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# Housework, Wages, and the Division of Housework Time for Employed Spouses

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While the popular press may have declared housework passé with the advent of the two-income household (see "Housework is Obsolescent" by Barbara Ehrenreich [1993] for one such example), the facts indicate that housework continues to consume a substantial amount of time, particularly for women. While estimates vary widely depending on the sample examined and the methods used to generate the information, representative values of housework time range around 6–14 hours per week for men and 20–30 hours for women. Since wages are likely to be influenced both directly and indirectly by the time and effort devoted to other activities, and since gender differences in household responsibilities are significant and often assumed to be a driving force behind gender earnings differentials, decisions regarding the overall amount of time spent on housework and the division of that time within the household are important ones. The goal of this paper is to shed some light on these allocation decisions.

We begin by discussing the various methods by which time and effort spent on housework may affect wages and summarize the available empirical evidence. Overall, the empirical evidence indicates that time spent on housework has a negative effect on wages, an effect which is most pronounced for women. We next examine the amount of time spent on housework and the division of that time between working spouses. To do so, we draw upon the human-capital literature and the bargaining literature to construct simple regression equations for time spent on housework by each spouse as well

as the share of housework time contributed by the husband. The results indicate that husbands do less housework than their wives as their relative earnings and hours spent in the labor market increase.

## I. The Effect of Housework on Wages

Time spent engaged in housework may affect market wages in a variety of ways. It may reduce wages indirectly by affecting the accumulation of human capital. Individuals who anticipate shorter (or less intense) employment spells due to greater home responsibilities will undertake less human-capital investment. Such individuals may obtain less education before entering the job market and may seek jobs providing less on-the-job training once actively participating. In addition, employers may be less likely to hire or to promote individuals whom they expect to have shorter or discontinuous working lives. Any investments by firms in such individuals, even hiring costs, are less likely to be recouped. Since wages are higher for workers with more years of work experience, training, and job seniority, and since women have significantly lower values of these human-capital characteristics, the weaker performance of women in the labor market relative to men is in this way related to differences in household responsibilities.

Housework may also directly affect earnings by limiting energy and effort. The more time and effort expended on housework, the less time and effort are available for performing market work (e.g., Gary Becker, 1985). Although men average more hours than women in paid employment, full-time employed women spend more total time on housework and market work than do men. The physical fatigue induced by their greater total work load may make women less productive in the labor market. In addition, the

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timing of household responsibilities may make schedules less flexible, so that market work may be disrupted for those women with greater household responsibilities. Such individuals may restrict their job search to positions entailing shorter commutes or allowing greater flexibility in scheduling.

Estimates from wage equations which include time spent on housework provide empirical support for the existence of a direct negative relation between housework and wages. This relation is most pronounced for women. Hersch (1991a) finds a negative effect on wages of time spent on housework for women, controlling for human-capital characteristics, number of children, and marital status. This effect persists (albeit with reduced significance) when controls for working conditions are included. Simultaneous-equation estimates of a wage-housework system, which recognizes that housework time is jointly determined with wage, yield similar results (Hersch, 1991b), as do instrumental-variables estimates correcting for the endogeneity of housework (Hersch and Stratton, 1993).

Although cross-sectional results indicate an inverse relation between wages and housework time, this relation may be due to a correlation between time spent on housework and unobserved individual characteristics, such as "market ability" or "ambition," that have negative effects on wages. We investigated this possibility by estimating fixed-effects wage equations for married workers (Hersch and Stratton, 1993). The fixed-effects estimates control for the effects of unobserved individual-specific characteristics on housework time and thereby help isolate the direct effect of housework on earnings that is attributable to factors such as effort. Consistent with the evidence from cross-sectional estimates, the fixed-effects results indicate a negative relation between housework time and wages for women. This relation is smaller in magnitude than the cross-sectional estimates, but it is still fairly large and statistically significant.

