# HOUSEWORK AND WAGES 

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Joni Hersch and Leslie S. Stratton ${ }^{*}$<br>Forthcoming Journal of Human Resources


#### Abstract

Gender differences in labor market outcomes are often attributed to gender differences in household responsibilities, and substantial empirical evidence documents the direct negative impact of housework time on wages, particularly for married women. Using data from the National Survey of Families and Households, we find that housework has a negative effect on wages regardless of marital status. Furthermore, this relation is strongest for housework tasks such as cooking and cleaning that constitute a daily routine. Since women spend substantially more time on housework, controlling for housework time increases the explained component of the gender wage gap by 14 percentage points.


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# Housework and Wages 

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## I. Introduction

Statistics indicate that women's earnings average about 70 percent of men's. Between onethird and one-half of the gender wage disparity is explained by differences in individual characteristics such as work experience and tenure that are customarily included in wage equations. Part of the remaining disparity appears to be attributable to gender differences in home production time. A substantial literature documents a negative relation between housework and wages for married workers, especially for women (see Hersch and Stratton 1997 for a summary), and including information on housework time in the wage equation considerably decreases the unexplained residual. Hersch and Stratton (1997), for example, find that adding housework time to the wage equation decreases the unexplained component of the gender wage gap for married workers by about 10 percentage points. These results are cited in Blau (1998) and Joshi, Paci, and Waldfogel (1999) as evidence of how time allocation decisions within the family can lead to gender differences in the labor market.

For the most part, however, earlier research does not investigate whether housework time likewise affects the wages of not-married persons. A comparison of the effect of housework on wages by marital status will help determine the source of the observed effect for married women.

[^1]Finding that housework time affects wages only for married persons would suggest that there is some sort of interaction between marriage and housework that affects wages, perhaps due to within-household decisions regarding the division and scheduling of household responsibilities. While marriage allows additional opportunities within the household for specialization and exchange, it also entails joint decisions about shared activities, limiting individual flexibility. For example, married couples may fix a dinnertime, thereby limiting their flexibility and potentially their productivity as well. In addition, married individuals may perform different types of housework than their not-married counterparts and different types of housework may affect wages differently. However, finding that housework time has a similar effect on wages regardless of marital status suggests that the effect is due to the actual time or effort involved in housework.

In this paper we use data from the National Survey of Families and Households to estimate the housework-wage effect for both married and not-married persons. These data were collected more recently than those employed by most researchers in the field and include information on nine different types of household tasks. We use this detailed housework data to investigate whether different types of housework have similar effects on wages.

## II. Data

The National Survey of Families and Households (NSFH) consists of a national sample of 13,007 households interviewed in 1987-88, of whom 10,005 were reinterviewed in 1992-94. We restrict the sample to employed, white, non-Hispanics, age 18 to 65 , who are not in the military or in school, who report an hourly wage between $\$ 2.50$ and $\$ 75.00$, and who report valid information on all the variables used in the wage equation. These restrictions reduce the sample to approximately one-third its original size in each survey year, leaving 4209 observations in the
first survey year and 3443 observations in the second survey year. Detailed information regarding the sample is provided in Appendix 1; sample means by gender are reported in Appendix 2.

The most important characteristic of the NSFH for the purpose of this analysis is the availability of housework time measures. The NSFH elicits housework time data via a selfreported questionnaire. Respondents are asked to write in the approximate number of hours per week spent by themselves on nine activities: meal preparation ("meals"); washing dishes and cleaning up after meals ("dishes"); house cleaning ("cleaning"); shopping for groceries and other household goods ("shopping"); washing, ironing and mending ("laundry"); outdoor and other household maintenance tasks ("outdoor \& maintenance"); auto maintenance and repair ("auto repair"); paying bills and keeping other financial records ("bills"); and driving other household members to work, school, or other activities ("driving others"). Individuals who reported spending more than 70 hours per week on all housework tasks or more than 25 on any single task, as well as individuals living alone who reported no housework were excluded from the analysis in order to minimize errors in variables bias. While time use diaries are generally believed to provide more accurate measures of time allocation than interview data such as these, time spent on activities that are performed infrequently such as "outdoor \& maintenance" may be considered an exception (Juster and Stafford 1991) and no time use survey of comparable size exists. The NSFH provides more detailed housework data than is available in all but the relatively small Time Use Survey, and more detail than has previously been used to address the housework-wage relation.

