
Christopher Brown and Randall Kesselring

Poverty rates among female-headed households in the United States are substantially, and persistently, higher than poverty rates for households headed by married persons or unmarried males (see figure 1). This fact is presented as evidence in support of the claim that choices by women to live in nontraditional arrangements rank as an important cause of poverty and that, moreover, an effective anti-poverty policy should focus on redesigning welfare programs and the tax code so as to strengthen incentives to marriage and disincentives to nonmarital births.1

The family promotion initiatives favored by the political right are underpinned by viewpoints about the causes of rising female headship and illegitimacy—views articulated by Charles Murray (1984).2 For Murray, the modern welfare state is supported by an ideology that blames “the system” for society’s ills and relieves those dwelling at its fringes of moral responsibility for their own economic fortunes. As a result, behavioral patterns that in a more enlightened society are stigmatized and discouraged have been de-stigmatized and encouraged.3 The solution is a re-establishment of personal responsibility. The Personal Responsibility and Work Reconciliation Act of 1996 (the welfare reform bill) apparently marks a movement toward this goal.

There remains a perplexing question to which Murray and others on the political right have not given a satisfactory answer. Specifically, if marriage offers a dependable route to a better economic station, why do so many poor females remain single or become divorced?

The authors are at Arkansas State University, USA. This paper was prepared for the annual meeting of the Association for Evolutionary Economics at the Allied Social Science Association meetings in Washington, D.C., January 3–5, 2003.
We argue that the incidence of female headship is to a significant degree the manifestation of fundamental demographic factors, the most important of which is the ratio of marriageable males to females with similar characteristics. Our objective in this article is twofold: (1) to investigate long-term trends in earnings among males ages twenty-two to thirty-four and (2) to assess the implications of these trends for marital prospects facing young females. We argue that two trends of the post-1977 era in the United States have caused a sharp reduction in breadwinner ratios—that is, the number of males per 1,000 females in the same age group that qualify as marriageable based on an income test. These trends are (1) falling average incomes for males ages twenty-two to thirty-four and (2) rising within-group earnings inequality for this population.

**Economic Status of Young Males**

The term “marriageable” connotes a complex of attributes that vary according to the person asked to define it. But hardly anyone would dispute that earning capacity is an indispensable qualification for males seeking spouses. Thus, a simple approach to sorting out marriageable males is to apply an earnings test. That is, young men are classified as marriageable if their earnings meet or exceed some minimum threshold level deemed sufficient to insure a reasonable chance of success in marriage. So long as the income threshold constitutes an accurate measure of the minimum feasible earning power of marriageable males, counting the number of males above this threshold is a method that cannot underestimate the population of viable marriage candidates.

If a probability density function were formed to describe the earnings of young males, the area under the curve to the right of the marriage-qualifying threshold level of

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**Figure 1. Poverty Rates in the United States**

![Poverty Rates in the United States](image-url)

income measures the proportion of this group which meets the earnings test. Assuming no change in the shape of the function, an increase in mean income would increase the area under the curve above the (fixed) income threshold, and a decrease in mean income would diminish it. Changes in the shape of the distribution also affect the proportion of the sample above or below the income threshold. For example, increased skewness to the right of the distribution would cause, ceteris paribus, a decrease in the proportion of the population that is marriageable based on an income test. It stands to reason that a double movement encompassing falling average incomes and rising inequality (skewness) might shift a sizeable fraction of young males into the unmarried category.

We extracted microdata from the March demographic files of the Current Population Survey (CPS) to compute statistics helpful in uncovering changes in the economic fortunes of young males over a period of twenty-four years (1977–2001). The CPS is a monthly survey of approximately 50,000 households conducted by the Bureau of the Census. The results are reported in table 1.

Note that mean income of males ages twenty-two to thirty-four decreased by $6,070 (2000 dollars), or 18.4 percent, in the fifteen-year period between 1977 and 1992. The record shows improvement after 1992. Nevertheless, a decade-long economic expansion failed to lift mean income in 2001 back to its 1977 level. Most social scientists prefer median to mean income since the former measure is less sensitive to extreme values. Again, the record shows a sharp drop-off between 1977 and 1982. Median income bottomed out in 1992 but by 2001 was still only 88 percent of its 1977 value. The numbers leave little doubt that young men as a group have suffered a marked decline in their economic status in the past quarter century.

