3 Economic perspectives on marriage: causes, consequences, and public policy

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Marriage is central to the economic and social life of the United States, despite the delays in marriage, high rates of divorce, and high proportions of children born to unmarried parents. By their early 30s, 70 percent of Americans have married and nearly 60 percent are currently married.[1] Only 16 percent of 40–45-year-olds have never married. While marriage is a nearly universal experience, media coverage of marriage often focuses on issues affecting a small subset of the population, especially the legality of same-sex marriages.[2]

Although the home for the academic study of marriage has long been in sociology departments and among demographers, economists have increasingly produced theoretical and empirical analyses of marriage. The number of economics journal articles with the "marriage, marital dissolution, and family structure" descriptor jumped from 81 in the 1990–94 period to 393 in the 2005–09 period.[3] Economists have used standard economics tools to study marriage, including trade, contracting, game theory, externalities, human capital theory, financial risks, economic incentives built into the tax and transfer systems, search theory, and supply, demand and equilibrium in marriage markets.

The theoretical contributions that helped stimulate the economics profession to conduct rigorous research on marriage were Gary Becker's 1973 and 1974 articles on "A Theory of Marriage" and his 1981 book, *A Treatise on the Family*. Becker emphasized the gains from marriage that result from trade in which one partner may have a comparative advantage in the labor market, while the other has a comparative advantage in home production. Using the trade analogy, Becker reasoned that both partners can achieve higher incomes and utility by specializing and trading. A woman who is especially skilled in tasks highly valued in the labor market would specialize in that sector, while her partner who is comparatively more capable elsewhere concentrates on home production. When the two exchange income and services, both partners can gain from trade. One implication is marriage rates should be especially high in cases where the relative advantage of market and home production varies most. Assuming men have no advantage in home production, the more men earn relative to women, the more extensive are economic gains from marriage. An interesting extension is that a larger relative supply of potential male partners

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[1] See http://www.census.gov/population/socdemo/hh-fam/cps2009/tabA1-all.xls, drawn from the US Bureau of the Census. These figures are as of 2009.

[2] A Lexis-Nexis search of the *New York Times* between June 14, 2008 and June 14, 2010 revealed that of the 239 headlines involving marriage, 148 were about same-sex or gay marriage.

[3] Search by author of the Econlit database on June 14, 2010.

should increase the demand for women partners, raise their returns from marriage, and thus increase the likelihood of marriage (Grossbard-Shectman 1993).

The Becker approach suggests that men with high potential wages may marry women with low potential wages but good skills in home production. Women with high wage rates may gain less from marriage in the context of comparative advantage. But this logic does not apply to the case of public goods. In the context of joint financing of public goods, gains to a high wage man increase with the earnings of his spouse (Lam 1988).

In an overview of economic theories of marriage, Weiss (1997) examines how marriage promotes economies of scale, consumption of collective goods, and risk-sharing protection against unexpected events. Economies of scale arise because the costs of some home production rise more slowly than the output; for example, making a meal for two people takes less time than twice the time required to make a meal for one person. Compared to a situation where two parents live together with their children, the *combined* economic well-being of these same parents living in two separate households will necessarily be lower. This situation also applies to couples with no children, but children compound the drop in economic well-being because they typically require high expenditures and generate no (or very little) additional income.[4] Public goods allow additional people to enjoy goods or services with little or no added resource costs (e.g., housing, heating, and childrearing). If a husband expends time and effort to improve child outcomes, his wife can enjoy these outcomes at no added costs.

Given the potential benefits from marriage, how are the gains allocated? Economists have used game theory to answer this question. Instead of viewing marital choices as determined by a single individual or consensus, the game-theoretic view focuses on bargaining within the marriage (Lundberg and Pollak 1996). From this perspective, policies can affect the stability of marriages and the allocation of benefits by enhancing the bargaining power of a husband or wife. For example, divorce laws that make it easier for an ex-wife to gain custody over the children improve the bargaining power of all wives within a marriage (Ellickson 2008).

The distinction between cohabitation and marriage raises other issues. Cohabitation can bring economic gains from trade and joint financing of public goods in ways similar to the economic gains from marriage. But in the United States, cohabitation is far less stable than marriage. As a result, specialization or risk-sharing mechanisms might not work in cohabitation quite like they do in marriage. Higher stability through marriage allows couples to plan more easily and to make investments that will pay off over the long term. They may save, invest, and thereby accumulate wealth at a higher rate. Married couples may obtain higher wealth transfers from the grandparents of their children than cohabiting couples or single parents. Relative to cohabiting couples, married couples are probably more likely to react to income shocks to one partner with upward adjustments (for example, more work) by the other partner. The greater stability in marriage results

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[4] Economies of scale are reflected in the official poverty threshold. In 2001, the poverty threshold for a two-adult one-child household was $14,255, while the sum of the thresholds for one adult ($9,214) and for one-adult with one child ($12,207) was $21,421. Thus, it costs an additional $7,166 to maintain two adults and one child in two households at the poverty level than in one household at the poverty level. Having parents separated in two different households is more expensive than having the family share one household.

in part because marriage is a legally binding contract that imposes requirements that are not generally a part of a cohabitation relationship (Cohen 1998). The idea of marriage as contract leads economists to consider the similarities to and differences with commercial contracts. Contractual and legal issues take on special importance when a couple bears and raises children.

Economists have followed the policymaking community in focusing on the role of marriage in helping families, especially families with children, achieve self-sufficiency, lower their dependence on welfare payments and reduce their levels of poverty and material hardship (Burstein 2007). Policymakers have been especially concerned with the possibility that welfare programs have contributed to the decline in the marriage rate, the rise in non-marital childbearing and the increase in single parenthood. Families headed by unmarried women accounted for over 70 percent of chronically poor individuals living in families with children. Although the 30-year trend away from two-parent families has slowed in recent years, the share of children living outside married couple families remains high. About one in three children live in one-parent families and nearly 40 percent live away from at least one biological parent (Lerman 2002a). Moreover, unmarried parenthood may well increase, since the share of births to unmarried parents reached a new high of 40 percent in 2007 (Hamilton et al. 2009).

One contentious policy issue relates to whether the economic benefits of marriage extend to low-income, less educated women. In a 2004 editorial, the *New York Times* argued:

> It is undeniably true that women tend to become poorer after divorce and that children from single-family homes are more likely to grow up in poverty. But the fiscal lift that occurs when middle-class couples marry and combine resources does not come about in neighborhoods where jobs have long since disappeared and men in particular tend to be unskilled and poorly educated.