Table 1 presents average housework time for the pooled cross-section of workers. We consider three marital status categories: married; never-married; and divorced, separated, or
widowed. It is clear that the total amount of time spent on housework varies both by gender and by marital status. On average, married women spend 41 percent more time on housework than never-married women, and 7 percent more time than women who are divorced, separated, or widowed. Men who are divorced, separated, or widowed average 21 percent more time on housework than either married or never-married men. Not surprisingly, holding marital status constant, on average women report spending more time on housework than men, with nevermarried persons reporting the smallest gender difference.

Time spent on each of the nine housework categories is also shown in Table 1. This breakdown documents substantial differences in how total housework time is allocated by gender, regardless of marital status. Relative to men, all women spend more time, and a greater proportion of their time, on tasks such as cooking and cleaning. Men spend considerably more time than women performing outdoor and maintenance activities and auto repair. Bill paying and driving others are tasks that appear less gender specific. These detailed activities are aggregated based on observed gender differences in time allocation into three categories of housework, denoted "typically female," "typically male," and "neutral," and shown in Panel B at the bottom of Table 1 .

As noted above, researchers have generally found that housework time has a significant negative impact on wages for married women. Results for married men have been less conclusive. One possible explanation is that tasks typically performed by women are more likely to affect wages. Thus, controlling only for total time may mask the negative effect of those specific types of housework usually performed by women. Typically female housework may have a negative impact on wages because it is more likely to have to be performed on job days and so is more likely to infringe upon labor market activities. Meal preparation and cleanup are
routine daily activities in most households while outdoor and maintenance activities can often be postponed or contracted out. Extending the analysis to not-married persons and controlling for housework type will shed some light on the nature of any gender wage differential.

## III. Results

Table 2 presents coefficient estimates on housework time using the pooled cross-section sample stratified by gender and marital status. The complete wage equation estimates are provided in Appendix 3. In each equation we regress the log of hourly wage on housework, education, quadratics in experience and tenure, and dummy variables indicating residence in the South, job related disability, residence in an SMSA, and survey wave. Within the not-married samples, we include a dummy variable to distinguish between those who have never married and those who are divorced, separated, or widowed.

The results reported in column (1) indicate that the impact of total housework time on wages does not vary within gender by marital status. For women, housework has a significant negative effect on wages regardless of marital status. The magnitude of the effect is similar for both married and not-married women and not significantly different at even the 20 percent level. The results for men are weaker than those observed for women but remain similar across marital status. For both married and not-married men the results indicate a negative effect of housework that is of a similar magnitude and marginally significant (at the 6 percent level for both married and not-married men using a 1 -sided test). The hypothesis that housework time has the same effect for married and not-married men cannot be rejected.

A comparison of the effect of housework on wages for men and women of the same marital status indicates that for married persons, the housework effect is significantly smaller for men than for women, while for not-married persons there is no significant gender difference. The
differential effect observed for married men could be due to the substantially different type and quantity of housework performed by married men as compared to women and not-married men.

Specifications that differentiate between typically female, typically male, and neutral housework are presented in column (2) of Table 2. These provide some evidence that the type of housework matters. Time spent on typically female housework has a negative impact on wages that is statistically significant at the 1 percent level for women and at the 6 percent level for married men. This effect is evident as well in specifications (not reported here) that include controls for all nine types of housework. For men, time spent on neutral housework, specifically time spent driving others, also appears to have a significant negative impact on wages. This measure is, however, only marginally significant (with 1 -sided p-values of 0.05 for not-married and 0.06 for married men) and the gender differential in time spent on neutral housework is so slight that differences in this factor cannot explain a substantial fraction of the gender wage differential.

These findings suggest that the housework-wage effect is not limited to married persons. The evidence that the negative effect is primarily driven by typically female housework, housework that is more likely to be engaged in on a daily basis and that takes up a great deal of time, provides further support for the hypothesis that home production activities may be interfering with market productivity, especially for women.

Ordinary least squares estimates will, however, be biased if housework and wages are jointly determined. We make use of an extensive set of potential instruments available in the NSFH to test the hypothesis that housework is exogenously determined with respect to wages. ${ }^{1}$ Because

[^2]the validity of any individual instrument is questionable, we estimate a variety of alternative specifications, testing in each case the power of the instruments chosen as well as the exogeneity of housework with respect to wages.