We noted previously that changes in earnings inequality among young males are likely to impinge on the proportion of this group that meets an income test for marriageability. Compared with the movement of median income since 1977, the steep rise in earnings inequality among young men is even more striking. Two measures of inegal-

Table 1. Measures of Earnings and Inequality for Males, Ages 22–34

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<tr>
<td>Mean income (^a)</td>
<td>$32,982</td>
<td>$27,650</td>
<td>$29,947</td>
<td>$26,912</td>
<td>$29,682</td>
<td>$31,999</td>
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<tr>
<td>Median income</td>
<td>30,207</td>
<td>24,687</td>
<td>26,309</td>
<td>22,880</td>
<td>24,083</td>
<td>25,653</td>
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<td>Gini coefficient</td>
<td>0.2767</td>
<td>0.3294</td>
<td>0.3212</td>
<td>0.3384</td>
<td>0.3526</td>
<td>0.3627</td>
</tr>
<tr>
<td>Theil index</td>
<td>0.2158</td>
<td>0.2497</td>
<td>0.2472</td>
<td>0.2628</td>
<td>0.2830</td>
<td>0.2913</td>
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\(^a\)Income is measured in 2000 dollars.
ity are reported in table 1. The Gini coefficient measures the area above the Lorenz curve but beneath a line of absolute equality (area of inequality) divided by the area under the line of equality, where males are cumulated from the lowest value of total income to the highest. The Theil \((T)\) index is given by:

\[
T = \frac{1}{5} \sum_{i=1}^{5} r_i \times \log r_i
\]

where \(r_i\) is the ratio of the income of quintile \(i\) (\(Y_i\)) to average income for the population of twenty-two to thirty-four-year-old men \((\mu_{22})\). The Theil index is a monotonically increasing measure of inequality bounded by \(T \in [0, \log n]\). The principal advantage of the Theil index is that, unlike the Gini coefficient, its maximum value increases with population size.

The trends documented in table 1 have generated considerable research interest, particularly in the field of labor economics. There is strong mainstream support for the view that the widening disparity of incomes among workers in the past three decades is primarily explained by “skill-biased” technical change—that is, innovations that need skilled workers for their successful implementation. Advocates of the technical change explanation point to the sharp increase in the college premium—that is, the earnings of college graduates relative to high school graduates—as evidence of technology-skill complementarity.

Institutionalists tend to treat relative rewards as the objective manifestation of the exercise of economic or political power. Thus the deteriorating economic status of young men is explained chiefly by a disadvantageous shift in the balance of power—a shift precipitated by a combination of factors. These include technical innovation, import penetration and the relocation of production facilities abroad, political resistance to an increased minimum wage, seniority clauses in collective bargaining agreements, greater social tolerance for hardball negotiating tactics by employers, the loss of well-paying municipal jobs due to outsourcing of garbage collection and other functions, and lack of success in union building in service sector industries.

**The Breadwinner Ratio**

We earlier hypothesized that a double movement entailing both falling average earnings and rising inequality would have the effect of diminishing the population of marriageable men relative to females of similar age. To test this hypothesis we have computed breadwinner ratios, defined as the number of males between the ages of twenty-two and thirty-four per 1,000 females of the same age bracket that qualify as “marriageable.”

The question arises: what is the minimum level of income that qualifies a male as marriageable? The obvious answer is that it depends on the individual circumstances.
The income needs of young married men will differ according to factors such as the local cost of living, the number of children, or parental support. The problem at hand is to establish an income threshold that yields reasonably accurate measures of the number of breadwinning males for any particular year. But attempting to define such a threshold immediately gives rise to another issue, namely, should the minimum earnings requirement for marriageability be viewed as a fixed magnitude or as one that is changing over time? At least two factors point to the latter: (1) incessant reconfiguration of the market basket that is regarded as normal or necessary to the maintenance of status vis-à-vis other households and (2) the increased relative importance of women’s earnings.

