

“The Value of Commitment: Marriage Choice in the Presence of Costly Divorce” by Anna Yurko, proposal

Introduction

Over the past half a century, the developed world has observed a dramatic decline in legal marriage rates. Since 1970, the average marriage rate for the twenty seven OECD countries has fallen by almost 40%.¹ At the same time, an alternative relationship form to legal marriage, cohabitation, has become vastly more popular. Exact cohabitation rates are more difficult to measure; however, survey numbers show a tenfold increase for the US from 1970 to 2006, and similar changes in direction if not magnitude are observed for other countries.²

Why is it that more and more couples chose cohabitation as a precursor to or even a substitute for legal marriage? Economists tend to seek the explanation for social phenomena from the point of the cost / benefit analysis, hypothesizing that the relative benefit of marriage must have declined due to changes in the socioeconomic factors. Beginning with Becker’s (1973) seminal paper, most of the literature has focused on benefits and costs of being married versus those of being single, with a few notable recent exceptions, such as Matouschek and Rasul (2008), Brien, Lillard, and Stern (2006) and Wydick (2004), who make the choice between being married and cohabiting the focal point of their analysis. The current project follows the latter approach.

This paper develops a theoretical model of choice between cohabitation and marriage. It adopts the view from law and economics literature that marriage is a contract that makes it more costly to terminate the relationship. These costs of entering into a marriage contract – higher exiting costs - are the ones typically assumed in the literature. Unlike previous works, however, here the higher termination costs in marriage are also the key source of benefits to marriage, which is greater commitment.

The theoretical predictions are obtained with a dynamic model. It assumes that the only difference between marriage and a non-marital cohabitation is the higher contract

¹ Source: OECD (2005). The exact numbers vary across countries, but the overall trends remain roughly similar.

² Source for the US: Olson and Olson-Sigg (2007), with original data from the US Census Bureau. According to UNECE Statistical Division Database (2007), Denmark has experienced a 64% increase in percentage of cohabitating couples between 1980 and 2006, and Netherlands – an increase of 245% over the same time period.

termination cost associated with marriage, and that the agents are free to enter either type of relationship contract. The quality of the match evolves randomly and independently over time, and every period each of the paired agents makes his or her decision on whether to stay in the given relationship or terminate it and seek another one based on the current match quality and expectations about the future. The match survives to the next period only if partners choose to preserve it; otherwise their cohabitation or marriage is terminated, and both partners suffer the separation costs plus additional divorce costs in the case of marriage.

The model predicts³ that for the same level of break-up costs, couples that start out in higher-quality matches need lower divorce costs to induce them to choose legal marriage over cohabitation. With lower divorce cost the cohabitation rates are higher and the marriage rates are lower. The selection effect also results in longer marriages and lower divorce rates. These predictions of the model are tested with available data for the OECD countries. Over the past several decades most of these countries have adopted the no-fault divorce laws, which can be viewed as a permanent reduction in divorce costs. The variations in the timing of the adoption of these laws, as well as other differences in divorce procedures across countries, make such analysis viable.

The premise that the primary function of marriage contract, with its higher termination costs, is to serve as a commitment device has already found some empirical validation. Matouschek and Rasul (2008) use individual marriage and divorce certificate data from the US to evaluate the effect of adoption of unilateral divorce on the propensity to divorce for couples married before and after the law's enactment. They find that propensity to divorce is lower for couples married after the law was in place, which seems to indicate that lower divorce costs undermine the ability of the marriage contract to serve as commitment device, with the result that only the better-matched couples still prefer to marry. This finding is consistent only with the commitment model of marriage benefits out of the three that they propose, with the other two models constructed on assumptions that marriage provides exogenous benefits to its participants or serves as a signalling device. Additional evidence is also provided by Rasul (2005), who uses US state-level panel data to show that the adoption of unilateral divorce laws has caused the marriage rates to decline.

³ Rather, it is expected to predict.

Wydick (2004) and Matouschek and Rasul (2008) develop theoretical models of commitment in marriage, both of which use a repeated prisoner's dilemma game setting to show that marriage can foster cooperation better than cohabitation due to its higher termination costs. The implication is that partners in marriage are more likely to act cooperatively towards each other and behave themselves than the cohabiters.⁴ Whether that is, indeed, the case is not obvious. Moreover, one can find both scientific and anecdotal evidence to the contrary.⁵ The model presented in this paper does not require marriage to generate higher benefits relative to cohabitation through the commitment incentive of higher termination costs.

If marriage does not offer additional benefits, why would couples choose it over cohabitation? The analysis in this paper suggests that in the presence of substantial break-up costs, either emotional, social, or financial, the higher termination costs associated with marriage can result in greater lifetime utility for the married individual. Marriage is the most committed type of relationship because it is the costliest one to dissolve, and the commitment is valuable.

