets. On the right of Figure 5, we see that those with assets prefer marriage even with unilateral divorce, while some of those without assets substitute for cohabitation. Thus, marriage retains its value with the switch to unilateral divorce for those with assets, whereas those without assets switch substantially to cohabitation.

Figure 5: Partnership Selection by Divorce Regime




Our last exercise examine what happens when we alter $\gamma$, which represents the father's (or higher income partner's) financial transfers in the case of non-marital fertility (when the partnership dissolves). We contrast 3 values of transfers from our baseline of none, to 10% and finally to 20% of their endowment being transferred. We assume divorcees transfer 30% of their endowment, so marriage continues to provide more income insurance in case of separation. Figure 6 contrasts the attractiveness of marriage for each value of $\gamma$. We find that as cohabitation includes higher and higher post-separation transfers, marriage becomes less attractive compared to non-marital fertility. The difference by asset level is striking: those with assets barely react to the policy change while those without assets strongly respond. By making the post-separation transfer large but still below that of marriage, *no* low asset couples elect to marry while almost 90 percent of those with assets do. This supports our general theoretical model that altering paternity enforcement laws would particularly change marital choices for those whose assets cannot be used to increase the commitment levels of partners. The implication is striking—by enforcing the payment of child support outside of marriage, even at a level lower than that in marriage, the value of marriage versus cohabitation is quickly erased for low-wealth individuals.

Figure 6: Partnership Selection by Paternity Enforcement




## 2.7 Adding fertility timing

### 2.7.1 Exogenous asset growth

A potential simplification of our model is that individuals simply decide which arrangements to engage in, not when they do so. We now expand our framework to allow individuals to select when and how they will form a partnership. We show that our previous result that higher asset individuals showed a preference for marriage versus alternative arrangement is only furthered in this case. High assets people will choose marriage, but delay it, while lower assets individuals will engage in early non-marital fertility.

To explore this, let us imagine now that individuals live for 3 periods. Individuals can either marry or have children without marrying in the first or the second period. They can only have one such event in their life. Children generate benefits for their parents for 2 periods.[4] To proxy for asset growth in our binary setting, we assume that those who marry in period 2 have a higher probability of having a positive level of assets than those who marry in the first period. We will assume that the wage penalty for child investment is for two periods if a woman has a child in the first period.

A woman's utility, in a relationship of type $r$, who enters in the first period is, similar to before:

$$u(c_{1i}(\Omega_i, \Omega_j)) + 2Q_r(\tau, \Omega_i, \Omega_j) + 2\tilde{u}^r_{2i}(\Omega_i, \Omega_j, \tau, A_{j1}) - C_r$$

except that the "second period" expected utility will now be enjoyed for two periods. If she enters in the

[4]This is irrelevant for most of the results below.

relationship in the second period, then her utility is given by

$$\Omega_i + u(c_{1i}(\Omega_i, \Omega_j)) + 2Q_r(\tau, \Omega_i, \Omega_j) + \tilde{u}^r_{2i}(\Omega_i, \Omega_j, \tau, A_{j2}) - C_r.$$

The pay-out to remaining single now becomes:

$$U^S_i = 3\Omega_i$$

$$U^S_j = 3\Omega_j + A_j.$$

As before, the optimal investment level is found at the point where

$$\frac{dQ_r}{d\tau} = -\frac{1}{2}\frac{d\tilde{u}^r_{2i}}{d\tau}$$

when the union begins in the second period while it will be found at:

$$\frac{dQ_r}{d\tau} = -\frac{d\tilde{u}^r_{2i}}{d\tau}$$

when the union begins in the first period. The left-hand side of the equation will be the same no matter when the union is contracted. However, the right-hand side of the equation will differ by timing. Early unions will face a higher cost of the investment since it is born for 2 periods when a child is born in the first period. Furthermore, $A_{j2}$ is more likely to be positive than $A_{j1}$. This makes non-marital unions less stable but marital relationships more stable. Through that, it influences the level of investment made by each partner. Thus, a delayed marriage is more attractive than an early marriage but a delayed non-marital union may actually be less attractive than an earlier one.

The incentive for forming a relationship young are that one avoids the low payoff from remaining single in the first period and can obtain a higher utility, even if separated. The benefit of delaying is that the investment penalty is paid in only one period, instead of two. The benefits of investment and stability depend on whether the union is a cohabitating one or a marriage.

**Proposition 4** *A higher probability of having positive levels of assets in the second period will lead to an increase in the number of late marriages, compared to early non-marital fertility. This will reinforce the difference in child investment between those whose asset holding are larger and those who have lower savings.*

**Proof.**

For individuals with $A_{j1} = A_{j2} = 0$, timing decisions will be irrelevant of $A_j$. Individuals will simply pick between marrying or cohabiting depending on their endowments. For couples with $A_{j1} = A_{j2} > 0$, timing decisions will also be independent of $A_j$. For those with $A_{j2} > A_{j1} = 0$, then assets play a crucial role in the timing decision since delaying will allow the couple to commit much more strongly to the relationship but only in the case they delay marriage. These individuals are thus more likely to switch from cohabitation (and more likely to be from early cohabitation than later since their assets make late cohabitation more fragile) to later marriage. Thus, a higher probability of having positive levels of assets in the second period will lead to more couples wanting to delay marriage as to be able to purchase a property.

We have shown that investments will be smaller in non-marital fertility than in marriages. Since, as the probability of positive $A_{j2}$ increases, marital investments will be even larger in later marriages than in earlier ones, we will see that investments will be widened by later marriage timing versus non-marital fertility, and thus those with higher assets will have higher relative child investments. ■

### 2.7.2 Endogenous asset growth

Instead of having the probability of having positive levels of assets in the second period being exogenous, we could instead think that individuals can invest part of their first period income and that this determines by how much their future assets will grow in the second period. In that case, individuals who form partnerships young will have less incentives to invest in their future assets. This is because they would sacrifice child quality and not acquire more marital stability. This would lead them to have lower levels of assets and thus be more likely to choose non-marital partnerships. On the other hand, individuals who delay fertility would have more incentives to save, which would raise their return to marriage compared non-marital partnerships and thus those who delay would be more likely to be higher assets individuals, which would lead to higher marriage rates, higher child investments and lower divorces. Introducing savings into our model, thus, would simply reinforce the pattern we are discussing.