With respect to the first factor, the average burden on the primary earner is made heavier once product innovations such as cable TV, home computers, cellular phone service, sport utility vehicles, or serotonin reuptake inhibitors have found a secure niche in the family budget. The changing roles assumed by women have had the opposite effect. Earnings of young women have increased both absolutely and as a percent of total household income since 1977. Average earnings of females ages twenty-two to thirty-four in 1977 ($13,075 in 2000 dollars) were equal to 29 percent of median household income. By 2001 average income for this group was $19,620, or 39 percent of median household income.

We propose the following flexible income test for marriageability: the income threshold for a particular year is found by subtracting the average income of females ages twenty-two to thirty-four from median household income in that year. Thus the threshold is equal to the income it takes to push a household up to the median income level, given the average amount of earnings that women in the same age bracket can contribute.

Table 2 presents two sets of estimates of breadwinner ratios. The first set of estimates is based on “fixed” income thresholds. Notice for example that if $20,000 is taken as the relevant threshold, there were 677 males per 1,000 females that could pass the test in 1977. By 1992 the number had fallen to 523. Ratios for whites and blacks are also reported. So, for example, the breadwinner ratio for whites measures the number of white males which qualify as breadwinners per 1,000 white females. According to data compiled by the Bureau of the Census, more than 90 percent of marriages are intra-racial. Thus the race-specific ratios give a more accurate measure of mate availability—especially for black women.

Measures of breadwinner ratios based on a “changing threshold” tell much the same story, even though this approach allows for a substantial reduction over time in the minimum income requirement for marriageability. In summary, the CPS microdata provide powerful evidence that a young woman’s prospects of finding a mate with an acceptable level of income are considerably worse today than in 1977, though there has been some small improvement since 1992. The data also bring to light the especially harsh realities faced by black women.
The purpose of this section is to perform a simulation to measure the influence of the factors described in the preceding section on marriage rates for young men. The simulation is designed to furnish precise answers to the following question: what would marriage rates have been in the years selected for analysis if young men had experienced no change in their economic status after 1977?

Let \( \theta_i \) denote the average propensity to marry for a young male in income bracket \( i \), where \( \theta_i = \frac{m_{ai}}{p_i} \). \( m_{ai} \) is the number of married men in income bracket \( i \), and \( p_i \) is the total number of men in the same income bracket. Thus the overall marriage rate (MR) can be expressed by:

\[
MR = \frac{1}{n} \sum_{i=1}^{n} \theta_i \times p_i
\]
where \( n \) is the total number of males ages twenty-two to thirty-four and \( m \) is the number of income brackets. Now let \( \alpha \) denote the fraction of the young male population in 1977 that falls into income bracket \( i \). To compute a simulated marriage rate, we simply redistribute the population of young males in various years across income brackets (there are twelve income brackets—i.e., \( m = 12 \)) so that the percentage of the population in each bracket is exactly what it was in 1977. So, for example, the number of men in income bracket \( i \) in a particular year is given by \( \alpha \times n \). The simulated marriage rate (SMR) is thus calculated by:

\[
SMR = \frac{1}{n} \sum_{i=1}^{m} \left( \theta_i \times (\alpha \times n) \right)
\]

The results of the simulation are displayed in table 3.

The simulation results indicate that falling mean incomes and rising within-group earnings inequality are responsible for shaving an average of 3.54 percentage points off the marriage rate for the years selected. A substantial portion of the change in marriage rates of young men since 1977 remains unexplained. Even so, the simulation results provide support for the claim that the rising incidence of female headship is linked to the deteriorating economic condition of men between the ages of twenty-two and thirty-four.

**Discussion**

These findings suggest that a public policy that aims to increase the proportion of children living in traditional, two-parent households cannot be successful unless it addresses the economic opportunities (or lack thereof) available to young men. The option to marry, if it exists at all, is most often a bad one for poor single mothers. To assert otherwise is to imply that low-income women do not respond to powerful economic incentives.