While a number of studies indicate a negative effect of housework on wages for women, the evidence for men is mixed. Hersch and Stratton (1993) find a negative

effect of housework time on wages for husbands, but the magnitude of the effect for wives is about 50-percent larger than for husbands. The difference in the magnitude of the effect of housework on wages between wives and husbands may in part be due to the relatively small amount of time spent on housework by the husbands. The effect of housework on wages may increase as time spent on housework increases, since at low levels of housework time individuals may be expending too little effort to be noticeable or may be engaged only in activities they enjoy. The disparity in the distribution of time spent on housework between wives and husbands is considerable. In Hersch and Stratton (1993) we find that this disparity is responsible for a significant component of the gender wage differential.

## II. Time Spent on Housework

To investigate the amount of time spent on housework and the division of that time between working spouses, we use data from the Michigan Panel Study of Income Dynamics for white, married workers aged 20–64, from the years 1979–1987, excluding observations from the year 1982 in which housework information is not available. Information about time spent on housework is obtained as the response to the question, "About how much time do (you or your spouse) spend on housework in an average week? I mean time spent cooking, cleaning, and doing other work around the house." In every year but 1985, the husband responded for both himself and his wife, suggesting that the large disparity between husband's and wife's housework time is not solely due to wives overstating their housework time. The analysis is restricted to working spouses in order to minimize reported housework time inconsistencies that may arise from the tendency of any task to fill the amount of time available.

Table 1 presents mean values of housework time for working husbands and wives. Consistent with all other evidence, we find large disparities in time spent on housework between husbands and wives, even though we restrict our analysis to households in

TABLE 1—AVERAGE VALUES AND SHARES  
OF HOUSEWORK TIME  
FOR EMPLOYED SPOUSES

| Sample                          | Average value  |                  | Husband's share | Number of observations |
|---------------------------------|----------------|------------------|-----------------|------------------------|
|                                 | Husbands       | Wives            |                 |                        |
| Overall                         | 7.36<br>(6.81) | 19.66<br>(10.97) | 0.27<br>(0.18)  | 6,409                  |
| No children                     | 6.86<br>(6.39) | 16.27<br>(9.12)  | 0.29<br>(0.18)  | 2,435                  |
| Children                        | 7.66<br>(7.04) | 21.74<br>(11.48) | 0.25<br>(0.18)  | 3,974                  |
| Both spouses employed full-time | 7.37<br>(6.45) | 17.32<br>(9.18)  | 0.29<br>(0.18)  | 2,855                  |

which both spouses are employed. Overall, the husbands average about 7 hours per week on housework, while the wives average around 20 hours. This differential persists within households in which both spouses are employed full-time, with men averaging 7 hours per week on housework and women averaging 17 hours. The differential increases in the presence of children. The housework time of employed wives increases by over 5 hours when children are present, whereas the impact on husbands' time is less than 1 hour.

### III. Division of Housework Time Between Wives and Husbands

Finding that time spent on housework indeed appears to have a direct negative effect on wages and that the average time spent on housework differs significantly between husbands and wives, we now turn to the question of how housework time is determined and allocated within the family. Predictions of how time spent on housework will be allocated between the husband and wife can be derived from both human-capital theory and from bargaining models. The human-capital argument is that gains from specialization and exchange will lead to one member of the household specializing in home production and the other specializing in market work. While human-capital theory alone does not imply that

women will specialize in home production, it is frequently argued that, even if a husband and wife initially have equal market ability, childbearing will lead to development of different skills, making it optimal for women to specialize in home production and men to specialize in market work (e.g., Becker, 1981).

Bargaining models examine how decisions are made in a long-term relationship, such as a marriage, in which transactions costs are high (e.g., Marilyn Manser and Murray Brown, 1980; Marjorie B. McElroy and Mary Jean Horney, 1981). The bargaining power of each spouse is related to his or her next-best alternative (the "threat point"). Since husbands typically have higher market wages than their spouses, their bargaining position is likely to be stronger than their wives', since they are more readily able to afford to purchase in the market many of the services provided by a wife. Assuming that housework is not engaged in voluntarily, this stronger bargaining position of husbands may lead to the observed greater share of housework time of women.