## 2.8 Model summary

Our model thus provides a key role for assets in marriage that was not considered previously by the literature. In particular, assets provide "insurance" to the partner investing in children, by either increasing the commitment of the higher-endowment partner to the relationship or providing some guaranteed consumption in the case of marriage dissolution. This allows the female partner to feel "safer" about making higher child investments, even at the expense of her own earning potential. This is a very different type of explanation than has been provided previously. While most previous models have suggested that marriage may have an advantage for child-rearing, we highlight the fact that, with unilateral divorce, women may fear that marriage will not be as lasting as they had anticipated and thus require some insurance in order to fully invest in children. Thus, the ability to insure investments through asset ownership becomes a key factor in determining the value of marriage.

Our model provides several intuitive results that align with current marriage patterns and changes over time. We find that higher endowed individuals will be more likely to prefer marriage to non-marital fertility, which aligns with expectations, but add that, conditional on endowment, those with higher assets receive more value from marriage. The model also specifies that child investment will be higher in marriage, but this is a consequence of underlying heterogeneity that determines marriage's value, rather than heterogeneous tastes for investment. The model predicts that unilateral divorce will increase divorce levels, and thus decrease the value of marriage, but provides the testable implication that this decrease in marriage will be less severe for those with higher assets. Additionally, we find that better non-marital contracting will increase parental investments for those who would have chosen non-marital fertility anyway, but will also move individuals from marriage to non-marital fertility—something that was found by Rossin-Slater (2016). However, our model introduces the testable implication of heterogeneity in this effect by asset level.

The model provides the additional prediction that those with higher assets should prefer later marriage, while those with lower assets who are apt to choose non-marital fertility have no reason to not do so in the first period, something that aligns with marriage timing patterns.

The mechanism for these predictions is that asset-holding on the part of one partner enables the purchase of a home, which in turn reduces the probability of divorce and increases child investment. We now look for evidence of the model's comparative statics in historical data from the United States.

# 3 Empirical Results

Having shown that a simple model can explain the correlational relationship between assets and marriage we documented, we now turn to further exploring the predictions of the model empirically using a variety of data sources.

We divide our empirical test of the model's predictions into two parts. First, we test the model's mechanism for the relationship between assets and marriage appeal, by looking at child investment and shocks to home ownership driven by price variation. Then, we test the model's policy predictions for how the relationship between marriage rates and assets change with shifts in policies regarding non-marital parental rights and responsibilities as well as US divorce law.

## 3.1 Exploring drivers of marriage rates through changes in house prices

Our model predicts that home ownership enables greater value from marriage via increasing child investment in marriage, since the investing partner has greater security. Thus, our model predicts that home ownership should have a causal impact on the investment of mothers' time into child quality. We can measure this in two ways—the number of children and their human capital, and the direct input of mothers' time via reduction in work hours.

Of course, if we looked at the difference in these outcomes between homeowners and non-homeowners, we might be identifying selection, rather than causality: those that wish to invest more in children might choose to buy homes as one such input. Therefore, we need a source of exogenous variation in home ownership. We therefore use idiosyncratic variation in housing prices at the time of marriage, while controlling for current housing prices. Our hypothesis is that higher housing price at the moment of marriage would make the couple unlikely to start their marital life as owners, and make asset accumulation as the marriage evolves more difficult. Clearly, housing prices also influences rental prices, but in periods of "bubbles" the two usually become disjoined, making housing price more likely to make ownership difficult than rental.

Our data source is the American Community Survey from 2008-2014. This survey has the advantage of including the age at first marriage, from which we can derive the year in which individuals married. We restrict our sample to households where it is one individual's first marriage and where the marriage occurred between 1991 and 2014. We merge this database by year of marriage and state of residence to the Federal Housing Finance Agency's housing price index based on purchase-only data. The data are available at a quarterly frequency and by state, for which we average over all quarters in a year to obtain our annual index.

Table 2: Relationship between house price at marriage year and home ownership

| | Dependent variable: Own Home | | |
|---|---|---|---|
| | (1) | (2) | (3) |
| House Price Index | -0.0290*** | -0.0277*** | -0.0324*** |
| | (0.00523) | (0.00543) | (0.00615) |
| Year of Survey HPI control | Yes | Yes | Yes |
| Year of Survey FEs | No | Yes | Yes |
| Additional Controls | No | No | Yes |
| Observations | 3220736 | 3220736 | 3220736 |
| R-Squared | 0.0654 | 0.0666 | 0.124 |

Thus, our general empirical strategy will consist of estimating the following equation:

$$Y_{ismt} = \beta HPI_{sm} + \eta_s + \nu_m + \gamma X_{ismt} + \delta_t + \psi HPI_{st} + \varepsilon_{ismt} \tag{1}$$

where the outcome of interest of a household $i$, in state $s$, married in year $m$ and observed in year $t$ is correlated with the household price index that was in place at the time of marriage $m$ in the state where they currently reside $s$. Given that states may differ in many ways in addition to the evolution of their price index, we include fixed effects for each state. We also include fixed effects for each year of marriage $m$. To rule out that correlation with current housing prices (which may affect these outcomes), we additionally control for the *current* housing price index, which varies by both state and survey year.

We include, depending on the specification, some controls such as the age of the married individual, their gender, and their educational attainment. We also include a fixed effect for the year of the survey to capture changes in economic environment at the time of the survey. Importantly, a higher HPI in the year of marriage is expected to lead to *lower* home-ownership, and thus lower child investment, per our model's predictions.

We initially demonstrate that higher HPI at the time of marriage is linked to lower home ownership. Then, to proxy for child investment, we use a measure of the fraction of the children in the household who are in a grade below what their age would suggest. We also measure the number of children since, while our model supposes that couples have only one child and they are able to increase the quality of that child, it is probably more likely that they may also invest in having more children (which would substantially reduce mothers' time for career investments). We then examine the hours worked of the parents as a way to see whether investment is altered, as our model directly predicts women who invest more in children decreasing their work investments accordingly.

We treat women's hours worked relative to men's as an inverse proxy for investment. Finally, we examine divorce. Although our model's predictions about divorce are somewhat ambiguous, conditional on marriage we expect separation rates to fall for couples with greater assets.