The findings also cast doubt on the wisdom of the sort of marriage promotion initiatives now being contemplated by Congress. The evidence here indicates that such

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<tr>
<td>[1] Actual marriage rate</td>
<td>66.3</td>
<td>59.2</td>
<td>55.0</td>
<td>51.7</td>
<td>49.8</td>
<td>51.4</td>
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<tr>
<td>[2] Simulated marriage rate</td>
<td>62.8</td>
<td>57.4</td>
<td>56.8</td>
<td>53.4</td>
<td>54.4</td>
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measures would be effective only if poor women were willing to marry men that, based on their economic status, people like Murray and William Bennett would likely deem unsuitable for their own daughters.

**Notes**

1. The percentage of families with children under eighteen years headed by a single female increased from 16 percent to 22 percent between 1977 and 2000, according to the Bureau of the Census. Robert Lerman claimed that the “1971–89 trend away from marriage accounted for . . . more than the entire rise in child poverty rates” (1996, S137). Conservatives William Bennett and Jack Kemp recently opined: “We can think of no more effective way of reducing the number of poor people—especially poor children—than reducing the number of single parent families. Consider the numbers: Poverty afflicts nearly half of mother-only families, but fewer than one in 10 married couples . . . Clearly, there is a relationship between marriage and escaping poverty” (“Keep Reforming Welfare,” Wall Street Journal, August 1, 2002).

2. Janice Peterson (2002) noted that the family formation provisions are at the center of the re-authorization debate for the Temporary Aid to Needy Families (TANF) legislation.

3. Charles Murray argued that the welfare policies of the Great Society eliminated the “status rewards” for behaviors necessary to escape from poverty and gave “official sanction to reject personal responsibility for one’s actions. Status distinctions among the poor began with the assumption that people are responsible for their actions. . . . Once it is assumed that the system is to blame when a person is chronically out of work [or] neglects spouse and family, then the moral distinctions were eroded” (1984, 180).

4. Kathryn Edin (2000) surveyed 272 low-income single mothers in three U.S. cities and discovered most women in this group aspire to marriages that improve their social status: “Marriage made a statement to the larger community about each partner’s current and prospective class standing. Thus, marriage could either confer respectability or deny it. . . . Mothers who remained unmarried were able to maintain their dream of upward mobility. ‘Marrying up’ guaranteed the woman the respect of her community, while marrying at her own class level only made her look foolish in the eyes of her family and neighbors. When . . . asked whether they would marry erratic or low earners that had fathered their children, the most common response was ‘I can do bad by myself’” (Edin 2000, 120).

5. That is, $\bar{Y} = \frac{1}{n} \sum_{i=1}^{n} Y_i$ and $\mu_Y = \frac{1}{n} \sum_{i=1}^{n} Y_i$.

6. Note that there is greater potential for inequality as population size increases. For a discussion of the strengths of the Theil index, see Conceição and Galbraith 2000.

7. Alan Krueger (1993), for example, attributed great significance to the computer in bringing about wage inequality. For a literature review on skill-biased innovation, see Acemoglu 2002.

8. For a discussion of the causes of the widening income gap between the skilled and less skilled, as well as cross-country comparisons of inequality, see Gottschalk and Smeeding 1997.

9. Richard Freeman examined the relationship between union density (the percentage of workers in unions) and wage inequality using CPS files for 1978–1988 and found that “[t]he fall in union density did contribute to the 1980s increase in earnings inequality. Cross-section-based estimates of union wage effects suggest that the white collar/blue-collar pay differential would have been 4 to 5 points lower, and the college/high school differential to be 1 to 4 points lower than they were, had union density remained at its 1977 level throughout the 1980s” (134). Freeman reported that union density for males ages twenty-five to thirty-four declined from 43 to 25 percent between 1978 and 1988.
10. The average age at first marriage in 2000 was twenty-seven years for men and twenty-five years for women, up from twenty-three and twenty-two years respectively in 1977. Source: Current Population Reports.

**References**