Kim Gandy, president of the National Organization for Women, has argued (Toner 2002), "To say that the path to economic stability for poor women is marriage is an outrage." The worry is that the prospective spouses of low-income women and men are themselves too poor or too limited in their earnings capacities to contribute significantly to the family's resources (see Edin 2000). While the lack of a second earner complicates the economic problems of less educated mothers, another adult with zero or low earnings would hardly be a solution. At the same time, a second earner or caregiver need only provide about $2,000–$3,700 in earnings in order to offset the increase in family needs required by an additional person.[5]

This chapter uses economic perspectives to examine the factors influencing marriage in the United States, the consequences of marriage for men, women, and children, and the role of selected public policies relating to marriage. Since the literature on each of these issues is vast, the chapter is selective. In particular, the emphasis will be on how marriage trends and the potential economic benefits from marriage are affecting people who are at high risk of low-income and material hardship. The first step is a brief description of

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[5] The increase in the poverty threshold associated with adding another adult depends on the initial family size and number of children. See http://www.census.gov/hhes/poverty/threshld/thresh01.html.

some of the complications that arise when trying to determine cause and effect relationships surrounding marriage issues. Next, the chapter considers economic perspectives and evidence on the determinants of marriage. Then, we examine evidence about the consequences of marriage for adult and child well-being. The chapter concludes with a discussion of selected current and future public policies relevant to marriage.

COMPLEX CONNECTIONS BETWEEN MARRIAGE AND ECONOMIC FACTORS

The relationships among marriage, labor-market choices and outcomes and other economic and social outcomes are complex. How well adults succeed in the labor market can directly affect their marital and family status, which in turn can affect their living standards and their relationships with their children. But marital status and family status also affect labor-market choices, such as whether to work and how much to work. The interactions are often unclear and frequently vary by subgroup. A high-earning man or woman might be able to choose among several good potential partners without committing to a marriage. Marriage might divert attention from one's career and lead to lower long-term earnings. On the other hand, marriage might strengthen responsibility and long-term time horizons that lead some spouses to work more and others to work less. Cohabitation might be a viable substitute for marriage in couple relationships, but less so with childrearing. High income might keep families together or become a source of dissension and family conflict. Work by mothers might serve as a good example to children and reduce the financial burden on families or might limit the attention children receive at critical junctures.

The direction of causation is often difficult to determine. Marital status may affect the wages that people earn and the commitment to work that people make (Ahituv and Lerman 2007), but these relationships may be mediated by the effect of marriage on the quality of couple relationships and parent-child relationships. The types of jobs available to mothers and fathers may affect the amount of time parents spend with their children. At the same time, the priority parents attach to parenting time may affect the jobs they choose. The dynamics of these interactions are likely to vary by sex and over time as individuals age. Moreover, statistical analyses are generally able to capture average effects for groups but not all the variations in impacts within groups.

Social scientists have tried for decades to sort out which relationships are genuinely causal and which are merely associations. The job is complex and fraught with conceptual, methodological, and empirical problems. Are the researchers simply showing correlational relationships or learning about causation? It is hard enough to document causation in one particular relationship, such as between marriage and work effort. Can the researchers incorporate all the key interactions in studying this or other specific relationships? Are there sufficient data to determine the size of the impacts and how they differ among subgroups of the population?

The complexities become magnified when researchers try to incorporate links between marriage, employment, living standards, and child outcomes. Each of the relationships involves many possible connections that may vary over the life cycle, may be changing as the economy and social attitudes evolve and may differ by demographic group.

There is little doubt that personal characteristics affect the choices that individuals face

and make. Recent research argues for the importance of both cognitive and non-academic abilities (like patience, self-control, and time management) in determining choices that individuals make (Cunha and Heckman 2007). The effects can be multiplicative, because skills and abilities are acquired, reinforced, and complemented through development. But rarely are these non-academic skills measured or assessed.

Despite the difficulties, economists have joined other social scientists and provided a large and growing body of evidence about the causes and effects of marriage. As economists have incorporated marriage into microeconomic models of behavior, researchers from various fields have drawn on these perspectives to measure a variety of impacts on large samples of individuals. The next sections consider these economic perspectives in reviewing this evidence.

ECONOMIC PERSPECTIVES ON DETERMINANTS OF MARRIAGE TRENDS

The decline in marriage is a worldwide phenomenon. Between 1970 and 2006–07 the crude marriage rate (marriages per 1,000 population) declined by nearly 50 percent in 29 OECD countries.[6] One reason is the rising rate of cohabitation in nearly all countries. Data from recent years show that about 12 percent of 20–34-year-olds are cohabiting, nearly 30 percent of all couples (married or cohabiting). At the same time, divorce rates have increased in most countries, nearly reaching the high levels present in the US. Perhaps the indicator of most importance to policy is the share of children living away from their parents. In the US, 30 percent of children do not live in a two-parent family, a figure well about the 17 percent average in OECD countries.

The tendency to delay and to avoid marriage is taking place among all income and race/ethnic groups. As Figure 3.1 shows, men in their late 20s and early 30s were far less likely to be married in 2009 than in 1960. Less than 30 percent of black 25–34-year-old men were married in 2009, down from 70 percent in 1960. Although the marriage rates of men rise with income, the dropoff in marriage has affected all income groups (Watson and McLanahan 2009). In 1960, 90 percent of 25–34-year-old non-Hispanic white men in the top quartile of income were married; in 2000, the figure had dropped to 67 percent. For those in the bottom income quartile, the decline was even sharper, from 67 to 34 percent. Black men in the bottom quartile of incomes saw their marriage rates fall from 51 percent to 16 percent (Watson and McLanahan 2009). About 84 percent of men and women have been married by their mid-40s, but the share who are still married at these ages is only about 65 percent. Alongside the relatively constant share of women ever marrying are important differences in trends for subgroups (Heaton 1991). Among white women, the proportion ever marrying is projected to rise for those who have graduated from college, but to decline for those who do not graduate from college. Black women have experienced a sharp drop in marriage, with the proportion ever marrying falling from 85 percent for the 1945–49 cohort to 64 percent for the 1960–64 cohort.

