Opting Out and Buying Out: Wives' Earnings and Housework Time

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Abstract

It has been proposed that the negative association between wives' earnings and their time in housework is due to greater outsourcing of household labor by households with high-earning wives, but this hypothesis has not been tested directly. In a sample of dual-earner married couples in the Consumption and Activities Mail Survey of the Health and Retirement Study (N = 796), use of market substitutes for women's housework was found to be only weakly associated with wives' time cooking and cleaning. Furthermore, expenditures on market substitutes explain less than 15% of the earnings–housework time relationship. This suggests that use of market substitutes plays a smaller role in explaining variation in wives' time in household labor than has previously been hypothesized.

Keywords

families in middle and later life; Health and Retirement Study (HRS); housework/division of labor; time use; wives' employment

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Wives continue to spend more time than their husbands doing housework, even when both spouses work full-time (Kamo, 1988; Killewald & Gough, 2010). For those couples, domestic labor is a source of gender stratification, as it contributes to unequal leisure time between spouses. Furthermore, wives' time in housework is negatively associated with wages, thus making women's greater domestic burden a contributor to the gender gap in wages (Hersch & Stratton, 1997; Noonan, 2001).

It is therefore natural to ask what resources wives may use to reduce their time in household labor. Existing studies indicate that wives' earnings are negatively associated with their time in housework, even after controlling for time spent in market work (Gupta, 2006, 2007; Killewald & Gough, 2010). Given that wives' earnings are positively associated with household expenditures on market substitutes for their household labor and negatively associated with their time in housework, it has been hypothesized that wives' earnings allow them to outsource household production (Cohen, 1998; de Ruijter, Treas, & Cohen, 2005; Gupta, 2006, 2007; Gupta & Ash, 2008): Wives use their earnings to buy out of time in housework. Nevertheless, the explanatory power of the buying-out hypothesis has, to my knowledge, never been directly tested. An alternative cause of the negative earnings–housework relationship is that higher earnings lead wives to reduce their household labor hours, without purchasing a market substitute for their own time. In other words, high earners opt out by doing less housework.

Testing the buying-out hypothesis has been difficult because most data sets do not include information on both housework time and household expenditures. Brines (1994), using data

from the Panel Study of Income Dynamics (PSID), found that increased expenditures on dining out relative to food consumed at home was negatively associated with wives' time in housework, but the PSID lacks data on expenditures on other types of market substitutes for housework. By linking time use and expenditure measures from the Consumption and Activities Mail Survey (CAMS) to earnings measures from its parent study, the Health and Retirement Study (HRS), I directly measured the extent to which use of market substitutes is associated with wives' time in household labor. Furthermore, by comparing the results of models of wives' housework time before and after the inclusion of a measure of use of market substitutes, I measured the extent to which the expenditures explain the negative relationship between wives' earnings and their housework time.

Understanding whether wives' earnings lessen the time they spend in household labor primarily by spending more on market substitutes has implications for understanding the intersection between household responsibilities and market work. Acknowledging that wives may not fully compensate for their reduced housework time by increased use of market substitutes introduces a new parameter into the household decision-making model: the level of household production. Households make choices about, for example, the degree of cleanliness of the home and the quality of the food that household members consume. Household labor need not be viewed as purely a task of allocation between spouses or between private production and purchased commodities. Rather, households are also making trade-offs between the amount of domestic production and the amount of other items the household values, including leisure time and consumption goods.

Buying Out and Opting Out

The relationship between wives' earnings and their time in housework is both statistically significant and practically large. Using data from the National Survey of Families and Households (NSFH), Gupta (2006) found that, compared with wives in the lowest quartile of the earnings distribution, those in the top quartile spent 13 fewer hours per week in housework, which implies a 40% reduction. Among couples in which both spouses worked full-time, wives in the second quartile of the earnings distribution spent 26 hours per week in housework, compared with 18 hours for women in the highest quartile, a 30% reduction. Thus, the relationship is not entirely due to differences in labor market work by high- and low-earning wives.

Households face decisions about both the use of their members' time and the ways to spend available financial resources. Domestic production, such as meals and a clean home and clothes, can be created either directly, through the time inputs of household members, or indirectly, using the financial rewards from market work to purchase the services of others. If wives' earnings are negatively related to their housework hours, this may be because earnings are negatively correlated with the total amount of household production or because they are positively correlated with the fraction of domestic production that is outsourced or allocated to other household members, or both.