The instrumental variables estimates for women continue to indicate a negative relation between housework and wages that is usually somewhat larger in magnitude than the ordinary least squares estimates, particularly for married women. The instrumental variables estimates for men suggest a smaller negative impact or even a positive impact between housework and wages, particularly for married men. Most importantly, however, in almost every specification we were unable to reject the hypothesis that housework is exogenously determined. There is little evidence using the NSFH that housework is endogenous and requires instrumental variables estimation.

We also estimate fixed effects wage specifications in order to control for unobserved individual specific productivity differences that are invariant over time. As fixed effects estimation aggravates errors in variables problems of all sorts and requires estimation of a substantially greater number of parameters, it is not surprising that the estimated impact of housework on wages for this short panel sample, while generally negative, virtually never attains statistical significance. ${ }^{2}$ In this sample, fixed effects estimation provides no reliable information about the relation between housework and wages.

[^3]
## IV. Decomposition of the Gender Wage Differential

To measure the degree to which gender differences in housework time explain the gender wage gap, we compare the fraction of the gender wage differential that is explained by observable characteristics in a model that excludes housework time with the fraction that is explained in a model that includes housework time. The model we estimate is with two exceptions identical to the log wage specifications reported above. Our first departure from the above model is to pool samples across marital status, allowing only for a difference in the level of wages. Thus, all women (men) are joined in one sample, regardless of marital status, and dummy variables are incorporated to identify those never married and those currently married. F-tests indicate that one cannot reject such pooling at the five percent significance level. Next we follow Oaxaca and Ransom (1994), and pool across gender to obtain estimates of the wage structure that would prevail in the event that there were no gender differences in the parameter estimates.

Results from the specification that excludes housework time indicate that gender differences in the explanatory variables account for 29.1 percent of the gender wage differential. Results from the specification that includes housework time indicate that 43.4 percent of the gender wage differential is explained by observable gender differences. Thus, including housework time in the wage equation increases the explained component of the gender wage gap by about 14 percentage points. These results do not, however, imply that the decision to spend time on housework is a choice always made freely by the individual and uninfluenced by discriminatory forces in the market or in the home.

## V. Conclusion

In this paper, we extend previous research examining the housework-wage relation using a different data set, samples of both married and not-married persons, and a detailed breakdown of the different types of housework. We find ordinary least squares results for married women using the NSFH that are strikingly similar to those obtained by Hersch and Stratton (1997) using the Panel Study of Income Dynamics. As in Hersch and Stratton, we are unable to reject the hypothesis that housework is exogenously determined with respect to wages. More importantly, we find that the negative relation between housework and wages is not unique to married women but rather is of approximately the same magnitude for all women. Results for men also show a negative relation between housework and wages that persists across marital status. These findings suggest that marriage does not cause the housework effect, and that the negative relation is attributable to the actual time or effort involved in housework.

Tests indicate that housework has approximately the same impact on wages for men and women who are not currently married, but that the negative relation is somewhat stronger for married women as compared to married men. Evidence suggests that this differential could be due to gender differences in the type of housework performed by married persons. Married men report less time spent on household tasks such as meal preparation, cleaning, shopping, and laundry that appear to have the largest influence on wages. It may be that these tasks, which generally must be attended to on a daily or almost daily basis, are more likely to interfere with on-the-job performance. These results are partially substantiated by Hersch (1991) who finds that it is time spent on housework only during job days that is negatively related to wages. Further research on the nature of this interaction is necessary to pinpoint the mechanism at work.

## Appendix 1: Sample Inclusion Criteria

The data employed here are drawn from the National Survey of Families and Households (NSFH). This is a nationwide sample of 13,007 households, with a double sample of minorities, single parents, stepparents, cohabitors, and recently married persons that were interviewed in 1987-88. Approximately five years later, in 1992-94, 10,005 of the original respondents were reinterviewed.

The analyses presented here are based on a cross-section sample of employed, white, nonHispanics, age 18 to 64 , who are not in the military or in school, and who report valid information on all the variables used in the wage analysis and on housework. This sample contains information on 5380 individuals of whom 4209 satisfy the restrictions in the first year and 3443 satisfy the restrictions in the second year.

Details regarding the sample restrictions are tabulated below. The first column identifies the nature of the restriction; the next columns identify the number of affected individuals. As indicated in that table, about 23 percent of the initial sample is excluded due to racial restrictions. Another 14 percent are either under the age of 18 or over the age of 64 at the time of the survey. Thus, approximately half of the observations excluded from the analysis are excluded due to racial or age restrictions.