To investigate whether housework time can be explained by factors recognized in the economics literature, we estimate three housework equations to explain the husband's share of total housework time, the husband's housework time, and the wife's housework time. While the share of housework time corresponds most closely to the household allocation decision, finding an increase in the husband's share (for instance) does not identify whether the increase in his share resulted from an increase in his housework time or from a decrease in his wife's time. For this analysis the estimates from all three equations are required.

Both bargaining and human-capital models suggest that a common set of observable characteristics explain housework time, although for somewhat different reasons. The individual with relatively higher earnings is expected to contribute less time to housework, either because that individual has a comparative advantage in market work, or because that spouse's bargaining position is stronger. Thus we expect an inverse relation between the husband's share of household

labor income and his time (and share of time) on housework. We expect a negative relation between own labor-market hours and own housework time, and a positive relation between own housework time and spouse's labor-market hours.

We control for both spouses' education with dummy variables equal to 1 if the individual has less than a high-school education or greater than a high-school education (the omitted category is high-school graduate). Education affects earning opportunities and thereby each individual's threat point or comparative advantage in household versus market work. Education may also proxy for attitudes. For instance, opinion surveys suggest that education is positively related to egalitarian household values.

Children enter the specification through three separate variables indicating the number of children under age 6, aged 6–12, and aged 13–18. This level of detail can be justified on two counts. First, to the extent that wives have a comparative advantage in child-raising, this comparative advantage would seem to depend not only on the presence of children, but on their ages as well. Second, as children get older they may themselves perform significant housework.

We control for cohort effects with a dummy variable equal to 1 if the husband was born before 1950. The purpose of this variable is to capture changing social norms. It is expected to have a negative effect on the husband's share of housework time. Finally, since there may be regional differences in tastes or values, we include a dummy variable equaling 1 for residence in the South.

Table 2 presents variable means and the regression results. The dependent variable in column 2 is the husband's share of total housework time, in column 3 it is the husband's housework time, and in column 4 it is the wife's housework time.

The share equation indicates that the husband's share of housework time is significantly lower when he contributes a greater share of labor income. By looking at the housework-time equations for the husband and wife, we see that his lower share is due to both a decrease in the amount of

TABLE 2—INDIVIDUAL AND HUSBAND'S SHARE OF HOUSEWORK TIME

| Independent variable                  | Mean [SD]          | Husband's share               | Housework hours               |                               |
|---------------------------------------|--------------------|-------------------------------|-------------------------------|-------------------------------|
|                                       |                    |                               | Husband's                     | Wife's                        |
| Husband's share of labor income       | 0.67<br>[0.16]     | -0.20<br>(8.60)               | -3.54<br>(4.16)               | 9.06<br>(7.19)                |
| Combined labor income                 | 40,629<br>[22,427] | $-2 \times 10^{-7}$<br>(2.03) | $-1 \times 10^{-5}$<br>(2.60) | $-2 \times 10^{-5}$<br>(3.14) |
| Husband's labor-market hours          | 2,167.3<br>[531.8] |                               | $-6 \times 10^{-4}$<br>(3.49) | $1 \times 10^{-3}$<br>(4.18)  |
| Wife's labor-market hours             | 1,576.9<br>[621.7] |                               | $3 \times 10^{-4}$<br>(0.21)  | $-2 \times 10^{-3}$<br>(7.56) |
| Husband's share of labor-market hours | 0.59<br>[0.13]     | -0.11<br>(4.14)               |                               |                               |
| Education:                            |                    |                               |                               |                               |
| Less than high school, husband        | 0.11<br>[0.32]     | -0.029<br>(3.82)              | -0.79<br>(2.65)               | 0.85<br>(1.92)                |
| More than high school, husband        | 0.52<br>[0.50]     | 0.38<br>(7.45)                | 0.17<br>(0.84)                | -1.65<br>(5.65)               |
| Less than high school, wife           | 0.11<br>[0.32]     | -0.005<br>(0.67)              | -0.07<br>(0.24)               | 1.45<br>(3.41)                |
| More than high school, wife           | 0.44<br>[0.50]     | 0.02<br>(4.04)                | 0.29<br>(1.47)                | -0.89<br>(3.05)               |
| Children:                             |                    |                               |                               |                               |
| Age 13–18                             | 0.24<br>[0.54]     | -0.02<br>(5.38)               | -0.14<br>(0.87)               | 1.84<br>(7.56)                |
| Age 6–12                              | 0.51<br>[0.81]     | 0.007<br>(2.65)               | 0.66<br>(6.31)                | 2.19<br>(14.07)               |
| Age < 6                               | 0.37<br>[0.63]     | 0.004<br>(1.02)               | 1.29<br>(9.03)                | 2.89<br>(13.60)               |
| Older cohort                          | 0.55<br>[0.50]     | -0.03<br>(6.85)               | -0.23<br>(1.21)               | 2.46<br>(8.87)                |
| South                                 | 0.33<br>[0.47]     | -0.03<br>(5.77)               | -0.75<br>(4.14)               | 0.43<br>(1.62)                |
| Constant                              |                    | 0.48<br>(43.76)               | 10.61<br>(10.61)              | 12.62<br>(11.07)              |
| Adjusted R <sup>2</sup> :             |                    | 0.12                          | 0.04                          | 0.19                          |