The buying-out explanation for the negative relationship between wives' earnings and their housework hours suggests that wives' earnings give them the purchasing power to buy market substitutes for their own household labor. This explanation focuses on the positive correlation between wives' earnings and the fraction of domestic production that is outsourced. The assumption that higher-income households use their financial resources to purchase market substitutes that allow household members to reduce their own time in housework is frequently given as a reason to control for household income in models of individuals' time in housework (e.g., Bittman, England, Sayer, Folbre, & Matheson, 2003; Brines, 1994; Evertsson & Nermo, 2004). The buying-out hypothesis is also invoked in

recent studies that recognize the distinct effects of husbands' and wives' earnings on wives' housework time (Gupta, 2006, 2007; Gupta & Ash, 2008).

The buying-out hypothesis is appealing in part because it draws on a standard economic model of consumption: conditional on the amount of time spent in the labor force, wives with higher earnings have greater financial resources to outsource domestic labor, thereby "purchasing" additional leisure time for themselves. Assuming that wives enjoy leisure more than housework and again conditioning on time in paid work, wives with greater earnings should devote less time to housework and more to leisure. If wives use their earnings to buy out of time in household labor, we would expect that household expenditures on market substitutes for household labor rise with household income, as high-income households have greater financial resources to purchase the wife's leisure time. This does not imply that there are no constraints on households that prevent them from outsourcing household labor, merely that, all else equal, households with more financial resources are better able to overcome those constraints and reduce the wife's time in household labor than are households with fewer financial resources.

Furthermore, the wife is likely to value her own leisure time more highly than her husband does. Even if spouses pool their incomes, existing evidence indicates that spending on goods that wives value or within wives' sphere of traditional responsibility rises more quickly with wives' earnings than with husbands' (Phipps & Burton, 1998). As a result, the buying-out hypothesis predicts that expenditures on market substitutes for wives' household-labor time rise more quickly with wives' earnings than with husbands'. As expected, couples' spending on market substitutes for housework women typically perform, including child-care services and cleaning services, have been found to have a stronger positive association with wives' earnings than with husbands' (Cohen, 1998; Oropesa, 1993; Phipps & Burton, 1998; Soberon-Ferrer & Dardis, 1991), although some studies have found that dining out responds equally strongly to husbands' and wives' earnings (Cohen, 1998; Oropesa, 1993). This is also consistent with past evidence that wives' time in housework falls more rapidly with their own earnings than with the earnings of their husbands (Gupta, 2006, 2007; Gupta & Ash, 2008; Killewald & Gough, 2010).

If use of market substitutes is an important mechanism by which wives reduce their time in household labor as their earnings rise, use of market substitutes should be strongly negatively related to wives' time in housework. Furthermore, if the use of market substitutes fully explains the negative relationship between wives' earnings and their housework hours, then models of wives' housework time that include a measure of households' use of market substitutes should show no remaining association between wives' earnings and their time in housework. In other words, the link between wives' earnings and their time in housework is entirely indirect, as it operates through increased expenditures on market substitutes.

Buying out, however, is not the only possible source of the negative relationship between wives' earnings and their housework hours. It is possible that housework hours are lower for wives with higher earnings because the average level of domestic production in their households is lower. This may occur for two reasons: opting out and selection. Wives may respond to earnings increases by opting out of housework, foregoing time in household labor without purchasing a market substitute. Wives with higher earnings may have a preference for lower levels of domestic production because the rewards for high levels of domestic production are not as great for them. High-earning wives may face less social pressure to perform the traditionally female tasks of household production, as has sometimes been suggested (Gupta, 2006, 2007; Gupta & Ash, 2008). All women may feel pressure to perform housework as a way to "do" gender and to express affection for household members (Berk, 1985; DeVault, 1991; Hochschild, 1989; West & Zimmerman, 1987), but that

pressure may not operate with equal force on all women. High-earning women may be particularly likely to derive more personal satisfaction and social status from their labor-market roles, which makes the status ascribed for performing traditional household production less important.

Furthermore, the effort required to procure adequate, trustworthy substitutes for wives' time in household labor, as well as reluctance to trust service providers (especially when their employers do not easily observe their behavior) may reduce households' desire to outsource many aspects of market production (de Ruijter, van der Lippe, & Raub, 2003). Therefore, households that choose to reduce wives' time in housework still may not be willing to bear the financial and non-financial costs of purchasing market substitutes and may choose instead to reduce household production. If wives are both opting out and buying out in response to earnings increases, expenditures on market substitutes will only partially mediate the earnings–housework relationship, and models that include a control for expenditures on market substitutes will continue to show a residual association between wives' earnings and their housework time.