Many of the remaining restrictions are based on labor market information. Respondents to the survey were asked to provide information on earnings and method of payment (hourly, salaried, etc.), number of hours worked per week, years of work experience, tenure, industry, and occupation. Hourly wage is calculated in the usual manner from information on earnings, method of payment, and hours worked, and is converted to 1992 constant dollars using the Consumer Price Index. We include those with wages between $\$ 2.50$ and $\$ 75.00$ per hour.

About 14 percent of the respondents (79 percent of whom are women) are not employed at the time of the survey and almost 6 percent either fail to report wage information or report wages that do not fall within the stated bounds. Less than 2 percent of the respondents are excluded due to incomplete experience or tenure data or for failing to report the marital status, education, household composition, or work related disability information that is used in the analysis.

Missing information on housework time, a variable central to this study, necessitated the final sample cuts. As discussed in the text, respondents were asked to indicate the approximate number of hours per week on each of nine activities. Unfortunately, a large number of respondents left at least one response blank, particularly during the first wave of interviews. NSFH personnel indicate that many respondents to this wave left blanks instead of filling in zeros as requested in the directions. Interviewers were instructed to check for this during the second wave, and the response rate improved considerably.

Some non-responses can reasonably be assigned zero values based on answers to other questions. For instance, driving time is set to zero for those who report that they have not driven a car for over six months and time spent on auto repair is set equal to zero for those who report not having a car. Other missing responses from the first wave are coded zero if the respondent answered at least five of the nine questions and did not self-report a zero more than once. We consider reported housework time to be unreliable for those who fail to report housework time in more than four categories at the time of the first survey, fail to report housework time in any category at the time of the second survey, report "some" time in an activity rather than a magnitude, report 70 hours or more of housework activity per week, report spending more than 25 hours on any single housework activity, or live with no other adults and report no time on
housework at all. These restrictions reduced the sample by 7.6 percent for the first wave and 4.0 percent for the second wave. These selection criteria are summarized in the table below.

## Selection Criteria for NSFH Cross-Section Sample

Number (Percent of Total)

|  | First Wave |  | Second Wave |  |
| :---: | :---: | :---: | :---: | :---: |
| Initial Number of Observations | 13007 |  | 10005 |  |
| Non-White or Hispanic | 2523 | (19.4\%) | 2523 | (25.2\%) |
| Age below 18 or above 64 | 1805 | (13.9\%) | 1412 | (14.1\%) |
| In Military | 65 | ( 0.5\%) | 23 | ( 0.2\%) |
| In School ${ }^{\text {a }}$ | 458 | ( 3.5\%) | 190 | ( $1.9 \%$ ) |
| Not Employed | 2071 | (15.9\%) | 1190 | (11.9\%) |
| Missing Wage | 646 | ( 5.0\%) | 460 | ( 4.6\%) |
| Hourly Wage below \$2.50 or above \$75 | 119 | ( 0.9\%) | 123 | ( $1.2 \%$ ) |
| Missing or Unreliable Experience or Tenure | 89 | ( 0.7\%) | 127 | ( 1.2\%) |
| Miscellaneous Exclusions ${ }^{\text {b }}$ | 23 | ( 0.2\%) | 31 | ( 0.3\%) |
| Missing Work-Related Disability Information | 8 | ( 0.1\%) | 81 | ( 0.6\%) |
| Housework Time Not Reported ${ }^{\text {c }}$ | 754 | ( 5.8\%) | 259 | ( $2.6 \%$ ) |
| Unreliable Measure of Housework Time ${ }^{\text {d }}$ | 240 | ( 1.8\%) | 143 | ( 1.4\%) |
| Sample: 5380 Individuals | 4209 | (32.4\%) | 3443 | (34.4\%) |

a. Those over the age of 25 who were enrolled in school part-time and working full-time were included in the survey.
b. Reasons for exclusion include: missing or invalid education, household composition, or marital status; residence in a group home; and residence with a same sex partner.
c. To account for reporting differences over time, up to four missing housework measures are recoded as zeros for the first wave responses, provided no more than one zero value is volunteered.
d. Reported housework time is considered unreliable if total reported housework time exceeds 70 hours per week, if reported housework time for any single activity exceeds 25 hours per week, or if no time at all is reported and there are no other adults in the household.