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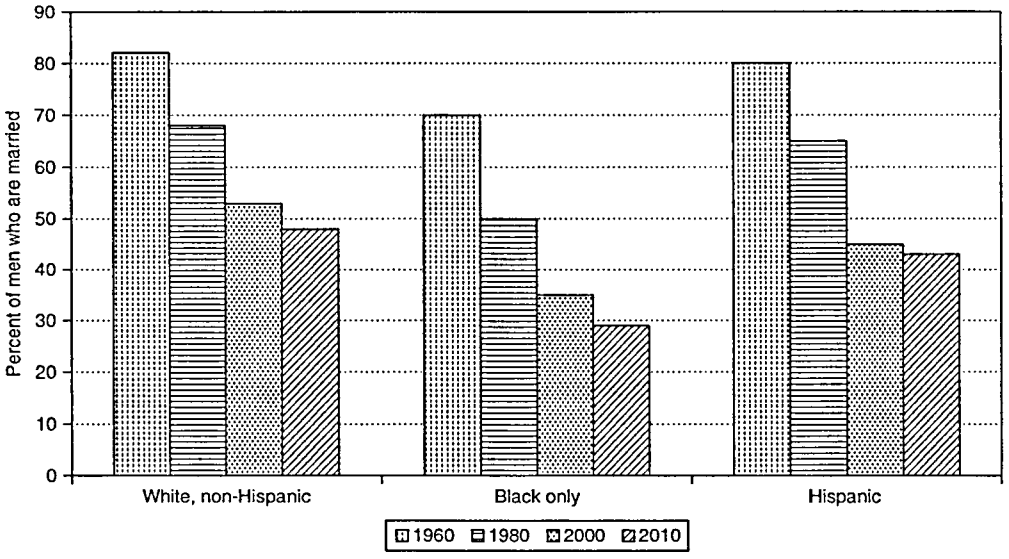
[6] These figures come from the OECD and its family database, www.oecd.org/els/social/family/database.



Source: Watson and McLanahan (2009); US Census Bureau, www.census.gov.

Figure 3.1 Declining marriage rates among 25–34-year-old men, 1960–2009

Men's Earnings and Marriage Rates

In explaining the changing marriage patterns, economists and sociologists lean heavily on the changing job market. Isolating the impact of men's earnings on marriage is difficult for several reasons. One is that men with better capabilities in the job market are more attractive in the marriage market as well. Even among men with the same educational levels, work experience, and other characteristics that the researcher can observe, some will have unmeasured attributes that increase both work and marriage. A second concern is potential reverse causation – that is, the prospect of marriage causes men to become more serious in the labor market, implying that it is marriage that raises earnings instead of high earnings causing marriage. A third issue is the varying contexts for studying determinants of marriage. Is the focus on entry into marriage from cohabitation or from living alone? Is it staying married or remarriage? Is it marriage among unmarried parents who have recently had a child?

One well-known analysis (Wilson 1987) attributes the decline in marriage rates among black men to their declining ability to obtain good, steady jobs. Certainly, researchers find considerable evidence that better job options for men lead to higher marriage rates at a point in time.[7] Ellwood and Jencks (2004) cite 18 studies showing some positive impacts on marriage from higher men's earnings. Additional recent studies find higher wage rates

[7] See Oppenheimer (2000), Burgess et al. (2003), Xie et al. (2003), Manning and Smock (1995), Call and Teachman (1996), Smock and Manning (1997), Teachman et al. (1994), Becker et al. (1977), and Weiss and Willis (1997).

and improved employment opportunities for men significantly influence higher rates of marriage (Ahituv and Lerman 2007; Black et al. 2003). At the same time, worsening job opportunities over the 1970s and 1980s accounted for only a modest reduction in the decline in marriage over time (Wood 1995). Moreover, higher earnings do not seem to increase cohabitation relative to living alone.

One striking study uses experimental data to address the purely causal role of men's earnings on marriage (Marmun 2008). The focus of the experiment was to determine the impact of the Job Corps on the labor-market outcomes of disadvantaged youth participants. Since the experiment did show initial earnings gains for participating men and women, it offers a test of whether an exogenous improvement in earnings increases marriage. Among the young men in the sample (ages 16–24 at entry into the program), the earnings gains did not translate into higher marriage rates. Somewhat surprisingly, the earnings gains for women did increase marriage.

The impact of men's earnings on marriage may depend on their ability to reach an income threshold relative to their peers. One study looks at the importance of reaching at least some "ideal" income for influencing men to marry, where ideal income is the median income of the man's peer group (Watson and McLanahan 2009). The authors find that men below this threshold are much less likely to marry, perhaps because both the man and the women have financial expectations that must be reached before getting married, even if they have already parented a child together. The impact of higher men's earnings on marriage turns out to be much higher among men below the threshold than among men above it. Presumably, the reason is that once men reach a certain earnings threshold, factors other than earnings dominate marriage decisions.

Women's Earnings and Marriage Rates

Raising the potential earnings of women relative to men can lower marriage rates, as expected from the Becker model of specialization. In job markets that are especially good for women and especially bad for men, young women experience lower marriage rates (Blau et al. 2000). Moreover the lower the relative supply of men, the lower the marriage rates.

Other studies have looked at the impact of the projected long-run earnings of men and women on marriage and on the entry into marriage and divorce (Burgess et al. 2003; Hoffman et al. 1991). Both find that higher prospective earnings of women lower their entry into marriage and both agree on the pro-marriage effects of higher men's earnings. The estimates differ on how women's earnings affect divorce, with one finding women's potential earnings negatively related to divorce (Hoffman et al. 1991) and the other showing higher long-term wages of women increasing divorce (Burgess et al. 2003). For the cohort reaching their 20s in the 1980s, more self-reliance among women meant less time spent married. A third study reinforces the findings that higher earnings potential among women delays entry into marriage (Van der Klaauw 1996). An increase of $1,000 in women's earnings lowers the number of years spent in marriage by age 35 by 1.3 years and raises the proportion of never-married women. This estimate is in sharp contrast to the substantial positive impact on marriage of added earnings of men. One important caveat is that behavioral patterns may have shifted since 1985, the end date for following women in this study.