It is also possible that the observed negative relationship between wives' earnings and their time in housework is entirely spurious, as a result of differences among women in taste for housework or domestic production that are correlated with, but not caused by, differences in earnings. In this case, too, we would expect to see lower levels of domestic production and less time spent in housework for wives with higher earnings, and controlling for expenditures on market substitutes would not eliminate the earnings–housework relationship.

There is some evidence that use of market substitutes may reduce women's time in housework. Van der Lippe, Tijdens, and de Ruijter (2004), using data from the Dutch National Time Budget survey, found that frequency of takeout meals is associated with less time cooking for both men and women and that use of cleaning services reduces women's time cleaning. Similarly, Bittman, Rice, and Wajcman (2004), using the Australian 1997 Time Use Survey, found that having hired someone to clean the home in the previous two weeks was associated with significantly less total time in housework for women, although the number of times restaurant or takeout meals were purchased over the same period was not. Nonetheless, neither study tested whether the use of these market substitutes explained the negative association between women's earnings and their housework time.

Method

The sample was drawn from the Health and Retirement Study (HRS) (Health and Retirement Study; RAND HRS Data, Version H). The Consumption and Activities Mail Survey (CAMS), which in each wave included a subsample of households from the HRS sample, asked individuals about their own time in housework and household expenditures on various items. The 2003, 2005, 2007, and 2009 waves of CAMS were merged with the HRS Core surveys of 2002, 2004, 2006, and 2008. In the 2005–2009 waves of CAMS, the spouses of primary respondents were asked to complete a shorter interview that included measures of the respondent's time use but did not repeat the household expenditure measures. In those cases, I imputed to both spouses the level of household expenditure that the primary household respondent reported. For the periods considered here, the HRS is a representative sample of the U.S. population older than age 50, although the sample included younger spouses as well. This article highlights the experiences of a relatively understudied group: mature couples, typically living without young children in the household, but before retirement. As the population ages, understanding the experiences of this population becomes increasingly valuable.

In the analyses that follow, the dependent variables are wives' self-reported time in meal preparation and cleanup (cooking) and cleaning house, washing, ironing, and mending (cleaning) in the week before the survey. Together, these tasks—cooking, doing dishes, ironing, washing, and cleaning house—account for more than 70% of women's time in noncare household activities, including for women aged 45–64 (Krantz-Kent, 2009).

Measuring Substitution

Before I discuss the measure of market substitutes employed here, it is useful to think about what such a measure would ideally capture. By "market substitutes," I mean any good or service that an individual purchases to increase household production, without performing household labor herself. Purchasing takeout food, hiring someone to clean the home or mow the lawn, or sending shirts to a laundry are all examples of using market substitutes, sometimes also referred to as outsourcing. To test the extent to which wives substitute purchased services for their own time in housework, it would be ideal to determine the amount of wives' own time that the purchased goods replace. For example, if a wife hires a domestic cleaner, how many hours would the wife have spent to accomplish the work the cleaner did?

There is not, of course, such an ideal measure. Instead, households' expenditures on dining out (cooking) and housekeeping or laundry services (cleaning) are here considered expenditures on market substitutes for women's housework time. This is consistent with existing research (Cohen, 1998; de Ruijter, Treas et al., 2005; Oropesa, 1993; Treas & de Ruijter, 2008), although spending on laundry services is sometimes excluded (Cohen, 1998; Oropesa, 1993).

In CAMS, individuals were asked to report their expenditures on "Housekeeping, dry cleaning and laundry services: hiring costs for housekeeping or home cleaning, and amount spent at dry cleaners or laundries" and "Dining and/or drinking out: items in restaurants, cafes, and diners, including take-out food." This measure is not without limitations. Expenditures in these areas may increase without reducing wives' housework time. For example, consuming alcoholic beverages in restaurants rather than at home would register as increased spending on food away from home but would be a poor measure of money spent reducing wives' time cooking. Likewise, a household may spend more money on laundry services simply because it has purchased more clothes that require dry-cleaning.

In addition, particularly for food, variation in spending on market substitutes may reflect variation in the quality of services purchased rather than the amount of the wife's time that is replaced. Alternatively, wives' greater earnings may lead to greater tolerance of food that is purchased but ultimately goes uneaten by household members. These effects introduce measurement error into the substitution measure, which will lead to a downward bias in the estimated relationship between the use of market substitutes and wives' housework time.