First, we show that our right-hand side variable indeed creates variation in the endogenous variable of interest, home ownership, in Table 2. We divided the price index by 100, implying that a change of 1 in our index corresponds to an increase of 1 percent in housing prices.

Table 3: Relationship between house price around marriage year and child investment

| | Grade Retention | | Number of Children | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| House Price Index | 0.00796*** | 0.00879*** | -0.0270** | -0.0244** |
| | (0.00233) | (0.00254) | (0.0116) | (0.0113) |
| Year of Survey HPI control | Yes | Yes | Yes | Yes |
| Year of Survey FEs | Yes | Yes | Yes | Yes |
| Additional Controls | No | Yes | No | Yes |
| Observations | 2428234 | 2428234 | 3702212 | 3702212 |
| R-Squared | 0.00869 | 0.0232 | 0.0659 | 0.118 |

In our model, the couple's desire to marry is directly related to the quality of the public good that is being produced jointly by the couple. We here attempt to measure this by using three different proxies of child quality: whether the child is delayed in school progression, the number of children below age 5 within the household, and mother's time investments. We look at children below age 18 because this makes it more likely that they are the children of the marriage we are examining. The first outcome is only available for households that have children of school age, which implies that our sample size is smaller. Table 3 shows each outcome in two separate columns. The odd columns correspond to a model where we include our basic specification plus year fixed effects; the even columns add to that additional controls. The table suggests is that households that were limited by high housing prices in the year they were married also showed some evidence of changes in investment behavior.

In the case of grade retention, we find that those who entered marriage with lower assets because of high housing prices are more likely to see their children repeat grades. This could indicate a lower level of time investment in each child, with children having lower human capital as a result. Parents facing high housing prices at the time of marriage also have fewer children, indicating lower investment in children, Each child takes more time away from the mother's career investments, especially because it is the infant and early childhood period that is more time intensive for the mother, and where the investments can least easily be shared between partners. Thus, our model predicts women who are less insured against divorce will reduce their investment in children, which can be done through both the number of children and the investment in each one. This suggests that those facing idiosyncratically high house prices at the time of marriage had lower gains to marriage, as our model predicts.

We next directly examine the allocation of women's time, since our model suggests that labor market participation would be what one household member would need to sacrifice in order to make higher investment in children. We present these results in Table 4. We use a difference-in-differences specification here to compare women's working hours to those of men's, since our model predicts women, typically the lower-endowment partner, should invest less in children, and thus work more, when home ownership is less possible. We find that women who faced higher home prices at the time of marriage are more likely to work in the year of the survey relative to men and work more hours relative to men. When looking at genders separately in Table 5, we find an increase in women's working and hours, although it is not robust to controls, and a non-significant pattern in the opposite direction for men.

Table 4: Relationship between house price around marriage year and parental labor force participation

| | Dependent variable: | | | | | |
|---|---|---|---|---|---|---|
| | Worked Last Year | | | Usual Hours Worked | | |
| | (1) | (2) | (3) | (4) | (5) | (6) |
| HPI × female | 0.0134*** | 0.0134*** | 0.0108*** | 1.334*** | 1.335*** | 1.186*** |
| | (0.00382) | (0.00383) | (0.00355) | (0.258) | (0.258) | (0.249) |
| House Price Index | -0.00390 | -0.00383 | -0.00343 | -0.441*** | -0.424*** | -0.409*** |
| | (0.00252) | (0.00253) | (0.00266) | (0.125) | (0.126) | (0.117) |
| Year of Survey HPI control | Yes | Yes | Yes | Yes | Yes | Yes |
| Year of Survey FEs | No | Yes | Yes | No | Yes | Yes |
| Additional Controls | No | No | Yes | No | No | Yes |
| Observations | 3702212 | 3702212 | 3702212 | 3702212 | 3702212 | 3702212 |
| R-Squared | 0.0497 | 0.0510 | 0.100 | 0.113 | 0.114 | 0.163 |

Table 5: Relationship between house price around marriage year and parental labor force participation

| | Women | | | |
|---|---|---|---|---|
| | Worked Last Year | | Usual Hours Worked | |
| | (1) | (2) | (3) | (4) |
| House Price Index | 0.00677* | 0.00413 | 0.531** | 0.392 |
| | (0.00354) | (0.00419) | (0.231) | (0.246) |
| Year of Survey HPI control | Yes | Yes | Yes | Yes |
| Year of Survey FEs | Yes | Yes | Yes | Yes |
| Additional Controls | No | Yes | No | Yes |
| Observations | 1874594 | 1874594 | 1874594 | 1874594 |
| R-Squared | 0.0112 | 0.0633 | 0.0109 | 0.0646 |

| | Men | | | |
|---|---|---|---|---|
| | Worked Last Year | | Usual Hours Worked | |
| | (1) | (2) | (3) | (4) |
| House Price Index | -0.000782 | -0.000463 | -0.0271 | -0.0219 |
| | (0.00207) | (0.00186) | (0.123) | (0.101) |
| Year of Survey HPI control | Yes | Yes | Yes | Yes |
| Year of Survey FEs | Yes | Yes | Yes | Yes |
| Additional Controls | No | Yes | No | Yes |
| Observations | 1827618 | 1827618 | 1827618 | 1827618 |
| R-Squared | 0.00709 | 0.0803 | 0.00971 | 0.0817 |

Table 6: Relationship between house price around marriage year and divorce probability

| | Dependent variable: Divorce Status | | | | | |
|---|---|---|---|---|---|---|
| | Year of Marriage | | | Year Before Marriage | | |
| | (1) | (2) | (3) | (4) | (5) | (6) |
| House Price Index | 0.00512 | 0.00580 | 0.00609* | 0.00857** | 0.00873** | 0.00908** |
| | (0.00366) | (0.00353) | (0.00364) | (0.00416) | (0.00403) | (0.00416) |
| Year of Survey HPI control | Yes | Yes | Yes | Yes | Yes | Yes |
| Year of Survey FEs | No | Yes | Yes | No | Yes | Yes |
| Additional Controls | No | No | Yes | No | No | Yes |
| Observation | 3665398 | 3665398 | 3665398 | 3642065 | 3642065 | 3642065 |
| R-Squared | 0.0254 | 0.0295 | 0.0409 | 0.0255 | 0.0296 | 0.0410 |

These results suggest an increase in household specialization when high home prices at the time of marriage decrease the ability to purchase a home. In the context of our model, this could be interpreted as marriages being less secure due to the lower possession of joint marital assets, and thus women needing to protect their own income through higher labor force participation. This would in turn be tied to lower investments in children, and thus a lower value of marriage overall.