Reviews by Burstein (2007), Ellwood and Jencks (2004), and Oppenheimer et al. (1997) raise serious questions about the evidence indicating higher employment of women reduces their marriage rates. All are skeptical of cross-section and time-series studies because of their inability to distinguish whether employment is causing less marriage or marriage is causing less employment. Panel studies have other problems, including the difficulty of distinguishing between delaying marriage or reducing the long-term incidence of marriage. They point to studies showing that highly educated women who have higher than average earnings potential delay marriage but ultimately are more likely to marry than other women (Goldstein and Kenney 2001; Qian and Preston 1993). Moreover, several studies have found little or no effect of women's earnings potential on their marital outcomes. Looking at a sample of cohabiting couples in the same two periods, Smock and Manning (1997) also find no impact of lagged women's earnings on the likelihood that cohabiting couples will marry.

Some studies focus on the effects on marriage of women's earnings relative to their actual partners. They ask whether marriages are less likely to occur and be maintained when women can earn or do earn as much or more than their male partners. For example, two studies find that couples in which men earn substantially more than women are more likely to marry and stay married (Heckert et al. 1998; Jalovaara 2003). In Nock's study (2001), marriages in which both spouses earn at least 40 percent of the family's total earnings involve less commitment among women and a higher divorce rate.

How Taxes and Transfer Benefits Influence Marriage

Other economic incentives can affect the gains from marriage for men and women. Government tax and benefit policies often lessen the economic gains from marriage relative to cohabitation or to living apart from a potential partner (Carasso and Steuerle 2005). A long and contested literature has found mixed impacts of welfare payments on marriage (Moffitt 1998). The overall picture emerging from this research indicates that the level of welfare benefits exerts a negative impact on marriage and a positive impact on mother-headed families (Moffitt 2000; Hu 2003).[8] Tax policies play a role as well, especially in affecting whether cohabiting couples make the transition to marriage. The presence of marriage penalties in the tax system discourages these couples from marrying, although the size of the observed impact is modest (Alm and Whittington 2003).

Another economic factor in determining marriage, especially among parents, is the availability of child support payments. To the extent unmarried or divorced mothers have ready access to generous child support payments, their economic gain from marriage declines. For this reason, stronger child support enforcement regimes reduce the likelihood that unmarried parents marry (Carlson et al. 2004).

Economists have applied concepts of job matching and job search to the marriage market (Mortensen 1988; Burdett and Coles 1997). Questions that arise in this context include: What factors prolong or shorten search? And how does prolonging a search for partners affect marriage rates? One factor that prolongs search is a high dispersion in male

[8] However, among unmarried parents living together, higher welfare payments may discourage couples from breaking up (Carlson et al. 2004).

wage levels, the argument being that increases in wage dispersion raise the gains from extending search in the marriage market. Some studies have shown a link between high male earnings inequality and low marriage rates (Gould and Paserman 2003; Loughran 2002). Another factor that affects search time is attitudes toward risk. Individuals who are risk averse are more likely to marry sooner than individuals who are more willing to take risks (Spivey 2010). The effect is especially strong among men, indicating that women value risk aversion as an attractive trait for a marriage partner.

Other evidence for the role of risk comes from a study of how state differences in the variability of consumption affect the marriage rate. Since economic gains from marriage theoretically increase with the uncertainty of lifetime incomes (Kotlikoff and Spivak 1981), the expectation is that higher risk states have higher marriage rates. Marriage allows for some diversification of risk. A recent cross-section study finds that higher levels of the state's variability of consumption are associated with higher marriage rates (Chami and Hess 2005). At the same time, higher initial incomes lower the likelihood that individuals are married.

Overall, economic theories suggest, and empirical evidence demonstrates, that economic factors play a significant role in the level of marriage. Most of these economic determinants of marriage reflect how well men and women are doing in the job market, while other factors arise from government tax and transfer policies.

ECONOMIC CONSEQUENCES OF MARRIAGE

Questions about the benefits of marriage are complicated to answer for two important reasons. The first is selectivity, or unobserved heterogeneity. In most data sets linking an economic variable with marital status, we are unable to observe many attributes of the relevant individuals, such as their looks, motivation, and personality. If these unobserved attributes are the cause of both marriage and economic well-being, then associations between marital status and economic success would have no value for predicting the economic impact of marriage. A second issue is simultaneity. Low income may reduce the chances that people marry, but marriage may increase incomes. Any effort to quantify potential economic gains from marriage must confront yet not be immobilized by these methodological problems.

Several mechanisms may generate a beneficial impact of marriage on economic well-being. Married men may be more committed to work and less likely to quit because of more stable personal routines and the greater emotional support from wives. Husbands may see work as an especially urgent priority because of their family responsibilities. One spouse may help the other invest in the skills required to increase long-term earnings. The apparent marriage advantage in emotional health for men and women (Waite and Gallagher 2000) might carry over into jobs and earnings power. For these reasons, married workers, especially men, may earn a wage premium over equally qualified unmarried workers.[9] The higher income of husbands might be partly offset by a lessening of the earnings pressure on wives.

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[9] The evidence for these patterns is discussed in the empirical sections of the chapter.

Marriage might reduce material hardship, even among similarly low-income families. Current income relative to needs does not take account of permanent income, income variability, wealth accumulation, or the ability to draw on resources of relatives and friends. Broader measures of economic well-being may be of special importance to low-income families trying to avoid material hardships, since measured income may understate actual income and the ability to consume. Perhaps by drawing on assets and on greater help from family and friends, poor married couples may be in a better position to limit material hardships than equally poor single-parent families.

The specific route to marriage or non-marriage may play a role as well. The gains for a continuous marriage relative to a second marriage may differ from the gains for the first year parents are married over the first year of single motherhood. First marriages between parents may be more beneficial than second and subsequent marriages involving step-parents. Mothers who divorce often end up with a property settlement and a flow of child support payments. Never-married mothers are much less likely to receive either source of income. Men who become non-custodial parents face child support obligations that might be related to their income and thus serve as a tax on income. The theoretical impact on the father's work effort is uncertain since the income loss associated with child support payments should act to encourage work, while the lower marginal gain from working (because some of each added dollar goes to child support) should discourage work effort.

All of these potential effects of marriage may be weaker or stronger among individuals with low education and earnings capacity. If potential partners initially have little or no "productivity" or "insurance value", and the prospect of increasing these attributes is slim even if they marry, then the benefits to marriage may be minimal (Edin 2000). Because the US social safety net weakens the returns to marriage among low-income families, government policies may lower the benefits of marriage to these families. On the other hand, marriage may be more attractive to the poor, since it is especially urgent for them to increase their income in any way, to avoid income instability, to engage in long-term planning and to expand the involvement of both parents in childrearing.