To the extent that increasing expenditures on market substitutes reflect quality increases and tolerance for wastage, a similar effect should also lead to increased spending on groceries and, to a lesser extent, cleaning supplies, which are complements to rather than substitutes for wives' housework time. Also, CAMS asked individuals about expenditures on "Housekeeping supplies: cleaning and laundry products" and "Food and beverages: food and drinks, including alcoholic, that you buy in grocery or other stores." To capture more accurately the extent of substitution for the wife's housework, a measure of the share of the household's expenditures in the domain of cooking or cleaning that is spent on market substitutes rather than on complements was constructed. This is given as follows: share = 100× (spending on substitutes)/(spending on substitutes + spending on complements)

Brines's (1994) measure of spending on restaurant meals relative to spending on food prepared at home is similar in spirit. It is expected that this measure is more strongly related to wives' housework time than is the absolute level of expenditures on substitutes, as it more strongly indicates the extent to which market substitutes, rather than complements, are used. Nonetheless, the measure is still not perfect. For example, if wives choose to purchase prepared foods that are more expensive than raw ingredients but require relatively less time to cook, this inflates expenditures on groceries but in fact indicates greater use of market substitutes.

Model Specification

The analytic technique was ordinary least squares (OLS). Wives' hours spent cooking and cleaning in the previous week were the dependent variables. Wives' annual earnings in the calendar year before the HRS survey was the primary independent variable. Husbands' earnings (also in the calendar year before the HRS survey), the usual weekly labor market hours of each spouse in main and secondary jobs at the time of the HRS survey, and dummy variables for whether the wife is African American and whether each spouse has a bachelor's degree were included as covariates. Because race, education, and labor-force participation are correlated with household expenditures on market substitutes and with housework time (Baxter, Hewitt, & Haynes, 2008; Bellante & Foster, 1984; Cohen, 1998; de Ruijter, Treas et al., 2005; Pittman & Blanchard, 1996; Sanchez & Thomson, 1997; South & Spitze, 1994) but are also associated with earnings, failure to control for those variables would risk confounding their effects on expenditures and housework time with those of earnings.

Two measures were used to adjust for differences across households in the demands for domestic production from people and space: the number of rooms in the family's home and a dummy variable set to 1 if members of the household include anyone other than the couple.

A measure of the wife's employment history and the number of children ever born to the wife were included as indicators of her relative taste for home production as opposed to market work. Furthermore, a wife's employment and fertility history may affect the household's current division of labor, net of current employment hours, if household roles negotiated earlier in the marriage shape her own and her husband's expectations of behavior later in life. The employment history measure was constructed by dividing the wife's years of employment to date by the difference between her present age and 14. This approximates the share of the wife's adult life that she has spent employed, although it is a coarse measure and subject to measurement error in respondents' reported work history.

Of the 12,052 observations of women from CAMS, 237 (2.0%) were excluded because their information could not be matched to HRS reports from the previous calendar year. To focus the analysis on married, working-age couples, women whose marital status was something other than married were excluded (5,513 observations, 45.7%), as were couples in which either spouse was older than age 65 (4,084 observations, 33.9%). Couples in which either spouse was not in the labor force at the time of the HRS survey or reported no earnings in the previous calendar year were excluded from the analysis (1,374 observations, 11.4%). This restricts the focus of the analysis to dual-earner couples. Retired couples were excluded because their earnings are a poor measure of their financial resources. Household sample weights of 0 led to the exclusion of 11 observations (0.09%). An additional 11 observations (0.09%) were excluded because they were missing data on one of the variables used to define the sample: marital status or age, earnings, or retirement status of either spouse.

After excluding couples who did not meet the age or employment criteria, 822 couple-year observations remained in the sample. Of those, 12 observations (1.5% of the remaining sample), were removed because of reporting no expenditure at all in the domains of either cooking or cleaning, suggesting that the couples have some other means of household production that direct spending on household goods or services does not capture. Missing values on the dependent variable—the wife's time in housework—led to a loss of 14 observations, or 1.7% of the remaining sample. The final analytic sample included 796 observations from 449 wives.

In the analytic sample, 2.1% of the observations were missing data on the usual hours spent in paid work by the husband, and 2.3% were missing this information for the wife. The number of rooms in the house was missing for 7.2% of the sample and the number of children ever born was missing for 0.1% of the sample. Last, 5.6% of the sample was missing data on one of the expenditure variables related to cleaning, and 5.1% was missing data on one of the cooking expenditure variables. For each of these variables, an indicator variable was created that is set to one if the observation is missing data on this covariate. The indicator for missing data was included in any model that includes the associated covariate.

The HRS household-level weights, normalized to average one in each year in the full sample of HRS households in each wave, were used to weight the sample in all analyses. Because wives may be represented in multiple waves, all analyses clustered the standard errors at the individual level. The top 5% of both time-use and financial variables were recoded to the 95th percentile, as were the variables for the number of rooms in the home and the number of children ever born. To adjust for inflation during the period, financial variables were scaled to 2009 dollars.