Finally, we examine the impact on divorce. Our model's predictions are somewhat ambiguous, but conditional on marriage, divorce rates are expected to fall. Since we examine HPI at the time of marriage, this empirical section is conditional on marriage.

Table 6 shows the impact of the home price index at the time of marriage on the probability that the person interviewed is found to be divorced at the time of the survey. In the first 3 columns, we include the housing price index in the year where the person declared having been married. Since possible house purchase may be a requirement for some individuals before marriage, we also include, in the last 3 columns, the price index in the year preceding the nuptials. We add year of survey fixed effects in columns (2)-(3) and (5)-(6). The last set of columns also include controls, namely age, gender, and education.

The results suggest that facing a one percent increase in the housing price in one's state of residence at the time of marriage increases the probability that the person is currently divorced by 0.5 percentage points for the year of marriage (though this is not significant without controls) and around 0.8 percentage point for the year before the marriage. This is a small but not irrelevant effect given that the average divorce probability in our sample is 13 percent.

Together, the results from the ACS on the relationship between housing prices and home purchase, child quality, mother's time allocation, and divorce suggest that our model's predicted mechanisms are active, and thus more likely to explain the marriage selection seen in the other empirical sections. To confirm these results, we additionally use metropolitan-level variation in the housing price index, both from all metropolitan areas, and from the top 50 metropolitan areas, shown in Appendix Tables B.1 – B.9.

## 3.2 Using legal changes to understand relationship between marriage rates and assets

We show that the connection between marriage rates and assets has grown stronger as US marriage and child custody laws have changed in two ways: 1) Childbearing without marriage has become closer to marriage in legal framework, by allowing for both parental rights and obligations without marriage, and 2) Divorce can now be initiated by one partner, making marriage less resistant to bad shocks. We use state-year variation in these laws to test how marriage rates change for individuals of different asset levels as the legal framework changes.

We first use data from the 1992, 1993, and 1996 waves of the SIPP to test whether the impact of in-hospital voluntary paternity establishment (IHVPE) differed for those with and without assets. IHVPE, and the era of non-marital rights and responsibilities (verified through DNA if necessary) it signaled, created an alternative legal partnership, that, from an income-division perspective, was very close to marriage, without the asset-sharing component that marriage offers. Our model would predict this legal change would widen the marriage gap between high and low asset individuals.

We assemble a data set encompassing all men aged 21-35 who are enter the SIPP data unmarried.The SIPP data generally includes individuals for up to four years, or 16 waves of quarterly data collection although some years have 9 or 12 waves. We regress "ever married" and "time to marriage" on asset holding and the IHVPE policy in the initial period, controlling for state and year fixed effects. Our data on IHVPE dates comes from Rossin-Slater (2016), and all of these policies were implemented in the 90s, during the period of welfare reform. Assets are specifically listed in the SIPP data, and we divide individuals into "asset holding," those with assets greater than zero, and not.[5]

The equation being estimated is:

$$Evermarry_i = \beta IHVPE_{st} \times assets_i + \nu assets_i + \gamma IHVPE_{st} + \eta_s + \delta_t + \varepsilon_i \tag{2}$$

Where $s$ and $t$ represent the state and year the individual first appears in the data. We add individual-level controls as well as state-specific time trends in subsequent specifications.

Table 7 shows that the introduction of IHVPE is correlated with lower marriage rates overall, but higher marriage rates for those possessing assets. The effect size remains consistent even when state-specific time trends are accounted for. This result highlights the role of assets in creating differential value of marriage, above and beyond that of non-marital fertility contracts, even as these contracts are strengthened. Table 8 shows that the results are directionally consistent, although less significant, for the outcome measure "time to marriage".

We next turn to examining whether increased likelihood of divorce, through a switch from dual consent requirements to unilateral decision-making, led to an increased relationship between assets and marriage, signaling an erosion of marriage value for those without assets. We implement this empirical test using the PSID, since the PSID contains data for the time period when unilateral divorce laws were introduced. We

[5]We exclude homeownership from assets for two reasons: first, it is only measured for household heads, and secondly, homes owned pre-marriage are unlikely to be divided upon divorce, whereas financial assets that are used to purchase joint marital homes create shared marital property.

Table 7: Paternity establishment laws and marriage rates, by asset status

| | Dependent variable: Ever Married | | | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| IHVPE × Assets | 0.0389** | 0.0383** | 0.0367** | 0.0359** |
| | (0.0170) | (0.0172) | (0.0171) | (0.0168) |
| IHVPE Laws | -0.00889 | -0.00826 | -0.00795 | -0.00281 |
| | (0.0140) | (0.0140) | (0.0145) | (0.0137) |
| Owns Assets | 0.0410*** | 0.0399*** | 0.0219*** | 0.0216*** |
| | (0.00733) | (0.00733) | (0.00703) | (0.00710) |
| Age control | | YES | YES | YES |
| Inc, race, and educ control | | | YES | YES |
| State-specific time trend | | | | YES |
| Observations | 10670 | 10670 | 10670 | 10670 |
| R-Squared | 0.0931 | 0.0937 | 0.102 | 0.106 |

Table 8: Paternity establishment laws and time to marriage, by asset status

| | Dependent variable: Time to Marriage | | | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| IHVPE × Assets | -0.165* | -0.166* | -0.150 | -0.132 |
| | (0.0918) | (0.0917) | (0.0904) | (0.0875) |
| IHVPE Laws | 0.101 | 0.101 | 0.0999 | 0.0940 |
| | (0.0653) | (0.0653) | (0.0665) | (0.0628) |
| Owns Assets | -0.249*** | -0.250*** | -0.131*** | -0.135*** |
| | (0.0483) | (0.0475) | (0.0456) | (0.0453) |
| Age control | | YES | YES | YES |
| Inc, race, and educ control | | | YES | YES |
| State-Specific Time Trend | | | | YES |
| Observations | 12962 | 12962 | 12962 | 12962 |
| R-Squared | 0.689 | 0.689 | 0.692 | 0.692 |

follow Voena (2015)'s coding of unilateral divorce laws.