## Appendix 2: Descriptive Statistics by Gender for Pooled Cross-Section

Mean (standard deviation)

| Variable | Women | Men |
| :---: | :---: | :---: |
| Real Hourly Wage (1992\$) | $\begin{aligned} & 11.19 \\ & (6.88) \end{aligned}$ | $\begin{aligned} & 15.42 \\ & (9.25) \end{aligned}$ |
| Education | $\begin{aligned} & 13.57 \\ & (2.49) \end{aligned}$ | $\begin{gathered} 13.85 \\ (2.75) \end{gathered}$ |
| Experience | $\begin{aligned} & 14.53 \\ & (8.64) \end{aligned}$ | $\begin{gathered} 17.74 \\ (10.15) \end{gathered}$ |
| Tenure | $\begin{gathered} 6.86 \\ (6.83) \end{gathered}$ | $\begin{gathered} 9.37 \\ (8.69) \end{gathered}$ |
| South | $\begin{gathered} 0.30 \\ (0.46) \end{gathered}$ | $\begin{gathered} 0.31 \\ (0.46) \end{gathered}$ |
| Disability | $\begin{gathered} 0.02 \\ (0.13) \end{gathered}$ | $\begin{gathered} 0.02 \\ (0.13) \end{gathered}$ |
| SMSA | $\begin{gathered} 0.76 \\ (0.43) \end{gathered}$ | $\begin{gathered} 0.75 \\ (0.43) \end{gathered}$ |
| Second Survey Wave | $\begin{gathered} 0.46 \\ (0.50) \end{gathered}$ | $\begin{gathered} 0.44 \\ (0.50) \end{gathered}$ |
| Married | $\begin{gathered} 0.57 \\ (0.50) \end{gathered}$ | $\begin{gathered} 0.67 \\ (0.47) \end{gathered}$ |
| Never Married | $\begin{gathered} 0.13 \\ (0.34) \end{gathered}$ | $\begin{gathered} 0.17 \\ (0.38) \end{gathered}$ |
| Hours of housework per week | $\begin{gathered} 28.08 \\ (13.66) \end{gathered}$ | $\begin{gathered} 18.29 \\ (10.89) \end{gathered}$ |
| Number of observations | 3944 | 3708 |

Source: National Survey of Families and Households.