Results

Table 1 presents descriptive statistics for the sample. The mean annual earnings were $43,111 for wives and $68,352 for husbands. Husbands also spent somewhat more time in the labor market an average of 44.9 hours per week, compared with 38.0 hours for wives. Thus, in this sample of dual-earner couples, husbands both substantially outearned their wives and were more engaged in the labor market. A bachelor's degree was held by 36% of wives and 40% of husbands. African Americans comprised 4% of the sample. Couples had an average of 7.2 rooms in their homes, and 44% of couples lived with at least one other resident. On average, wives had spent 73% of their years since age 14 in the labor market and had given birth to 2.2 children. Wives were 54.1 years old on average, compared with 56.8 years old for husbands.

Wives spent an average of 6.6 hours per week cooking and 8.0 hours per week cleaning and doing laundry. Almost all households reported some spending on groceries, cleaning supplies, and dining out: more than 97% of the sample households reported some expenditure on each of those items. By contrast, only 56% of households reported any spending on house-cleaning or laundry services in the previous year. Among those who buy such services, mean monthly expenditures were $66 for laundry and housecleaning services, $35 for cleaning and laundry supplies, $217 for dining out, and $485 for groceries.

Multivariate Results

Table 2 presents two models of wives' time in household labor. Model 2 is identical to Model 1, except that it also includes the measure of the household's level of use of market substitutes. The reduction in the size of the coefficient on wives' earnings between Model 1 and Model 2 indicates the extent to which greater use of market substitutes in households in

which wives have higher earnings explains the relationship between wives' earnings and their time in housework.

In Model 1, wives' earnings were significantly negatively associated with their time in both cooking and cleaning, consistent with existing evidence. For each $10,000 increase in a wife's annual earnings, her weekly time in cleaning was predicted to be 0.21 hours (13 minutes) lower, and her weekly time cooking was predicted to be 0.19 hours (11 minutes) lower. Consistent with past research, in models of wives' time in both cleaning and cooking, it was possible to reject the null hypothesis that the coefficients on husbands' and wives' earnings are equal (F(1,448) = 7.49, $p < 0.01$ and F(1,448) = 8.65, $p < 0.01$), and in fact husbands' earnings were positively and not significantly associated with wives' time both cooking and cleaning. This suggests that increased husbands' earnings do not translate into less housework for wives.

Model 2, of Table 2, presents the results from the models that include the measure of the household's use of market substitutes. For both cooking and cleaning, wives' housework time was predicted to be lower when their households made greater use of market substitutes, but the relationship was weak and only marginally significant in the model of time cleaning. An increase of 1 percentage point in a household's reliance on market substitutes was associated with a predicted decline of 0.01 hours (1 minute) in a wife's weekly time cleaning and of 0.02 hours (1 minute) in her weekly time cooking. Even considerable changes in the use of market substitutes were therefore associated with small changes in wives' housework time.

Controlling for use of market substitutes reduces the negative association between wives' earnings and their time spent in housework, but the reduction was moderate in both models: 12% in the model of time spent cleaning and 2% in the model of time spent cooking. The greater role of market substitutes in mediating the cleaning–earnings relationship as compared to the cooking–earnings relationship is consistent with the results of models of households' expenditures on market substitutes, which showed that wives' earnings were positively and significantly associated with their reliance on substitutes for wives' time cleaning but not with reliance on substitutes for wives' time cooking (see Appendix Table 1 in the online material associated with this article).

After controlling for the use of market substitutes, wives' earnings and the level of use of substitutes were the only significant predictors in the model of wives' time cooking, and the model explained only 7% of the variation in wives' time cooking. A larger number of control variables were significant in the model of wives' time cleaning, which explained 16% of the variation in wives' time cleaning, after including the measure of use of market substitutes. Wives with bachelor's degrees spent, on average, 2.1 fewer hours per week cleaning than other wives, even after including controls for earnings, labor-force hours, and use of market substitutes. The number of children ever born was positively and significantly associated with wives' time cleaning, as expected. Each additional child born to the wife was associated with a predicted increase of 0.4 hours per week in her time cleaning, net of other controls. Each additional room in the house was associated with a predicted decline of 0.3 hours per week in the wife's time cleaning, contrary to expectations. A possibility for this counterintuitive finding is that larger homes are less cluttered and therefore easier to clean. Neither the share of the wife's adult life spent working nor the presence of residents other than the couple in the household was significantly associated with the wife's housework time.