The intuition is as follows. Any relationship survives if and only if both partners chose to maintain it. If one person enjoys the relationship and prefers to stay in it, she would only be able to do so if her partner also prefers not to terminate it. If he is no longer happy in the relationship and chooses to end it, his decision imposes a negative externality on her. When the break-up is painful and costly, this externality may be quite large. Higher costs of terminating a legal marriage may induce her partner to change his mind and preserve the relationship, eliminating the break-up costs they both would have had to pay otherwise. If break-up costs are sufficiently large, and as long as there is a chance that he may eventually become happy again in this relationship, additional termination costs from the marriage option result in higher welfare even when agents end up staying in less than satisfactory relationships for prolonged periods of time.

⁴ Wydick (2004) uses a relationship game in which the wife's strategies are "nag" or "be sweet", and the husband's strategies are "stay home" or "go out".

⁵ Averett, Sikora and Argys (2008) study the link between obesity and relationship status. They show that the body mass index for both men and women tends to increase significantly after marriage or entry into cohabitating relationship, but much more so in the case of marriage. They also provide evidence that, at least for women, thinner individuals are more desirable as partners. They interpret this result as evidence for the "marriage market" hypothesis, which suggests that since maintaining low weight is costly, individuals that are no longer concerned about attracting a mate may allow their weight to rise. This concern is likely to be lower for individuals in more committed types of relationships.

The results of this analysis are expected to contribute to the debate on the efficient divorce laws, providing both theoretical motivation and additional empirical evidence to support the view that divorce costs can be too low, resulting in lower individual and, thus, collective welfare.

Literature Review

The economics of marriage literature has begun with the seminal works by Becker (1973, 1974). This literature seeks to identify the gains from marriage relative to singlehood, and defines marriage as any union of two people sharing the same household, a definition that can be applied equally well to cohabitation. Smith (2004) provides a good and brief summary of the literature.

More recently several papers have developed theoretical models of the formation of either married or cohabiting unions: Matouschek and Rasul (2008), Brien, Lillard, and Stern (2006) and Wydick (2004).

Wydick (2004) uses a repeated prisoner's dilemma type game to demonstrate that marriage with its higher termination costs is more likely to induce cooperative behavior than cohabitation.

Matouschek and Rasul (2008) analyze three models of relative benefits from marriage versus cohabitation: the commitment model, the exogenous benefit model, and the signaling model. The commitment model is similar to Wydick (2004). The exogenous benefit model assumes that marriage gives additional utility to spouses that is not available in cohabitation. The signaling model assumes that marriage serves as a device to credibly signal one's love for his or her partner. Their empirical work shows that only the predictions of the commitment model of marriage are consistent with the data.

Brien, Lillard, and Stern (2006) estimate a dynamic structural model of choice between cohabitation and marriage with true match quality not being immediately observed. They assume that marriage provides exogenous utility bonus to both partners.

There has been a lot of empirical work analyzing changes in marriage rates, divorce rates, and cohabitation rates that have occurred over the past half a century. The majority of these studies focus on the no-fault divorce's effect on the divorce rates, and

most of them use the US data. The most recent studies have been done by Wolfers (2006) and Matouschek and Rasul (2008). Wolfers (2006) uses a panel data set of divorces in the US from 1968 to 1988⁶ to show that divorce rates rose sharply immediately after the introduction of no-fault divorce legislation, but the trend was reversed within a decade, and divorce rates actually fall slightly below the pre-legislation levels. Matouschek and Rasul (2008) use a different data set of individual marriage and divorce certificates for 33 US states from 1968 to 1995 and find that couples married after the enactment of no-fault divorce laws are significantly less likely to divorce.

The international studies have been so far limited to individual countries.⁷ Thus they can only explore variation over time, making it difficult to control for other relevant social and legal changes that have occurred over the same time period. All of these studies generally find a significant increase in divorce rates after the introduction of no-fault divorce legislation.

The effect of no-fault divorce laws on marriage rates have been analyzed by Rasul (2005) using the US state-level panel data. He finds that marriage rates decline after the no-fault divorce laws are implemented. Allen, Pendakur and Suen (2006) show that the introduction of the no-fault divorce legislation has caused a small but statistically significant increase in the average age at first marriage in the US.

The divorce procedures are not the only factors affecting people's decisions to enter into various types of relationships, and there are numerous studies exploring the effects of other socio-economic factors on marriage rates, divorce rates, marriage duration, labour force participation by married women, etc, and how changes in those factors affect these statistics over time. At the cross-country level, Kalmijn (2007) conducts a study for 30 countries in Europe to explain the differences in their marriage rates, ages at first marriage, and divorce rates in the 1990-2000 with differences in selected social and economic factors. He also uses those factors to explain differences in cohabitation rates, but the model is OLS due to the unavailability of panel data for cohabitation statistic. He finds that higher levels of women's employment are associated with low marriage rates, high divorce rates, and increased cohabitation. Religion is also important, as people in more religious countries are less likely to marry and less likely to divorce.

⁶ This data has been put together and used in an earlier study by Friedberg (1998).

⁷ An extensive summary of this literature is provided in Allen and Gallagher (2007).

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