## Appendix 3: Log Wage Equations ${ }^{\text {a }}$

| Variable | Married Women |  | Not-Married Women |  | Married Men |  | Not-Married Men |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (1) | (2) | (1) | (2) | (1) | (2) | (1) | (2) |
| $\begin{aligned} & \text { Housework x } \\ & 100 \end{aligned}$ | $\begin{aligned} & -0.391 \\ & (0.067) \end{aligned}$ |  | $\begin{aligned} & -0.285 \\ & (0.075) \end{aligned}$ |  | $\begin{aligned} & -0.136 \\ & (0.085) \end{aligned}$ |  | $\begin{aligned} & -0.176 \\ & (0.112) \end{aligned}$ |  |
| Typically Female x 100 |  | $\begin{aligned} & -0.435 \\ & (0.081) \end{aligned}$ |  | $\begin{aligned} & -0.412 \\ & (0.096) \end{aligned}$ |  | $\begin{aligned} & -0.210 \\ & (0.129) \end{aligned}$ |  | $\begin{aligned} & -0.017 \\ & (0.150) \end{aligned}$ |
| Typically Male x 100 |  | $\begin{gathered} 0.171 \\ (0.365) \end{gathered}$ |  | $\begin{gathered} 0.155 \\ (0.318) \end{gathered}$ |  | $\begin{gathered} 0.133 \\ (0.170) \end{gathered}$ |  | $\begin{aligned} & -0.224 \\ & (0.276) \end{aligned}$ |
| Neutral x 100 |  | $\begin{aligned} & -0.394 \\ & (0.319) \end{aligned}$ |  | $\begin{gathered} 0.179 \\ (0.346) \end{gathered}$ |  | $\begin{aligned} & -0.499 \\ & (0.320) \end{aligned}$ |  | $\begin{aligned} & -0.992 \\ & (0.488) \end{aligned}$ |
| Education | $\begin{gathered} 0.089 \\ (0.004) \end{gathered}$ | $\begin{gathered} 0.088 \\ (0.004) \end{gathered}$ | $\begin{gathered} 0.082 \\ (0.004) \end{gathered}$ | $\begin{gathered} 0.082 \\ (0.004) \end{gathered}$ | $\begin{gathered} 0.081 \\ (0.003) \end{gathered}$ | $\begin{gathered} 0.082 \\ (0.003) \end{gathered}$ | $\begin{gathered} 0.090 \\ (0.005) \end{gathered}$ | $\begin{gathered} 0.090 \\ (0.005) \end{gathered}$ |
| Experience | $\begin{gathered} 0.028 \\ (0.004) \end{gathered}$ | $\begin{gathered} 0.028 \\ (0.004) \end{gathered}$ | $\begin{gathered} 0.025 \\ (0.004) \end{gathered}$ | $\begin{gathered} 0.025 \\ (0.004) \end{gathered}$ | $\begin{gathered} 0.025 \\ (0.004) \end{gathered}$ | $\begin{gathered} 0.025 \\ (0.004) \end{gathered}$ | $\begin{gathered} 0.024 \\ (0.005) \end{gathered}$ | $\begin{gathered} 0.023 \\ (0.005) \end{gathered}$ |
| Experience <br> Squared x 100 | $\begin{aligned} & -0.062 \\ & (0.011) \end{aligned}$ | $\begin{aligned} & -0.063 \\ & (0.011) \end{aligned}$ | $\begin{aligned} & -0.040 \\ & (0.010) \end{aligned}$ | $\begin{aligned} & -0.039 \\ & (0.010) \end{aligned}$ | $\begin{aligned} & -0.040 \\ & (0.009) \end{aligned}$ | $\begin{aligned} & -0.040 \\ & (0.009) \end{aligned}$ | $\begin{aligned} & -0.049 \\ & (0.012) \end{aligned}$ | $\begin{aligned} & -0.049 \\ & (0.012) \end{aligned}$ |
| Tenure | $\begin{gathered} 0.034 \\ (0.004) \end{gathered}$ | $\begin{gathered} 0.034 \\ (0.004) \end{gathered}$ | $\begin{gathered} 0.031 \\ (0.004) \end{gathered}$ | $\begin{gathered} 0.031 \\ (0.004) \end{gathered}$ | $\begin{gathered} 0.022 \\ (0.003) \end{gathered}$ | $\begin{gathered} 0.022 \\ (0.003) \end{gathered}$ | $\begin{gathered} 0.027 \\ (0.005) \end{gathered}$ | $\begin{gathered} 0.027 \\ (0.005) \end{gathered}$ |
| Tenure Squared x 100 | $\begin{aligned} & -0.070 \\ & (0.015) \end{aligned}$ | $\begin{aligned} & -0.069 \\ & (0.015) \end{aligned}$ | $\begin{aligned} & -0.067 \\ & (0.014) \end{aligned}$ | $\begin{aligned} & -0.067 \\ & (0.014) \end{aligned}$ | $\begin{aligned} & -0.037 \\ & (0.010) \end{aligned}$ | $\begin{aligned} & -0.036 \\ & (0.010) \end{aligned}$ | $\begin{aligned} & -0.047 \\ & (0.016) \end{aligned}$ | $\begin{aligned} & -0.048 \\ & (0.016) \end{aligned}$ |
| South | $\begin{aligned} & -0.068 \\ & (0.019) \end{aligned}$ | $\begin{aligned} & -0.067 \\ & (0.019) \end{aligned}$ | $\begin{aligned} & -0.036 \\ & (0.021) \end{aligned}$ | $\begin{aligned} & -0.036 \\ & (0.021) \end{aligned}$ | $\begin{aligned} & -0.061 \\ & (0.019) \end{aligned}$ | $\begin{aligned} & -0.061 \\ & (0.019) \end{aligned}$ | $\begin{aligned} & -0.069 \\ & (0.028) \end{aligned}$ | $\begin{aligned} & -0.070 \\ & (0.028) \end{aligned}$ |
| Disability | $\begin{aligned} & -0.016 \\ & (0.073) \end{aligned}$ | $\begin{aligned} & -0.017 \\ & (0.073) \end{aligned}$ | $\begin{aligned} & -0.082 \\ & (0.072) \end{aligned}$ | $\begin{aligned} & -0.088 \\ & (0.072) \end{aligned}$ | $\begin{aligned} & -0.147 \\ & (0.072) \end{aligned}$ | $\begin{aligned} & -0.146 \\ & (0.072) \end{aligned}$ | $\begin{aligned} & -0.281 \\ & (0.086) \end{aligned}$ | $\begin{aligned} & -0.282 \\ & (0.086) \end{aligned}$ |
| SMSA1 ${ }^{\text {b }}$ | $\begin{gathered} 0.152 \\ (0.028) \end{gathered}$ | $\begin{gathered} 0.154 \\ (0.029) \end{gathered}$ | $\begin{gathered} 0.169 \\ (0.031) \end{gathered}$ | $\begin{gathered} 0.171 \\ (0.031) \end{gathered}$ | $\begin{gathered} 0.218 \\ (0.028) \end{gathered}$ | $\begin{gathered} 0.221 \\ (0.028) \end{gathered}$ | $\begin{gathered} 0.121 \\ (0.040) \end{gathered}$ | $\begin{gathered} 0.121 \\ (0.040) \end{gathered}$ |
| SMSA ${ }^{\text {b }}$ | $\begin{gathered} 0.159 \\ (0.029) \end{gathered}$ | $\begin{gathered} 0.159 \\ (0.029) \end{gathered}$ | $\begin{gathered} 0.183 \\ (0.039) \end{gathered}$ | $\begin{gathered} 0.179 \\ (0.039) \end{gathered}$ | $\begin{gathered} 0.160 \\ (0.030) \end{gathered}$ | $\begin{gathered} 0.163 \\ (0.030) \end{gathered}$ | $\begin{gathered} 0.089 \\ (0.053) \end{gathered}$ | $\begin{gathered} 0.088 \\ (0.053) \end{gathered}$ |
| Second Survey Wave | $\begin{gathered} 0.006 \\ (0.035) \end{gathered}$ | $\begin{gathered} 0.007 \\ (0.035) \end{gathered}$ | $\begin{aligned} & -0.026 \\ & (0.045) \end{aligned}$ | $\begin{aligned} & -0.020 \\ & (0.045) \end{aligned}$ | $\begin{aligned} & -0.001 \\ & (0.035) \end{aligned}$ | $\begin{gathered} 0.001 \\ (0.035) \end{gathered}$ | $\begin{aligned} & -0.051 \\ & (0.059) \end{aligned}$ | $\begin{aligned} & -0.050 \\ & (0.059) \end{aligned}$ |