Husbands' Housework

The main results may be limited by their neglect of husbands' time in housework. First, it is possible that wives' earnings enable them to negotiate greater time in housework by their husbands. If this is the case, including husbands' housework hours in the model of wives' time use should reduce the negative relationship between wives' earnings and their time spent on housework. In addition, increased spending on substitutes may be used to reduce husbands' housework time, rather than wives', thus leading to a weak association between households' use of market substitutes and wives' housework time.

To test these hypotheses, I used the subset of 362 wives ($n = 609$) from the 2005–2009 CAMS for whom husbands' housework time was also available. The husbands in this subsample reported spending an average of 3.1 hours per week cleaning and 3.0 hours per week cooking. Including husbands' housework hours as a covariate in the models of wives' housework time revealed that husbands' time cleaning was positively and not significantly associated with wives' time cleaning, whereas husbands' time cooking was negatively and marginally significantly associated with wives' time cooking (full results available in Appendix Table 2 in the online material associated with this article). Nonetheless, controlling for husbands' time in housework slightly increased the negative association between wives' earnings and their time both cooking and cleaning. Therefore, although wives cooked less when their husbands cooked more, the negative association between wives' earnings and their time in housework does not appear to be due to high-earning wives reallocating housework to their husbands.

Second, I repeated the analysis of Table 2 using husbands' time in housework as the outcome (full results available in Appendix Table 3 of the online material associated with this article). If high-earning wives were reallocating housework to husbands, we would expect to see a positive association between wives' earnings and their husbands' housework time. If high-earning wives use their earnings to purchase substitutes for their husbands' housework time, we would expect to see a negative relationship between wives' earnings and their husbands' housework time, and we would expect that the association would be substantially reduced after controlling for the household's use of market substitutes. Wives' earnings were not significantly associated with husbands' time cooking but were marginally significantly and negatively associated with husbands' time cleaning once the measure of use of market substitutes was included. Despite this, the household's use of market substitutes was not significantly associated with the husband's time cooking or cleaning and the negative relationship between wives' earnings and their husbands' cleaning time was slightly greater after the measure of use of market substitutes is added to the model. Thus, although husbands married to high-earning wives spend less time cleaning, this does not appear to be because wives' earnings are used to purchase substitutes for their husbands' household labor time. Instead, it is possible that high-earning wives not only opt out of housework themselves but also allow their husbands to do so.

Alternative Specifications

This section considers various possible sources of heterogeneity that may be associated with both wives' earnings and their time in household labor, as well as alternative specifications of several independent variables. Under each alternative specification, the models presented in Table 2 were repeated, to test whether the inclusion of the additional variables alters the main conclusions. Spouses' ages, whether either spouse is younger than age 50, whether either spouse is in poor health, household income other than the earnings of spouses, and year of the report were all tested as possible omitted variables. The fraction of the earnings–cleaning relationship explained by the inclusion of the market substitute measure ranged

from 11% to 16%, and from 1% and 3% for the earnings–cooking relationship. The results are therefore quite similar to those in the main models.

Alternative specifications of the financial variables were also considered. First, I used absolute rather than relative expenditures on market substitutes in the time-use models but found that the inclusion of those variables reduced the magnitude of the earnings–cleaning relationship by only 4% and the earnings–cooking relationship by less than 1%, and the level of expenditure was not a significant predictor of time in either cleaning or cooking. Second, because spouses' wages rather than earnings determine the opportunity cost of each hour of housework, I repeated the models replacing spouses' earnings with their hourly wage. Wives' wages were negatively and marginally significantly related to their time cleaning, and the use of market substitutes explained 8% of the relationship. Wives' wages were positively and not significantly related to their time cooking. Third, I included a linear measure of the share of the couple's earnings that the wife earns, because spouses' bargaining positions may affect both their division of household labor and their expenditure decisions. The relative earnings measure was not significant in any of the models. It is also possible that spouses' relative earnings may be nonlinearly related to their time in housework (Bittman et al. 2003; Brines 1994), but when I added a quadratic term for spouses' relative earnings to the linear term, neither term was significant; nor were they jointly significant.

Discussion

The results presented here go beyond existing work by explicitly considering the relationships among wives' earnings, household expenditures on market substitutes for wives' time in household labor, and wives' housework time. Household expenditures on domestic substitutes were negatively related to wives' time in household labor, although the association is far weaker than might be supposed. The inclusion of measures of the use of market substitutes in models of wives' time in household labor explained 12% of the negative association between wives' time in cleaning and their earnings and 2% of the relationship between wives' time in cooking and their earnings.