Because the PSID panel is constructed differently than the SIPP, we create our sample using a slightly different methodology. In the SIPP, new people are regularly added to the panel, and the panel itself is short. Thus, we can take "newcomers" of every age (within the 21-35 range that would reasonably be affected) to maximize data availability. In the PSID, because the panel stays largely constant over time, and the panel is long, with new individuals entering only if they marry into a sample household, if we added individuals based on the 21-35 year age range, we would construct a panel with a mix of 21-35 year olds in the beginning, but with essentially *only* 21 year olds coming into the data over time. We thus designate a specific age at which to add individuals to our sample: 26 (our results are robust to other ages). And, as the panel itself is long, we need to limit the time period we are looking at to some extent. We choose to look at a 12 year period, although, again, our results are robust to other choices.

We designate asset-holding individuals based on asset income, which is more likely to indicate the types of financial assets that could be invested in a marital property. Asset income is measured cleanly for heads of household, and with noise for non-heads. For non-heads, we must infer asset income based on *some* individual in the household who is not the head or wife having asset income.

The equation being estimated is:

$$Evermarry_i = \beta unilateral_{st} \times assets_i + \nu assets_i + \gamma unilateral_{st} + \eta_s + \delta_t + \varepsilon_i \tag{3}$$

With, again, individual-level controls as well as state-specific time trends being included in subsequent specifications. A control for age is not necessary here, as everyone "starts" at age 26.

Table 9 shows that the introduction of unilateral divorce laws appear to decrease marriage rates overall, although this effect is not significant, but that this effect is cancelled out for individuals possessing assets. The effect size remains stable with the introduction of individual controls and state-specific time trends, although it becomes non-significant when state trends are included. This aligns with our hypothesis that having assets allows marriage to retain value—through increased commitment and protection for the lower earning spouse—even in the presence of one-sided divorce decision-making. Table 10 shows a consistent effect for time to marriage.

# 4 Conclusion

We introduce a possible explanation for a heterogeneous retreat from marriage that does not rely on differing tastes for child investment: as marriage becomes a less binding contract, only those who possess assets are able to insure partners who invest time into child human capital against divorce. This insurance enables efficient investment, which reduced the income-earning potential of one partner to the benefit of both partners through child human capital. Thus, marriage retains value relative to non-marital childbearing arrangements. To the contrary, for individuals without assets, increased divorce rates and non-marital paternity establishment programs create a suitable substitute for marriage, since income-sharing is enforced through child support and asset-sharing is irrelevant. Thus, without the insurance provided by assets, the costly contracting of marriage provides no additional benefit, and non-marital fertility is chosen.

Table 9: Unilateral divorce laws and time to marriage, by asset status

| | Dependent variable: Ever Married | | |
|---|---|---|---|
| | (1) | (2) | (3) |
| Unilateral × Assets | 0.121* | 0.121* | 0.114 |
| | (0.0680) | (0.0666) | (0.0682) |
| Unilateral divorce | -0.0967 | -0.0733 | -0.146 |
| | (0.0918) | (0.103) | (0.138) |
| Own Assets | 0.162*** | 0.0613 | 0.0517 |
| | (0.0512) | (0.0470) | (0.0511) |
| Inc, educ, race controls | | YES | YES |
| State specific time trend | | | YES |
| Observations | 1391 | 1339 | 1339 |
| R-Squared | 0.158 | 0.196 | 0.227 |

Table 10: Unilateral divorce laws and time to marriage, by asset status

| | Dependent variable: Time to Marriage | | |
|---|---|---|---|
| | (1) | (2) | (3) |
| Unilateral × Assets | -1.039* | -1.106* | -1.217* |
| | (0.590) | (0.614) | (0.656) |
| Unilateral divorce | -0.0276 | -0.115 | 0.123 |
| | (0.822) | (0.862) | (0.833) |
| Own Assets | -0.0675 | 0.239 | 0.433 |
| | (0.558) | (0.587) | (0.628) |
| Inc, educ, race controls | | YES | YES |
| State specific time trend | | | YES |
| Observations | 1391 | 1339 | 1339 |
| R-Squared | 0.227 | 0.240 | 0.272 |

We demonstrate that quite simple assumptions in a model of partnership selection generate the effect that asset-holding helps to solve the "public goods problem" of investment in children, by reducing the impact of such investment on the investing parent's expected second period consumption. This comes through two channels, first, reducing the risk of divorce by giving the richer partner "more to lose," and second, providing a guaranteed level of consumption in case divorce does occur. This causes individuals with sufficient assets for home purchase to select marriage over non-marital fertility at much greater rates. Additionally, the model predicts that unilateral divorce and better extra-marital contracting will not remove the appeal of marriage for high-asset individuals, while these policies encourage non-marital fertility for those without wealth.

We show empirical support for this model, first by demonstrating that our model's proposed mechanisms are active, and those families who more easily purchase homes upon marriage invest more in children and specialize more within the household. We then demonstrate that increased ease of non-marital contracting has starkly different effects for those without assets than those with assets. Similarly, unilateral divorce additionally erodes marriage only for those who lack assets.

Thus, our model suggests that the uneven retreat from marriage among certain groups may result from underlying heterogeneity in asset-holding. This is important because some groups may be particularly disadvantaged in the holding of wealth, and the ability to convert this wealth into housing stock. For example, Hamilton and Tippet (2015) demonstrate that while the white-black income gap is large, the white-black asset gap is *substantially* wider. On top of the disparity in financial assets, redlining historically limited the ability of non-white individuals to purchase homes. Our model suggests a mechanism linking this gap to a corresponding gap in marriage rates. More generally, credit constraints for home buying penalizes couples not just in the housing market but in their child investment choice. We think this is an interesting avenue to explore in future research.

Our model additionally suggests that such inequality is unlikely to be self-correcting. Because investment in child human capital is higher in marriage, and such investment must be insured through assets, those who lack assets may be hamstrung in their level of investment in the next generation. This would then produce a mechanism through which inequality is transmitted from one generation to the next. Those with high assets create high-security marriages with high levels of child investment, producing advantaged children. Those without assets end up in less secure non-marital arrangements, with correspondingly less advantaged children. Wealth has not previously been considered as a driver of marital value, and thus the ability to insure child investment. This paper presents evidence that it could be an important factor, with stark policy and welfare implications.