What does the empirical evidence reveal about gains in well-being resulting from marriage? Before attempting to answer this question, we first attempt to clarify the issue by recognizing the many ways of asking how marriage can contribute to economic well-being.

Marriage and Child Poverty, Income Inequality, Wealth, and Material Hardship

Official poverty measures document much lower poverty rates among married couples than among single parents. According to the 2008 official poverty measures, 6.7 percent of individuals living in married couple families had incomes below the poverty line; for all other individuals, the rate of poverty was over 24 percent. The gap was even higher among black individuals, with a 9 percent poverty rate for individuals in married couple families and over 35 percent for everyone else.

A common objection to the idea that marriage enhances economic well-being is that the men who current single mothers would marry are often poor themselves and their marriage would leave the children in poverty in any case (Edin 2000; Ooms 2002). One way of examining the issue is to simulate how family incomes of single mothers would have changed if their tendency to marry today were the same as in some earlier period

and they married available men with similar levels of education, race-ethnic origin, and age. Two studies have conducted this analysis, one from 1971 through 1989 (Lerman 1996) and another from 1971 through 1999 (Thomas and Sawhill 2002). Both find that, while the couples in simulated marriages would have incomes considerably below those in actual marriages, declines in poverty and inequality associated with marriage would be substantial. Child poverty rates would have declined instead of having increased and the added marriages would have prevented half of the rise in family income inequality.

Other studies of marriage and current economic status compare ever-married or currently married individuals with unmarried individuals with similar demographic, area, and family background characteristics. Marriage gains might be higher or lower among those most at risk of poverty. One study looked at the impact of marriage on poverty and examined whether the gains from marriage are as large for the disadvantaged as for other groups (Lichter et al. 2001). The results indicated that marriage significantly and substantially reduces the likelihood of poverty, holding constant for family background, race and ethnicity, age, education and marital versus non-marital childbearing. Current marriage was associated with a two-thirds reduction in poverty. Moreover, marriage apparently exerted a larger effect on poverty among women at a high risk of poverty than among women at a lower risk of poverty.

Another study found that marriage raised a family's net worth relative to cohabitation and single motherhood but not compared to single-father families (Hao 1996). Married couple families generally received more in the form of private transfers relative to other groups, when the author takes account of the probability of receiving a transfer and the mean size of the transfers. Intact married couples did better than all other groups in receipt of private transfers. Unfortunately, these findings are subject to possible selectivity bias.

Those who downplay the importance of marriage often cite cohabitation as an alternative, since cohabiting couples have two potential earners and can take advantage of scale economies, just like married couples. However, empirical studies typically show a clear disadvantage for cohabiting relative to married couples, even among those with the same race, education, parental background, number of children, and ability measures. A study of the impact of family type (married couple, cohabiting couple, single female, and single male) on the income-to-need ratios of children found that the income-to-needs ratio was 0.43 points lower for cohabiting couples than for married couple families, 1.26 points lower for single female families, and 0.54 points lower for single male families (Manning and Lichter 1996).[10]

Apparently, cohabiters are less likely to share their incomes than married couples (Winkler 1997). High levels of non-wage income generally reduce the hours people supply to the job market. Using this idea, Winkler argued that if a cohabiting man fully shared his income with his partner, then increases in his non-wage income would reduce his partner's hours worked by as much as increases in her non-wage income. By this indicator, married couples share their income fully but cohabiting couples do not. However, pooling is common among long-term cohabiting couples and cohabiting couples with children. Another study based on labor supply responses suggests that pooling and specialization are less common among cohabiting couples than among married couples (Song 1999).

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[10] The income-to-needs ratio is equal to income divided by each family's poverty threshold. Thus, a ratio of 1 means the family's income is equal to the poverty line.

Another look at the marriage-cohabitation comparison comes from studying the experience of material hardship, holding constant for family income. One found that income linked to cohabitation did significantly less than income within marriage to reduce hardship (Bauman 1999). In another analysis (Lerman 2002a), marriage lowered material hardship, even among households with similar incomes and demographic and educational characteristics. Since married couples have higher incomes than unmarried couples with the same income-generating capacity, married couples with the *same* incomes as unmarried couples are likely to have lower income-generating capacities. Thus, comparing low-income, married couples with low-income, unmarried couples biases measured effects of marriage downward. However, the reduced hardship associated with marriage extends both to low-income and less educated women, despite their less promising marriage market. One explanation is that married parents had greater access to help from family and friends and this gave married couples an advantage in avoiding material hardship.

The economic advantages that marriage conveys to mothers over cohabitation are especially interesting, since they are the result of an inability of a woman (mother) to form a close relationship and live with a male partner. Close to 95 percent of mothers and 75 percent of black mothers were able to live with their children and a husband or partner at least part of their years as parents. This suggests that the key issue is not finding a husband or partner, but forming a stable, long-term relationship. One study looked at a cohort of mothers with premarital pregnancies to determine the impact of marriage income and the stability of living standards (Lerman 2002b). Although many of the early marriages came about because of the pregnancy and impending birth and not because of long-term planning, marriage still appeared to raise living standards. Gains were registered for marriages among minority mothers and for those with the low test scores on Armed Forces Qualifying exams. Most strikingly, the marriage effect on economic well-being came from models that followed women over 15 years and controlled for both observed and unobserved differences among mothers. Living in a married state raised living standards by 65 percent relative to living alone as a single parent, 50 percent relative to living as a single parent with another adult, and 20 percent relative to cohabitation.

The Marriage Premium for Men in the Labor Market

The relationship between marriage and labor-market outcomes is complex. Marriage affects the supply of labor of men and women. Changes in work effort, in turn, influence each partner's accumulation of human capital and wage rates. For those who increase their human capital, higher wages over time make work more attractive, though the income effect lessens the urgency of long hours. Both hours and wage levels interact with marital status. Added work experience and higher wages can alter the entry into marriage, divorce, and remarriage by influencing the attractiveness of an unmarried person to a potential spouse and by raising the cost of divorce. At the same time, the increased stability of a marital union may affect hours worked and wages, though these effects may well differ by gender. Marriage may also raise or lower wage rates, for example, by influencing a worker's time horizon, investment, motivation, and acceptance of unpleasant jobs that pay well. These marriage-induced effects on wages provide an indirect mechanism by which marriage raises the supply of labor.