Throughout, I found stronger associations in the domain of cleaning than cooking. The model explained a greater share of the variation in wives' time cleaning than in their time cooking, and the inclusion of the measure of use of market substitutes reduced the cleaning–earnings association more than the cooking–earnings association. A reason for this may be that cleaning is a more uniformly undesirable activity, whereas some forms of cooking are enjoyable for at least some wives, so wives are more likely to use their earnings to outsource cleaning. Furthermore, dining out is a recreational activity for spouses, as well as a market substitute for wives' time cooking (Cohen, 1998; Oropesa, 1993). At a minimum, the results suggest that it may be inappropriate to treat women's time in household labor as homogenous.

This study has several limitations. First, the sample size is small, which limits the power of the statistical tests. Second, although the analyses presented suggest that buying out is not the only explanation for the negative relationship between wives' earnings and their time in housework, they do not distinguish between opting out and unobserved heterogeneity among wives as the source of the residual earnings–housework association, net of use of market substitutes. As the primary focus of this analysis was to call into question the power of the buying-out hypothesis, this ambiguity does not threaten the main conclusion. More extensive panel data on earnings, housework time, and use of market substitutes would provide an even richer test of the source of the earnings–housework relationship.

The measures available also limit analyses. First, housework hours and household expenditures were measured in the calendar year following the collection of information on spouses' earnings, labor-force hours, and household composition, so the measures are not contemporaneous. Second, the available measure of substitution is limited. Although cooking, cleaning, and laundry constitute a substantial share of women's noncare housework time, the analyses did not include all forms of household labor. In addition, not all household expenditures intended to reduce wives' housework time are included in the measure of expenditures on market substitutes. For example, purchases of labor-saving devices have the potential to reduce wives' household labor time, although the evidence of their effectiveness in this regard is mixed (Bittman et al., 2004; van der Lippe et al., 2004). Furthermore, among the types of expenditures considered, households may report their expenditures with error and, as discussed earlier, individuals report the dollar amount spent on goods rather than the goods' capacity to reduce household labor time. Such measurement error may partially explain the low predictive power of use of market substitutes in models of wives' housework time. If this is true, it minimally suggests that the documented positive relationship between wives' earnings and household expenditures on domestic services and restaurant meals cannot be interpreted as evidence that wives are using those goods to substitute for their own time in housework.

The extent to which the findings presented here generalize to younger samples of women is unknown. Younger women, particularly those with children in the household, may experience stronger time pressure that motivates them to use increased earnings to buy some relief in terms of household work. In addition to age differences, cohort differences may exist. Women born in later birth cohorts may be more willing to outsource household labor when they possess the financial resources to do so.

Despite the limitations, the results of this study shed light on the degree to which use of market substitutes explains variation in wives' time in housework and, in particular, to what extent increased use of market substitutes by high-earning women explains the negative relationship between wives' earnings and their time in housework. For those hypothesizing a role of market substitutes in mediating the earnings–housework relationship, this provides the first direct evidence in favor of the buying-out story. At the same time, the results indicate that the use of market substitutes is insufficient to explain all, or even the majority, of the difference between high-earning and low-earning wives' time in household labor. Although it is not possible in this study to determine the reason for the residual negative relationship between wives' earnings and their housework time, the results suggest that future research should recognize the potential for wives to opt out of housework.

Furthermore, although wives' time in housework falls as their earnings rise, the rate is quite slow. A $10,000 increase in wives' annual earnings is associated with a predicted decline in her combined cooking and cleaning time of only 0.4 hours. The fact that wives do not make extensive use of market substitutes to replace their own time in household labor suggests that nonfinancial concerns may motivate even high-earning women to invest time in domestic production, even though this reduces the amount of time available for either market work or leisure. Even high-earning wives may feel compelled to perform at least some household labor themselves, whether because they or their families do not perceive goods purchased in the market as adequate substitutes for the wife's own time or because norms of doing gender suggest that it is appropriate for women to spend some time in housework, regardless of the economic logic of this behavior. The idea that gendered norms of behavior operate to give greater responsibility for household labor to women than to men is not new (Berk, 1985; Hochschild, 1989; West & Zimmerman, 1987), but the results presented here suggest that these norms may also operate to keep domestic production in the household rather than outsourcing it to market goods and services.