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# A Model extensions

We now present a more specific and detailed model that fulfills the assumptions specified in Section 2 required to obtain our key results. This specific version helps to further illustrate the mechanisms driving the results in the general framework.

We have a continuum of men $m$ and women $w$ in an economy. All of them have an endowment $\Omega$ which is drawn from a distribution $F(\Omega)$ for women and $G(\Omega)$ for men, where the distribution of men's endowments stochastically dominates that of women. Men also receive an endowment in terms of assets $A_j$, that are positive with probability $h$.[6]

## A.1 Child investment and divorce selection

We assume that $Q_c(\tau, \Omega_i, \Omega_j) = (\Omega_i + \Omega_j)h(\tau)$, with $h(0) = 0$, with $h'(0) = \infty$ and $h(1) < 1$. We also assume here that $c_{1i} = \beta(\Omega_i + \Omega_j)$, $c_{1j} = (1-\beta)(\Omega_i + \Omega_j)$ in either type of partnership. Assume that $\frac{\Omega_i(1-\tau)}{\Omega_i(1-\tau)+\Omega_j} < \beta < 0.5$, namely that women receive a higher share in marriage than their share of endowments but less than 0.5, since women have always lower endowments than their spouse.

In the second period, when a couple remains together, we assume that $c_{2Ri} = \beta(\Omega_i(1-\tau) + \Omega_j + A_j)$, $c_{2Rj} = (1-\beta)(\Omega_i(1-\tau) + \Omega_j + A_j)$. When separated, we will assume that the women's consumption will be given by $c_{2Si} = \delta\Omega_j + 0.5A_j + \Omega_i(1-\tau)$ when divorced and $c_{2Si} = \gamma\Omega_j + \Omega_i(1-\tau)$ when separated where $\beta > \delta \geq \gamma$. This implies that married women will receive potentially some post-divorce transfers from their ex-husbands and those are lower than what they received in marriage but at least equal or above what she would received when separated from a non-marital relationship. Note that the cost she faces from her investment is not shared when she is not in the relationship. Men will receive $c_{2Sj} = (1-\delta)\Omega_j + 0.5A_j$ when divorced and $c_{2Sj} = (1-\gamma)\Omega_j + A_j$ upon separation from cohabitation.

Separation occurs because men receive a utility shock in the second period given by $\phi$, drawn from a uniform distribution centered around 0, whose cumulative distribution will be denoted $L(\phi)$. Thus, their utility if they remain together includes the value of $\phi$. In cohabitation, men will be the one making the decision to separate, and they will do so when:

$$\phi < \bar{\phi} = u\left((1-\gamma)\Omega_j + A_j\right) - u\left((1-\beta)(\Omega_i(1-\tau) + \Omega_j + A_j)\right)$$

Note then that $p_c(\Omega_i, \Omega_j, \tau, A_j) = Prob(\phi > \bar{\phi}) = 1 - L(\bar{\phi})$. Note that a higher $\gamma$ decreases the threshold value while higher assets and higher $\tau$ have the opposite effects.

A similar calculation allows us to determine that unilateral divorce will occur when:

$$\phi < \tilde{\phi} = u\left((1-\delta)\Omega_j + 0.5A_j\right) - u\left((1-\beta)\Omega_i(1-\tau) + \Omega_j + A_j\right)$$

Note that in this case, $p_m(\Omega_i, \Omega_j, \tau, A_j) = 1 - L(\tilde{\phi})$. In this case, a higher $\delta$, higher $A_j$ decreases the threshold value while higher $\tau$ increases it. Furthermore, note that $\tilde{\phi} < \bar{\phi}$, namely marriages are more stable

[6] We assume here that only men have assets. Women could also have assets. As long as their assets are lower than their spouse, the conclusions of the model would be unaltered.

than cohabiting relationships, particularly when $A_j > 0$.

If bilateral consent were required for divorce, divorce would occur when:

$$\phi < \phi' = u\left((1-\delta')\Omega_j + 0.5A_j\right) - u\left((1-\beta)(\Omega_i(1-\tau) + \Omega_j + A_j)\right)$$

where $\delta'$ is the value of transfers that would make the female partner just indifferent between marriage and divorce, namely:

$$\delta' = \frac{\beta * (\Omega_j + (1-\tau)\Omega_i + A_j) - \Omega_i(1-\tau) - 0.5A_j}{\Omega_j}$$

It is easy to show that divorce occurs less often in this case than in the case of unilateral divorce. Holding investment constant, in the case where the utility of consumption is linear, assets play no role in the bilateral divorce decision, since they simply shift the allocation of resources in the divorced state. However, if utility is concave, assets would make the relationship less likely to survive since it decreases the cost of divorce in terms of the loss of utility of the woman more than it augments the cost of men.

A woman in a non-marital fertility relationship will invest in a child up to the point where:

$$h'(\tau^{NM}) = \frac{\Omega_i(\beta(1-L(\bar{\phi}))u'(c^c_{2Ri}) + L(\bar{\phi})u'(c^c_{2Si})) + l(\bar{\phi})\frac{\partial\bar{\phi}}{\partial\tau}\left(u(c^c_{2Ri}) - u(c^c_{2Si})\right)}{2(\Omega_i + \Omega_j)}$$

But, note, the socially optimal level of $\tau$ would be where:

$$h'(\tau^*) = \frac{\Omega_i((1-L(\bar{\phi}))(\beta u'(c^c_{2Ri}) + (1-\beta)u'(c^c_{2Rj})) + L(\phi^*)u'(c^c_{2Si})) - l(\phi^*)\frac{\partial\phi^*}{\partial\tau}\phi^*}{4(\Omega_i + \Omega_j)}$$

where $\phi*$ is the threshold that would be observed in bilateral divorce but where the investment decision would be socially optimal.

It can be shown that $\tau^{NM} < \tau^*$ and thus that the level of investment is below optimal for three reasons. First, the return to the investment is lower than in the Pareto optimal world since $\bar{\phi} > \phi*$. Also, the woman pays a higher cost than the couple for the investment since she bears it all in the separated state. Finally, she also underinvests because this raises the probability that her partner will want to separate from her in the future since she is a costly burden due to her lowered income. Combining both, the partner $i$ will underinvest and will face a higher probability of separation than optimally.