| Never-Married |  |  | 0.014 | 0.016 |  |  | -0.106 | -0.111 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $(0.024)$ | $(0.024)$ |  |  | $(0.031)$ | $(0.031)$ |
| Constant | 0.673 | 0.684 | 0.709 | 0.724 | 0.986 | 0.969 | 0.916 | 0.929 |
|  | $(0.066)$ | $(0.067)$ | $(0.070)$ | $(0.071)$ | $(0.062)$ | $(0.062)$ | $(0.087)$ | $(0.088)$ |
| Adjusted $\mathrm{R}^{2}$ | 0.36 | 0.37 | 0.36 | 0.36 | 0.31 | 0.31 | 0.33 | 0.33 |

a. Standard errors are reported in parentheses.
b. SMSA1 (SMSA2) indicates residence in an SMSA at the time of the first (second) survey. These measures are not directly comparable as different definitions were applied each year.

## References

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Table 1
Average Time on Home Production Per Week by Gender and Marital Status

|  | Women |  |  |  | Men |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Married | Divorced, Separated, Widowed | NeverMarried | Significant Difference ${ }^{\text {a }}$ | Married | Divorced, Separated, Widowed | Never- <br> Married | Significant Difference ${ }^{\text {a }}$ |
| Panel A: |  |  |  |  |  |  |  |  |
| Total | 29.83 | 27.80 | 21.17 | a,b,c | 17.67 | 21.53 | 17.83 | a,c |
| Meals | 7.73 | 6.51 | 5.01 | a,b,c | 2.51 | 4.54 | 3.80 | a,b,c |
| Dishes | 4.89 | 4.27 | 3.56 | a,b,c | 2.01 | 2.80 | 2.40 | a,b,c |
| Cleaning | 6.09 | 5.49 | 3.99 | a,b,c | 1.87 | 3.14 | 2.55 | a,b,c |
| Shopping | 2.47 | 2.40 | 2.04 | b, c | 1.44 | 1.83 | 1.65 | a,b,c |
| Laundry | 3.96 | 3.24 | 2.60 | a,b,c | 0.77 | 1.71 | 1.55 | a,b |
| Outdoor \&Maintenance | 1.53 | 2.07 | 1.32 | a,c | 4.96 | 3.45 | 2.46 | a,b,c |
| Auto Repair | 0.17 | 0.50 | 0.60 | a,b | 1.66 | 1.43 | 1.34 | a,b |
| Bills | 1.47 | 1.67 | 1.49 | a,c | 1.34 | 1.52 | 1.51 | a,b |
| Driving Others | 1.52 | 1.65 | 0.56 | b, c | 1.11 | 1.12 | 0.56 | b, c |
| Panel B: ${ }^{\text {b }}$ |  |  |  |  |  |  |  |  |
| Typically Female | 25.14 | 21.91 | 17.20 | a,b,c | 8.60 | 14.02 | 11.95 | a,b,c |
| Typically Male | 1.69 | 2.58 | 1.92 | a,c | 6.62 | 4.87 | 3.80 | a,b,c |
| Neutral | 2.99 | 3.31 | 2.05 | a,b,c | 2.45 | 2.64 | 2.08 | b, c |
| Number of Observations | 2247 | 1176 | 521 |  | 2495 | 572 | 641 |  |