This analysis suggests a need for more research understanding how couples make decisions about the level of household production in their home. Just as the allocation of housework between spouses provides insight about processes of household decision making and gender inequality in the household, exploration of the circumstances in which households reduce domestic production provides insight about the more general question of work–family trade-offs that households make. Existing research has too often treated the amount of housework to be done as exogenous. As a result, we know little about the social processes by which individuals and households construct definitions of appropriate levels of domestic production and make decisions about time in housework as opposed to other activities, or expenditures on domestic production as opposed to other goods. Households are not bound to produce a fixed level of domestic production, with the only decisions being how much to outsource and how to allocate the remaining labor among household members. Instead, households also make decisions about how much they value domestic production as opposed to other goods and activities, as well as which forms of household production to retain and which to let go. Certainly, individuals do not have perfect freedom to choose the level and kind of domestic production they prefer, but it is equally erroneous to assume that households have no control over such decisions. An understanding of domestic production decisions as households experience them must therefore take seriously the full complement of domestic production options that families and individuals face, including the decision to opt out of certain types of domestic production.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

Acknowledgments

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Table 1

Spouses' Characteristics: Descriptive Statistics (N = 796)

Variables	*M*	*SD*
Wife's annual earnings	$43,111.17	$31,828.80
Husband's annual earnings	$68,351.66	$43,050.04
Wife has bachelor's degree[a]	0.36	0.48
Husband has bachelor's degree[b]	0.40	0.49
Wife is African American[c]	0.04	0.20
Wife's weekly labor-market hours	38.03	11.67
Husband's weekly labor-market hours	44.93	11.63
Residents other than couple[d]	0.44	0.50
Rooms in the home	7.23	1.86
Share of wife's adult years employed	0.73	0.20
Number of children ever born to wife	2.16	1.31
Wife's age	54.05	4.91
Husband's age	56.81	4.51
Wife's weekly hours cooking	6.62	4.29
Wife's weekly hours cleaning	7.97	5.44
Monthly spending on cleaning/laundry services, if positive	$66.32	$77.85
Monthly spending on cleaning/laundry supplies, if positive	$35.33	$27.41
Monthly spending on dining out, if positive	$217.32	$177.50
Monthly spending on groceries, if positive	$485.34	$255.98

[a] Wife has bachelor's degree: 0 = *no*; 1 = *yes*.

[b] Husband has bachelor's degree: 0 = *no*; 1 = *yes*.

[c] Wife is African American: 0 = *no*; 1 = *yes*.

[d] Residents other than couple: 0 = *no*; 1 = *yes*.

Table 2

Summary of OLS Regression Analyses for Wives' Weekly Housework Hours (N = 796)

	Cleaning				Cooking			
	Model 1		Model 2		Model 1		Model 2	
	B	SE B	B	SE B	B	SE B	B	SE B
Wife's annual earnings ($10Ks)	−0.21**	0.08	−0.19*	0.08	−0.19**	0.06	−0.18**	0.07
Husband's annual earnings ($10Ks)	0.07	0.05	0.09†	0.05	0.06	0.05	0.06	0.05
Wife has bachelor's degree[a]	−2.21***	0.48	−2.12***	0.48	−0.35	0.44	−0.26	0.43
Husband has bachelor's degree[b]	0.09	0.54	0.17	0.54	−0.18	0.41	−0.20	0.41
Wife is African American[c]	1.09	1.60	1.26	1.62	0.20	1.18	0.16	1.17
Wife's weekly labor market hours	0.03	0.02	−0.03	0.02	−0.02	0.02	−0.02	0.02
Husband's weekly labor-market hours	0.01	0.02	0.01	0.02	−0.01	0.02	−0.00	0.02
Residents other than couple[d]	0.68	0.47	0.60	0.46	0.72†	0.38	0.59	0.37
Rooms in the home	−0.33**	0.12	−0.34**	0.12	−0.17	0.11	−0.16	0.10
Share of wife's adult years employed	1.64	1.18	1.75	1.18	0.13	1.04	0.27	1.04
Number of children ever born to wife	0.44*	0.20	0.44*	0.20	0.17	0.15	0.19	0.15
Share of expenditures on substitutes	—	—	−0.01†	0.01	—	—	−0.02*	0.01
Constant	9.83***	1.36	9.64***	1.36	8.63***	1.38	8.94***	1.41
R^2	0.15		0.16		0.06		0.07	

Note: All models also include four indicator variables for whether the respondent is missing valid data on the labor-market hours of the husband, the labor-market hours of the wife, the number of rooms in the home, and the number of children ever born to the wife. Model 2 includes an indicator variable for whether the respondent is missing valid data on the share of expenditures on substitutes. All standard errors are clustered at the individual level.

[a]Wife has bachelor's degree: 0 = *no*; 1 = *yes.*

[b]Husband has bachelor's degree: 0 = *no*; 1 = *yes.*

[c]Wife is African American: 0 = *no*; 1 = *yes.*

[d]Residents other than couple: 0 = *no*; 1 = *yes.*

†
$p < .10.$

*
$p < .05.$

**
$p < .01.$

***
$p < 0.001.$