The literature on each of these key relationships is extensive and goes back many years.

Research confirms an earnings advantage for married men dating back at least to the 19th century (Goldin 1990). The marriage earnings premium estimated from 1940–80 decennial Census data has been consistently significant at percentages ranging from +11 percent in 1959 to +23 percent in 1969 (Loh 1996).[11] For black males, the marriage premiums are generally much higher.[12] Using cross-country data from the 1980s, Schoeni (1995) finds a wage advantage of married over single men in all 14 countries studied. Even among men with poor health, marriage appears to increase hours worked (Parsons 1977).

Though the earnings gains induced by marriage could come from added hours or higher wages, most of the literature examines how marriage affects the wage rates of men and not their labor supply. The focus of recent studies of male wage premiums is on distinguishing a pure causal effect of marriage from a selection effect in which men who are especially capable in the labor market are more likely to marry than other men.

Since men differ in ways unobserved in standard cross-sectional data sources, some studies use panel data to control for these unobserved differences by estimating how earnings respond to changes in marriage. An application of this approach for young white men from 1976 to 1980 indicated that marriage raises wage rates by about 6 percent and that divorce reduces wage rates by about 2 percent (Korenman and Neumark 1991). Allowing the marriage premiums to rise with the duration of marriage, the study found that wages rise with marital tenure and that the marriage premium reaches about 15 percent for those with the average years of marriage.[13]

Another study using the same data followed a cohort of 19–29-year-old white men in 1970 through 1980 when they were 29 to 39. It found a wage premium from marriage of 5.6–8.3 percent (Cornwell and Rupert 1997). Still another study using similar methods found declines in the male marriage premium, but these unexpected results are probably related to the use of only three years of data (Gray 1997).

One innovative study (Antonovics and Town 2004) estimated how marriage affects wage rates by using data on 136 pairs of identical twins from Minnesota. Assuming that both members of a twin pair have the same unobserved individual-specific earnings endowment and family-specific earnings endowment, the authors find a 26 percent marriage wage premium within twin pairs, a level somewhat higher than the estimate derived from cross-section regressions that take no account of the men's status as twins. This evidence persuasively shows the absence of a selection effect, but the results may not generalize to a broader population.

To see whether marriage causes men to work longer hours as well as earn higher wages, Ahituv and Lerman (2007) looked at the interactions between marital flows, wage rates,

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[11] These marriage impacts on earnings control for education, years of potential experience, potential experience squared, race, immigrant status, veteran status, region, occupation, and industry.

[12] The black marriage premium was less than the white premium in 1939 and 1949, and 1969, but reached 38 percent in 1979.

[13] Further evidence for a marital wage premium comes from their analysis of records from an individual employer. Even within a narrow range of occupations, marriage increases wage rates, largely by raising the likelihood of promotion. Daniel's (1995) analysis of a more recent cohort of young men found similar effects, with slightly higher shares associated with selection.

and hours worked as men aged from 17–19 in 1979 to their late 30s–early 40s in 2002. The effect of marriage is especially large for continuing marriage, while the effect of marriage on hours worked is particularly large for entering marriage. Putting the wage and hours effects together, entering or remaining married raises earnings by about 21–24 percent relative to staying single (i.e. never-married). The marriage effect on earnings is about 17 percent relative to divorce. Even remarriage is shown to lead to an 11 percent advantage over those remaining divorced. Marriage effects of these magnitudes are equivalent to earnings gains associated with 1.7–2.4 years of schooling, depending on whether the comparison is with divorced or with single men. For black men, the earnings advantage from a continuing marriage over never being married is similar to the overall effect (17.9 percent), but the black male earnings premium reaches 28 percent when comparing continuing marriage to continuing divorce.

The transition to marriage may raise earnings among men who are initially unwed fathers. One study found that entering marriage between the birth of the child and one year later was associated with an earnings gain of 29 percent at the one-year point, 44 percent after three years, and 66 percent after five years (Garfinkel et al. 2009). But entering cohabitation raised earnings almost as much. In all cases, the increases are net of age, education, race, immigrant status, and prior relationship stability. Another study shows estimates indicating no statistically significant earnings gains from the transition to marriage (Mincy et al. 2009). Still, even this study's estimates indicate marriage-induced earnings gains of 40–50 percent for black unwed fathers, though the results are significant only at the 10 percent level.

Several studies have examined the reasons for a marital wage premium. Some of the premium has been attributed to the fact that married men are more willing than unmarried men to take jobs that are more difficult, more dangerous, or more unpleasant in return for a higher wage (Reed and Harford 1989). Another possibility is that the marriage premium is partly a return on the higher human-capital investment that married men make by working longer hours and gaining more work experience (Kenny 1983). One study rejects the hypothesis that household specialization accounts for a good deal of the male wage premium by showing that the level of men's housework has no effect on the wage premium (Hersch and Stratton 2000).

Other possible reasons for a wage premium are that marriage leads to decreases in risky behaviors, such as binge drinking and marijuana use (Duncan et al. 2006). Norms no doubt matter as well. Married men appear to internalize norms like working hard, obedience to superiors, and getting ahead that make them better workers (Gorman 1999). Married men work longer hours, work harder on the job, have lower absenteeism from work, and are less likely to be fired than single men (Bielby and Bielby 1988; Nock 1998; Waite and Gallagher 2000). As a result, their productivity rises on the job. A study of marital transitions and job productivity among male Navy officers in technical and managerial jobs found improved performance ratings and a higher likelihood of promotion as a result of marriage (Mehay and Bowman 2005).

Marital Status Effects on Women's Employment and Earnings

The last several decades have witnessed a rapid growth in the employed share of married women (DiNatale and Boraas 2002; Pencavel 1998). The gap between the employed

shares of the married and single women populations narrowed sharply between 1975 and 2000. The share of 25–34-year-old married women participating in the work force jumped from 48 to 71 percent and the proportion working 50–52 weeks per year rose from 38 to 58 percent. The increases still left married women working less than unmarried women, but by a much smaller margin in 2000 than in 1975. Part of the growth in married women's employment is the rise in remarriage and the higher likelihood of employment among remarried women (Seitz 2000).

Among women without children under 18, married women work a few weeks less per year than unmarried women, but the gaps narrow as women age.[14] The pattern is similar for women with children under 18. Earnings differences are largest at the 25–34-year-old age group, especially between married and unmarried mothers.