a. Significant differences in means at the 5\% level where:
a - compares married and divorced, separated, and widowed persons of the same gender.
b - compares married and never married persons of the same gender.
c - compares never married and divorced, separated, and widowed persons of the same gender.
b. Typically Female housework includes meals, dishes, cleaning, shopping, and laundry. Typically Male housework includes outdoor
\& maintenance and auto repair. Neutral housework includes bills and driving others.

Source: National Survey of Families and Households.

## Table 2

## The Impact of Housework on Wages ${ }^{\text {a }}$

Coefficient ${ }^{\text {b }}$ (standard error)

|  | Women |  | Men |  |
| :---: | :---: | :---: | :---: | :---: |
|  | (1) | (2) | (1) | (2) |
| Married |  |  |  |  |
| Total Housework | $\begin{aligned} & -0.391^{* *} \\ & (0.067) \end{aligned}$ |  | $\begin{aligned} & -0.136 \\ & (0.085) \end{aligned}$ |  |
| Typically Female |  | $\begin{aligned} & -0.435^{* *} \\ & (0.081) \end{aligned}$ |  | $\begin{aligned} & -0.210 \\ & (0.129) \end{aligned}$ |
| Typically Male |  | $\begin{gathered} 0.171 \\ (0.365) \end{gathered}$ |  | $\begin{gathered} 0.133 \\ (0.170) \end{gathered}$ |
| Neutral |  | $\begin{aligned} & -0.394 \\ & (0.319) \end{aligned}$ |  | $\begin{aligned} & -0.499 \\ & (0.320) \end{aligned}$ |
| Adjusted $\mathrm{R}^{2}$ | 0.36 | 0.37 | 0.31 | 0.31 |
| Not-Married |  |  |  |  |
| Total Housework | $\begin{aligned} & -0.285 * * \\ & (0.075) \end{aligned}$ |  | $\begin{aligned} & -0.176 \\ & (0.112) \end{aligned}$ |  |
| Typically Female |  | $\begin{aligned} & -0.412 * * \\ & (0.096) \end{aligned}$ |  | $\begin{aligned} & -0.017 \\ & (0.150) \end{aligned}$ |
| Typically Male |  | $\begin{gathered} 0.155 \\ (0.318) \end{gathered}$ |  | $\begin{aligned} & -0.224 \\ & (0.276) \end{aligned}$ |
| Neutral |  | $\begin{gathered} 0.179 \\ (0.346) \end{gathered}$ |  | $\begin{aligned} & -0.992^{*} \\ & (0.488) \end{aligned}$ |
| Adjusted R ${ }^{2}$ | 0.36 | 0.36 | 0.33 | 0.33 |

a. Dependent variable is the log of hourly wage. All coefficients are multiplied by 100. Additional variables included in each equation are a constant, education, experience, experience squared, tenure, tenure squared, and indicators for South, disability, SMSA, and second survey wave. Equations for not-married persons also include an indicator for never-married.
$\mathrm{b}^{* *}\left({ }^{*}\right)$ indicates significance at the $1 \%(5 \%)$ level, 1 sided tests.


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[^2]:    ${ }^{1}$ These additional results are available upon request. The set of possible instruments includes information on the respondents' parents' education and mother's work experience, ability to perform housework tasks, interest in performing housework tasks, religious preferences, non-labor income, car ownership, home ownership and type of

[^3]:    residence, perception of gender roles in the household, spouse's background, and the number of other men and women of various relations living in the household.
    ${ }^{2}$ Results available upon request.