Note: Numbers in parentheses are absolute *t* statistics.

the husband's housework time and an increase in his wife's. The husband's share of housework is smaller in households with greater combined labor income, but as the housework equations show, both spouses' housework time is inversely related to combined labor income. The share equation thus indicates that the husband's time is reduced proportionately more than his wife's.

The predicted inverse relation between the husband's share of labor-market hours and his share of housework is also confirmed empirically. Own housework time is inversely related to own labor-market hours. However, the wife's housework time is posi-

tively related to her husband's labor-market hours, while her husband's is unaffected by her labor-market hours. Thus the reduction in the husband's share of housework time is due both to an increase in his wife's time and a decrease in his own time on housework.

The share equation indicates that husbands provide a greater share of the household labor time when either spouse has more than a high-school education, and a lesser share when the husband has less than a high-school education. The husband's share is more in households in which either spouse has greater than a high-school education because his wife does less housework, not because he does more. The lesser share done by husbands in households in which he has less than a high-school education is due to both a decrease in his housework time and an increase in his wife's.

The effect of children in the household is approximately as expected. The husband's share of housework time in households with older children is lower, which results from an increase in his wife's housework time with no change in his own. Both spouses increase their housework time when there are children under age 12 in the household. In this case, even the husband's share rises.

The variables entered specifically to capture attitudinal differences identified significant effects. Husbands in the older cohort provide a smaller share of the total housework time. This is due to an increase in their wives' housework time; the husbands' time is not affected by cohort. Since wives in this sample are on average two years younger than their husbands, this suggests that younger women are spending less time on housework. There is also evidence of regional differences in tastes: husbands in households located in the South do less housework.

Sensitivity tests are performed on alternative samples (not reported). To test whether the presence of children in a household fundamentally changes the allocation of time to housework, the analysis is repeated separately for households with and without children. The results are substantially unchanged. Similar results are also found when the sample is restricted to households in

which both spouses are employed full time. The principle difference is that combined labor income ceases to be a significant determinant of husband's share of housework or of own housework time.

#### IV. Concluding Remarks

We find that wives do more housework than their husbands, in part because they earn less on average than their husbands. Further, their greater time spent on housework exacerbates this earnings differential, both indirectly and directly. The anticipation of greater household responsibilities for women over their lifetime leads to different investment decisions or outcomes than for men of equal market ability. Thus women earn less on average than men because they invest less in the human capital necessary to increase earnings. But even after controlling for gender differences in human capital and other wage-related characteristics, time spent on housework has been found to have a direct negative effect on earnings, an effect which is most pronounced for women.

Thus allocation decisions that result in women doing more housework than men set up a vicious cycle, a cycle which is hard to break. Only the evidence indicating that younger women are spending less time on housework and more time in the labor market suggests that the gender difference in work histories and housework time may be diminishing. Such changes will further decrease the gender wage gap, leading to still greater equity in the allocation of housework.

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