The association between marriage and reduced employment is much higher among women with at least some college education. Education apparently increases the employment and earnings reduction associated with marriage. For women with no children and some college or more education, the share of married women working in 2004 is 11 percentage points lower than among single women and 5–9 percentage points lower than among separated, divorced, or cohabiting women. The marriage-related shortfall in employment is even higher among women with children. Among women who worked in 2004, marriage and motherhood are associated with lower hours of work per year, but the maximum differential is two weeks. Married educated women with no children worked about three weeks less per year than never-married women with no children; married mothers experience a shortfall of about six weeks per year.

Impact on Income Transfers

The lower poverty induced by the higher earnings and scale economies will generally reduce eligibility for and use of public benefit programs. Even among families with similar incomes, married couple families are less likely to rely on government social benefits. Outlays on welfare and related benefit programs do not necessarily involve resource costs to society as a whole, since the costs to taxpayers are mostly offset by benefits to recipients. However, there are economic distortions in collecting taxes and in distributing the revenues. The impact on welfare outlays of lost income associated with not being married will depend on the family's starting point.

One study found that the direct and indirect budgetary costs of nearly 10,000 divorces in 2001 in Utah amounted to $300 million, or over $30,000 per divorce (Schramm 2006). The required taxes to fund these outlays generate economic costs. Moreover, the study finds that families themselves experience added costs of about $12,000 per couple. Another study estimated that the taxpayer costs of divorced and unwed childbearing is at least $112 billion per year (Scafidi 2008). And these estimates do not take account of lost earnings and productivity linked with non-marriage and divorce.

Child support is an example of an intervention linked with unwed or divorced parenting that has real economic costs. When parents separate and one parent must pay child

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[14] The figures come from the author's tabulations of the March 2005 Current Population Survey (CPS).

support, there are substantial public and private costs. The public costs relate to the child support system, while the private costs can involve work disincentives, especially among low-income men. These can be substantial. To transfer $4,000 per year from a non-custodial father to a custodial mother is likely to have real costs of about $1,000 per year. This will not affect all couples, only those with children.

Finally, to the extent that marriage improves outcomes for children, the long-term impacts on income transfers are no doubt enormous, though they have yet to be fully quantified.

Implications for Material Hardship

The impacts of marriage may extend to reducing the material hardship of families, such as cutting or missing meals because of an inability to buy food and not having enough money to pay rent, mortgage payments, or utilities. Given the higher incomes of married parents, it is no surprise that they experience less hardship than do unmarried parents. More striking is the result that being in a married, two-parent household serves as a protective device against material hardship, even among those with the same income-to-needs ratio, immigration status, race, education, and age of children and adults (Lerman 2002a). In one study (Lerman 2002b), the rise in hardship associated with not being married is about 10 times the increase in hardship in moving from 50 to 150 percent of the poverty line (going from 0.5 to 1.5 on the welfare ratio).

Impact on Happiness

Often, economists take for granted the idea that higher income raises utility and satisfaction, partly by providing people with the chance to enjoy more goods, services, and/or leisure. Economists have always viewed income as a means to the end of higher utility or satisfaction. In recent years, economists have started to recognize that one of their main assumptions may not be valid and that it is worth measuring happiness directly and not indirectly through an assumed relationship between income and utility.

A variety of studies have examined the determinants of happiness and particularly the uneven role of income in comparison to other important life situations. Unemployment substantially lowers happiness, not mainly because of the income lost when losing a job, but because of joblessness itself (Winkelmann and Winkelmann 1998; Blanchflower and Oswald 2004). Both of these studies find significant impacts of marriage on happiness that rival in size the very large impacts of unemployment. In fact, the authors observe these positive effects of marriage on happiness even net of income. Thus, to the extent that marriage raises incomes, they will understate the full impact of marriage on happiness. The marriage impacts are large and statistically significant in Britain, the US, and Germany. Since income turns out to exert only modest effects, it takes a very large increase in income to realize the gains in happiness associated with marriage. One study (Blanchflower and Oswald 2004) cites the incredible figure of an added $100,000 per year to offset the losses in happiness from being divorced or separated. Interestingly, the marriage-related happiness advantage is smaller between married and single people than between married and divorced/separated individuals. A second study estimated that the positive effects of marriage on happiness are equivalent to more than a fivefold increase

in income (Winkelmann and Winkelmann 1998). These marriage effects are not primarily due to the possibility that happier people tend to marry.

Impact on Criminal Activity

The economic gains from reducing crime represent another potentially large benefit associated with marriage. One study calculated that crime imposed a cost on society of at least 4 percent of GDP (Freeman 1996). Today crime is lower (though the prison population is not) than in the years used for this calculations, but even a cost of 3 percent of GDP would amount to over $400 billion. Although marital status is not necessarily a primary determinant of criminal activity, researchers have found that marriage, especially marriages that involve a strong attachment to a spouse, reduces future arrests (Sampson and Laub 1993). Using a database of delinquent young men over 30 years, they found that marriage reduced arrests by about 0.17 per year and that, among the ever-married in this group, strong attachment to a spouse reduced arrests by 0.32 per year.

Other researchers have found that marriage is associated with lower sexual abuse and domestic violence. Waite and Gallagher (2000) report that cohabiting couples are much more likely to have violent arguments than are married couples with the same education, age, and race.

Marriage and Adult Health

Marriage plays a significant role in the physical and mental-health outcomes of adults. In making this assessment, it is important to remember that men and women may experience marriage differently and attain different benefits from marriage. The presence of children and having raised children may also influence the experience of marriage for adults. Again, it is challenging to identify causal relationships. Since happier, healthier people may be more likely to marry than adults in poorer physical and mental health, the apparent benefits of marriage may simply reflect differences in the people who get and stay married versus those who do not. On the other hand, negative selection into marriage is a possibility as well, since individuals who expect to require help in the future may be more likely to marry (Wilson and Oswald 2005).

Research on marriage dating back to the 1960s and 1970s viewed it through the lens of women's economic opportunities and found the institution wanting for women (Bernard 1972). In a 1966 study, Kaupfer et al. estimated that married men showed better mental health than single men, but married women had much worse mental health than single women.

