



VALUING LOST HOME PRODUCTION FOR DUAL-EARNER HOUSEHOLDS

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THE DIFFERENCE BETWEEN LABOR MARKET EARNINGS FOR MARRIED WOMEN AND EARNINGS NET OF THE VALUE OF LOST HOME PRODUCTION IS MODERATELY SMALL – ABOUT 30 PERCENT. THE CORRESPONDING LONG-RUN EFFECT ON THE OVERALL RATE OF PRIVATE SAVING IS MINOR. RECENT GAINS IN THE U.S. GDP STEMMING FROM GROWING FEMALE LABOR FORCE PARTICIPATION LARGELY REPRESENT TRUE IMPROVEMENTS IN THE STANDARD OF LIVING RATHER THAN SUBSTITUTION OF MARKET PRODUCTION FOR HOME PRODUCTION OF THE SAME VALUE.

Economists often use the life-cycle model to study the effects of government policy on saving behavior. This study incorporates into that model one of the most conspicuous and important changes in the U.S. economy in the last 50 years: the rise in labor market participation for married women. This study attempts to assess the significance of rising female labor market participation for aggregate national saving in the U.S.

In general, technological progress tends to push the standard of living for U.S. households steadily upward, and in this context it is somewhat surprising to find a trend away from home production – in other words, to find households, despite their growing prosperity, willingly giving up the amenities of home production of services such as food preparation, housekeeping, and childcare. If we are to bring female labor force participation into the life-cycle model, we must be able

to analyze the tradeoff that households face: as a woman joins the labor force, she raises her household's earnings; however, as she devotes more hours to market work, she almost surely reduces her time allocation to home production. Using panel data from the Health and Retirement Study (HRS), we find that the difference between measured labor market earnings for married women and earnings net of the value of lost home production seems moderately small – about 30 percent – and that the corresponding long-run effect on the overall rate of private saving is minor.

Measuring the Value of Home Production

It is difficult to measure the value of home production: survey data and macroeconomic time series (including the National Income and Product Accounts-NIPA) rely on recording market transactions; so, conventionally they omit home production. We have,

consequently, directly available only part of the information that we would like for the study of household choices: household earnings (and GDP) fully reflect increases in female labor force participation, but there is little data on corresponding diminutions in home production. We use a theoretical framework in combination with microeconomic data from the HRS to estimate net gains in household resources (i.e., additional market earnings less the value of sacrificed home production) when women join the labor force. Finally, we simulate the effect of increased female labor market participation on the average national savings rate. Our strategy for identifying the value of lost home production for women who join the labor force relies upon microeconomic data on savings behavior. We also simulate the macroeconomic effect of women's labor market participation on the U.S. average propensity to save.

Rationale

The following examples illustrate our strategy for obtaining measurements of the value of changes in home production, and they also suggest why we think that female labor force participation could influence a nation's overall saving rate.

(i) In a “traditional” household, suppose a husband works two-thirds of his adult life, earning \$900,000, and his wife never does market work. Suppose the household saves \$300,000 for retirement – seeking to hold the level of its spending constant.

(ii) In a second traditional household, the husband alone works outside of the house – for two-thirds of his adult life – and he earns \$1,800,000. Suppose the second household saves \$600,000 for its retirement.

(iii) In a third, “modern” household, the husband works for two-thirds of his adult life and earns \$900,000, and his wife works outside of the house and earns \$900,000. As she participates in the labor market, the wife drastically cuts back on her home production. The household purchases market replacements for the lost services. Suppose the replacements cost \$900,000. Since the household's “net” earnings are the same as the first household's, suppose that it saves \$300,000 for retirement, too.

This study's analysis depends on a comparison of such varying cases. In particular, we argue that the fact that accumulated saving in the last case may resemble that of household (i) rather than (ii) can provide information on the magnitude of lost home production. Our reasoning is that households with the same net-of-lost-home-production earnings should want the same net worth at retirement; thus, similar observed net worth for two households and dissimilar gross earnings implies the need for home-production valuations that bring net

earnings into equality. Conversely, from a macroeconomic perspective, the fact that case (iii) has recently become more widespread suggests one reason why the ratio of national savings to earnings may have fallen: a standard measure of national saving is the ratio of saving to gross output; however, life-cycle theory tends to imply that the ratio of savings to “net” earnings should remain constant – and the discrepancy between net (of sacrificed home production) and gross earnings has presumably grown in recent decades.

Data

We use data from the HRS to predict lifetime earnings of men and women, and household net worth. The HRS links to their Social Security Administration (SSA) earnings histories participants who sign permission waivers.

Findings

- We find losses about 30 percent as large as female market earnings, implying a 70 percent net gain from women's market employment.
- Our assessment of the value of lost home production is too small to explain substantial long-run declines in private saving.

Conclusion

The increased presence of married women in the labor force has obvious benefits: women now earn much more income than they did in the past. On the other hand, working women presumably spend less time doing housework and other types of home production, and the forgone value of time at home reduces the net benefit of their work in the market. Conventional accounts do not provide measurements of the costs of lost home production.

We find that the difference between measured labor market earnings for married women and earnings net of

the value of lost home production seems moderately small – about 30 percent – and that the corresponding long-run effect on the overall rate of private saving is minor. This finding has the interesting implication that recent gains in the U.S. GDP stemming from growing female labor force participation largely represent true improvements in the standard of living rather than substitution of market production for home production of the same value. Our 30 percent estimate may also shed light on the nature of the mechanisms and forces affecting the dynamic adjustment in the U.S. economy in the last 50 years toward higher labor force participation on the part of married women.

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The research supporting this brief is described in greater detail in MRRC working paper WP2004-097.

This work was supported by a grant from the Social Security Administration through the Michigan Retirement Research Center (Grant # 10-P96362-5). The findings and conclusions expressed are solely those of the authors and do not represent the views of the Social Security Administration, any agency of the Federal Government, or the Michigan Retirement Research Center.

About the MRRC

The University of Michigan Retirement Research Center (MRRC) is supported by a cooperative agreement with the Social Security Administration.

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