Using monotone comparative statics, we can show that the optimal investment $\tau^{NM}$ will be non-decreasing in $\gamma$. To do so, we need to demonstrate that the female's utility function is supermodular in $\gamma$ and $\tau$, namely

$$\frac{\partial^2 U_i^{NM}}{\partial\gamma\partial\tau} = -\Omega_i L(\bar{\phi})u''(c^c_{2Si})\Omega_j + l(\bar{\phi})\frac{\partial\bar{\phi}}{\partial\tau}u'(c^c_{2Si}) + \Omega_i\Omega_j l(\bar{\phi})u'(c^c_{2Sj})(u'(c^c_{2Si}) - \beta u'(c^c_{2Ri})) > 0$$

This is positive by the concavity of the utility function, the fact that $\frac{\partial\bar{\phi}}{\partial\tau} > 0$ and since $c^c_{2Si} < c^c_{2Ri}$.

Married women will pick their optimal level of investment in children:

$$h'(\tau^M) = \frac{\Omega_i(\beta(1-L(\tilde{\phi}))u'(c^m_{2Ri}) + L(\tilde{\phi})u'(c^m_{2Si})) + l(\tilde{\phi})\frac{\partial\tilde{\phi}}{\partial\tau}\left(u(c^m_{2Ri}) - u(c^m_{2Si})\right)}{2(\Omega_i + \Omega_j)}$$

Married women will invest more in children for a few reasons. Because their marriage is more stable than cohabitation, they will have to bear the entire cost of investment less frequently. Second, since their consumption level when divorced is higher than when a cohabiting partner separates, the marginal cost of the investment will be less difficult to bear in that case. Finally, because the difference in consumption level when married and divorced is less large than that when cohabiting and separated, the disincentive to invest because it will increase the probability of divorce is less high.

Socially optimal decisions for married couples are:

$$h'(\tau^{**}) = \frac{\Omega_i((1-L(\bar{\phi}))(\beta u'(c^m_{2Ri}) + (1-\beta)u'(c^m_{2Rj})) + L(\phi^{**})u'(c^m_{2Si})) - l(\phi^{**})\frac{\partial\phi^{**}}{\partial\tau}\phi^{**}}{4(\Omega_i + \Omega_j)}$$

where $\phi^{**}$ is the threshold that would be observed in bilateral divorce but where the investment decision is socially optimal.

Again, women will underinvest in their children compared to Pareto optimum for the same reasons as in the case of the cohabitation.

By an identical argument as the one presented above, investments will be non-decreasing in $\delta$. Investment will be also non-decreasing in $A_j$. Formally,

$$\frac{\partial^2 U^M_i}{\partial A_j \partial\tau} = -\Omega_i(\beta^2(1-L(\tilde{\phi}))u''(c^m_{2Ri}) + 0.5L(\tilde{\phi})u''(c^m_{2Si})) + \Omega_i l(\tilde{\phi})\frac{\partial\tilde{\phi}}{\partial A_j}(\beta u'(c^m_{2Ri}) - u'(c^m_{2Si}))$$

$$-l(\bar{\phi})\frac{\partial\tilde{\phi}}{\partial\tau}(u'(c^m_{2Ri})\beta - 0.5u'(c^m_{2Si})) - l(\tilde{\phi})\frac{\tilde{\phi}}{\partial\tau\partial A_j}(u(c^m_{2Ri}) - u(c^m_{2Si})) > 0$$

This is positive because these four terms are positive. The first stems from the concavity of the utility function. With more assets, the marginal cost of investing falls. The second is because more assets make the husband less likely to divorce which reduces her expected marginal cost. The third is that by having more assets, the difference between married and divorced consumption is lower, which reduces her disincentive to invest as to reduce the probability of divorce. Finally, the last term is positive because by having more assets, a man will feel less inclined to divorce at a higher rate of investment of his wife.

Thus, this more specific model satisfies the key assumptions required for our propositions in the general framework.

## A.2 Partnership selection

As child quality is larger for those in marriage than for those in cohabitation and expected consumption is also less volatile and that this is impacting more individuals with higher levels of endowments, we will have that as endowments increase, the fixed cost of entering in the relationship will be less relevant and thus that there will be a threshold of $\Omega$ for which individuals will first remain single, then cohabit, then marry. There will be positive assortative matching.

By the logic in the more general model, individuals with assets will receive more benefits from marriage. This is because their child investments are closer to the Pareto optimum, and thus the utility gap between marriage and non-marital fertility is higher, and therefore the fixed cost of marriage is justified by even those with a lower level of endowments. By the same logic, this more specific model also echoes the policy experiments from the more general model.

# B Appendix Tables

Table B.1: Relationship between house price around marriage year and divorce: HPI from top 50 MSAs

| | Dependent variable: Divorce Status | | | | | |
|---|---|---|---|---|---|---|
| | Year of Marriage | | | Year Before Marriage | | |
| | (1) | (2) | (3) | (4) | (5) | (6) |
| House Price Index | 0.00489** | 0.00494** | 0.00459* | 0.00668** | 0.00670** | 0.00640** |
| | (0.00223) | (0.00231) | (0.00235) | (0.00261) | (0.00262) | (0.00270) |
| Year of Survey FE | No | Yes | Yes | No | Yes | Yes |
| Additional Controls | No | No | Yes | No | No | Yes |
| Observation | 1810729 | 1810729 | 1810729 | 1810316 | 1810316 | 1810316 |
| R-Squared | 0.0262 | 0.0311 | 0.0431 | 0.0262 | 0.0311 | 0.0431 |

Table B.2: Relationship between house price around marriage year and child investment: HPI from top 50 MSAs

| | Private School | | Grade Retention | | Number of Children | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| House Price Index | 0.00797** | 0.00554 | 0.00464*** | 0.00558*** | -0.0124** | -0.0113* |
| | (0.00399) | (0.00360) | (0.00161) | (0.00166) | (0.00590) | (0.00601) |
| Additional Controls | No | Yes | No | Yes | No | Yes |
| Observation | 756056 | 756056 | 1194080 | 1194080 | 1828382 | 1828382 |
| R-Squared | 0.0304 | 0.0546 | 0.0103 | 0.0246 | 0.0658 | 0.117 |