After decades of substantial economic progress for women, these findings are now quite dated. Research from the 1980s forward indicates that marriage is quite beneficial for both men and women and that there is a strong causal component to the relationship. Begin with the ultimate outcome: mortality. Married adults are significantly less likely to die in any given year than unmarried adults. A thorough review of the literature found that mortality rates for unmarried men are 250 percent higher than those for married men; unmarried women's mortality rates are 50 percent higher than those of married women (Ross et al. 1990). More recent research shows that married adults have lower mortality rates than unmarried adults and that the marital advantage is greater for men

than for women (Rogers 1995). Marriage likely reduces mortality because upon marriage, adults in general, and men in particular, tend to reduce dangerous and harmful behaviors (drinking, brawling, etc.) and develop more healthful habits (e.g., eating more nutritious food on a regular basis). As single men are more likely to have worse "habits" than single women have, it is not surprising that marriage exerts a larger impact on the mortality rates of men than of women. A 2005 review of an array of studies, some with controls for selection effects, revealed persuasive evidence that marriage induces reductions in mortality for men and women (Wilson and Oswald 2005). One example is a study that controls for selection and that captures full marriage histories, allowing analysis of the timing and sequence of marital transitions (Brockmann and Klein 2004). The results showed that relative to married individuals, divorced men have a 60 percent higher risk of mortality and single women a 50 percent higher risk.

Married adults also report being in better health than divorced, widowed, and separated adults (Hahn 1993). As in other areas, devising ways to estimate the causal health effects of marriage is difficult because of the possibility of positive selection, in which personal attributes not observed in the study are positively associated with both health and marriage. But there is considerable evidence for negative selection into marriage (e.g., Wilson and Oswald 2005; Cheung 1998); less healthy men seem more likely to marry perhaps because of concerns about caring for themselves. Several studies find that marriage conveys substantial health benefits (Wilson and Oswald 2005). Even after controlling for who enters marriage by estimating health and marriage equations jointly and controlling for early health status, Lillard and Panis (1996) still find significant health gains for marriage. Other studies show that more harmonious marriages convey especially large health benefits (Prigerson et al. 1999; Wickrama et al. 1997).

The effects of marriage on mental health are broadly positive, but not in all studies. Horwitz et al. (1996) find reductions in depression for married women and in alcohol abuse for men. Simon and Marcussen (1999) show that marriage is associated with lower depression. Interestingly, beliefs about the value of marriage affect the gains from marriage; those valuing the permanence of marriage achieve a larger reduction in depression. Controlling for relationship characteristics, Brown (2004) finds no significant difference in depression between married and cohabiting adults without children, but cohabiting adults with children are significantly more likely to be depressed than married adults. Kim and McHenry (2002), like Brown (2004), examine clinical depression and marriage, but they focus on transitions in relationships. Although they take the number of children present into account in their analyses, they do not examine whether the relationship between marriage and depression differs across adults with and without children. Kim and McHenry find that continuously never-married and cohabiting adults are no more likely to be depressed than continuously married adults. However, divorced or separated adults are more likely to be depressed than married adults, and adults who get married show improvements in mental health.

That mental health improves upon marriage is a key insight for assessing the extent to which marriage is responsible for the better physical and mental health of married adults compared with unmarried adults. If happier, healthier people were more likely to get married and marriage itself had no effect, then we would still find a significant positive correlation between marriage and well-being, but the relationship would not be causal. However, if well-being improves following marriage, then it is likely that marriage itself

is responsible for the higher levels of well-being among married adults. The research documents significant improvements in mental health and healthy behaviors upon marriage. Marks and Lambert (1998) use data over a five-year period and find that happiness improves following marriage and that happiness decreases following divorce, especially for women. Similarly, Horwitz et al. (1996), in a seven-year study, find that marriage is associated with decreasing levels of depression and alcohol consumption.

Impacts on Children

The impacts of marriage described above may pale in comparison to the potential economic benefits for children of growing up with parents in a healthy, long-term marriage instead of with a single parent or cohabiting parents. Covering the extensive literature on these topics is beyond the scope of this chapter. Still it is worth citing some of the robust findings. For example, single parenthood is linked to a higher incidence of other social problems, such as higher rates of school dropouts, of alcohol and drug use, of adolescent pregnancy and childbearing, and of juvenile delinquency (Lang and Zagorsky 2000; McLanahan and Sandefur 1994). Marriage appears to reduce health problems of children. A recent study found that marriage reduces the onset of asthma and asthma-related emergencies (Harknett 2009).

Overall, the literature offers considerable evidence that living with married biological or adoptive parents from birth forward is associated with better child behavioral outcomes, better parent-child interactions, and better cognitive outcomes than any other pattern of living arrangements (Lerman et al. 2007). Family structure has become so important to the well-being of American children that some observers now argue that marriage is replacing race, class, or neighborhood as the greatest source of division in the US (Rector et al. 2001; Rauch 2001). Some of these effects may result not from marriage per se, but from growing up in a nuclear family involving marriage (Ginther and Pollak 2004).

IMPLICATIONS FOR GOVERNMENT POLICY

Existing studies provide considerable evidence about the resource gains from marriage, including benefits accruing to low-income families. The accumulated evidence of positive marriage effects on economic well-being is substantial. The implied present value of benefits, about $113,000, is no doubt a gross approximation of the actual value. However, any error is at least as likely to have caused an underestimate of the true, long-term effect as an overestimate.

Perhaps these strikingly high benefits are the reason a representative sample of households (in Oklahoma) favor trying out the healthy marriage initiative (Johnson et al. 2002). The positive feedback comes from former welfare recipients and African-Americans as well as from more advantaged groups. About 90% of African-Americans said they thought "a statewide initiative to promote marriage and reduce divorce" was a very good idea (40 percent) or a good idea (50 percent); of those who ever were on public assistance, 88 percent approved of the initiative. The figures for whites were virtually identical, 44 percent seeing the program as a "very good idea" and 41 percent seeing it as a "good idea". Moreover, three in four African-Americans and 72 percent of those

receiving public assistance said they would "consider using relationship education, such as workshops or classes, to strengthen your relationship."

Given the positive attitudes and the projected net benefits, the healthy marriage programs look promising. However, it is far from clear that the programs will be able to deliver by achieving modest success with participating couples. It will not necessarily be easy to cause even one out of 37 participating couples to sustain a healthy marriage when they would have done so in the absence of the program. Further, it may be difficult to detect the small effects that can make the difference between a good and an unwise investment. No doubt the healthy marriage initiative will be challenging for both program operators and evaluators.

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