Table B.3: Relationship between house price around marriage year and parental labor force participation: HPI from top 50 MSAs

| | Dependent variable: | | | | | |
|---|---|---|---|---|---|---|
| | Worked Last Year | | | Usual Hours Worked | | |
| | (1) | (2) | (3) | (4) | (5) | (6) |
| House Price Index | -0.00110 | -0.000527 | -0.000509 | -0.437** | -0.394** | -0.382** |
| | (0.00265) | (0.00271) | (0.00237) | (0.177) | (0.179) | (0.160) |
| HPI × female | 0.00357 | 0.00363 | 0.000972 | 1.196*** | 1.197*** | 1.051*** |
| | (0.00535) | (0.00535) | (0.00499) | (0.300) | (0.300) | (0.282) |
| Year of Survey FE | No | Yes | Yes | No | Yes | Yes |
| Additional Controls | No | No | Yes | No | No | Yes |
| Observation | 1828382 | 1828382 | 1828382 | 1828382 | 1828382 | 1828382 |
| R-Squared | 0.0547 | 0.0560 | 0.102 | 0.117 | 0.118 | 0.164 |

Table B.4: Relationship between house price around marriage year and divorce: HPI from top 50 MSAs

| | Dependent variable: Divorce Status | | | | | |
|---|---|---|---|---|---|---|
| | Year of Marriage | | | Year Before Marriage | | |
| | (1) | (2) | (3) | (4) | (5) | (6) |
| House Price Index | 0.000971 | 0.00361 | 0.00310 | 0.00235 | 0.00427 | 0.00387 |
| | (0.00237) | (0.00259) | (0.00258) | (0.00274) | (0.00293) | (0.00292) |
| Year of Survey FE | No | Yes | Yes | No | Yes | Yes |
| Additional Controls | No | No | Yes | No | No | Yes |
| Observation | 1003338 | 1003338 | 1003338 | 997167 | 997167 | 997167 |
| R-Squared | 0.0259 | 0.0301 | 0.0427 | 0.0260 | 0.0302 | 0.0427 |

Table B.5: Relationship between house price around marriage year and divorce: HPI from top 50 MSAs

| | Dependent variable: Divorce Status | | | | | |
|---|---|---|---|---|---|---|
| | Year of Marriage | | | Year Before Marriage | | |
| | (1) | (2) | (3) | (4) | (5) | (6) |
| House Price Index | 0.00476 | 0.00543 | 0.00488 | 0.00618 | 0.00663* | 0.00623 |
| | (0.00309) | (0.00332) | (0.00342) | (0.00374) | (0.00387) | (0.00400) |
| Year of Survey FE | No | Yes | Yes | No | Yes | Yes |
| Additional Controls | No | No | Yes | No | No | Yes |
| Observation | 1003338 | 1003338 | 1003338 | 1003338 | 1003338 | 1003338 |
| R-Squared | 0.0252 | 0.0301 | 0.0427 | 0.0252 | 0.0301 | 0.0427 |

Table B.6: Relationship between house price around marriage year and child investment: HPI from top 50 MSAs

| | Private School | | Grade Retention | | Number of Children | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| House Price Index | 0.0122** | 0.0100** | 0.00401* | 0.00473** | -0.0137 | -0.0143 |
| | (0.00498) | (0.00446) | (0.00200) | (0.00208) | (0.00992) | (0.00963) |
| Additional Controls | No | Yes | No | Yes | No | Yes |
| Observation | 413732 | 413732 | 658627 | 658627 | 1012573 | 1012573 |
| R-Squared | 0.0292 | 0.0565 | 0.00816 | 0.0230 | 0.0622 | 0.112 |

Table B.7: Relationship between house price around marriage year and child investment: HPI from top 50 MSAs

| | Private School | | Grade Retention | | Number of Children | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| House Price Index | 0.0126** | 0.00910* | 0.00496** | 0.00610** | -0.00723 | -0.00816 |
| | (0.00522) | (0.00457) | (0.00217) | (0.00225) | (0.00864) | (0.00870) |
| Additional Controls | No | Yes | No | Yes | No | Yes |
| Observation | 413732 | 413732 | 658627 | 658627 | 1012573 | 1012573 |
| R-Squared | 0.0292 | 0.0565 | 0.00817 | 0.0230 | 0.0622 | 0.112 |

Table B.8: Relationship between house price around marriage year and parental labor force participation: HPI from top 50 MSAs

| | Dependent variable: | | | | | |
|---|---|---|---|---|---|---|
| | Worked Last Year | | | Usual Hours Worked | | |
| | (1) | (2) | (3) | (4) | (5) | (6) |
| HPI × female | 0.00979* | 0.00982* | 0.00833 | 1.144*** | 1.145*** | 1.053*** |
| | (0.00577) | (0.00577) | (0.00560) | (0.268) | (0.268) | (0.258) |
| House Price Index | -0.00206 | -0.00252 | -0.00348 | -0.411** | -0.403** | -0.433** |
| | (0.00332) | (0.00338) | (0.00354) | (0.195) | (0.193) | (0.194) |
| Year of Survey FE | No | Yes | Yes | No | Yes | Yes |
| Additional Controls | No | No | Yes | No | No | Yes |
| Observation | 1012573 | 1012573 | 1012573 | 1012573 | 1012573 | 1012573 |
| R-Squared | 0.0561 | 0.0576 | 0.100 | 0.115 | 0.117 | 0.163 |

Table B.9: Relationship between house price around marriage year and parental labor force participation: HPI from top 50 MSAs

| | Dependent variable: | | | | | |
|---|---|---|---|---|---|---|
| | Worked Last Year | | | Usual Hours Worked | | |
| | (1) | (2) | (3) | (4) | (5) | (6) |
| House Price Index | -0.00345 | -0.00303 | -0.00435 | -0.593** | -0.555** | -0.603** |
| | (0.00354) | (0.00359) | (0.00322) | (0.272) | (0.271) | (0.248) |
| HPI × female | 0.00325 | 0.00329 | 0.000978 | 1.220** | 1.221** | 1.091** |
| | (0.00761) | (0.00762) | (0.00722) | (0.457) | (0.457) | (0.437) |
| Year of Survey FE | No | Yes | Yes | No | Yes | Yes |
| Additional Controls | No | No | Yes | No | No | Yes |
| Observation | 1012573 | 1012573 | 1012573 | 1012573 | 1012573 | 1012573 |
| R-Squared | 0.0562 | 0.0575 | 0.100 | 0.116 | 0.117 | 0.163 |