

Time Spent in Household Management:  
Evidence and Implications

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Key Words: Household Management, Household Production, Economics of the Family, Time Use

## Time Spent in Household Management: Evidence and Implications

**Abstract** Time spent in household management is an important "missing ingredient" in time use studies. This study seeks to fill this gap by taking advantage of newly available data from the American Time Use Survey (ATUS). Using a broad measure of household management, these data indicate that adults spend an average of just over 1 ½ hours per week in this function. This figure likely underestimates total management time for two reasons. First, management is often done in small blocks of time and hence may be missed. Second, the ATUS fails to capture time spent in secondary activities. One implication is that efforts to *value* time spent in household management using these data will similarly produce very a low valuation of the household manager role. Nonetheless, several patterns are identified: measured management time significantly increases with adult's age and educational attainment, and for dual-earner wives, the presence of preschool-age children. These data also indicate that measured household management time is much more equally divided among spouses than core household tasks.

**Keywords:** Household Management, Household Production, Economics of the Family, Time Use

## **Introduction**

Households purchase or produce a range of goods and services including meals, clean clothes, gardening, bill paying, and child care. In time use studies, the amounts of time that family members spend on these tasks are well-captured (e.g. Bianchi, Milkie, Sayer, & Robinson, 2000; Sayer, 2005). The “missing ingredient” is the process by which a family determines the quality and quantity of various goods and services to be provided, by whom, and how adequate provision will be monitored. Household management is much more than just “paying bills.” It plays an over-arching role in all of household production. The critical role of household management as part of household production has received considerable attention in family economics, including the publication of the seminal text by Deacon and Firebaugh, *Family Resource Management* (1988) and in empirical research, including a recent paper by Orrange, Firebaugh, & Heck (2003). At the same time, this function has been virtually ignored in the time use literature with the exception of Mederer (1993).

The conceptualization of household management described here was recognized as early as 1861 in Isabella Beeton’s “The Book of Household Management.” She wrote: “AS WITH THE COMMANDER OF AN ARMY, or the leader of any enterprise, so it is with the mistress of a house.” Similarly, in *Bridenstine v. Iowa City Electric Railway Company* (1917), the Iowa Supreme Court, ruling on how damages should be determined in the death of a homemaker, said that juries should provide:

fair consideration of all the evidence tending to show the condition, capacity and efficiency of the deceased in the discharge of her domestic duties, not only as a laborer performing menial service, but also as the housewife and head and administrator of the internal affairs of her home.

The critical function of a household manager is also recognized in the commercial marketplace of 2007. Firms and individuals offer such services under the occupational title of “Personal Assistant,” “Personal Concierge Service,” or Professional Organizer.” These firms advertise the time savings that can be realized by hiring an outside person to perform such household managerial functions as making travel arrangements, event planning, filing, scheduling a painter, and finding a dog kennel. The presence of a national organization, the National Association of Professional Organizers, is an indicator of the maturation of this industry. Full-time organizers appear to earn anywhere from \$25,000-\$120,000 per year, though some specific services are available at an hourly rate at \$30-\$50 an hour (Bick, 2006; Buntic, 2007).

This study seeks to fill the gap in the time use literature by taking advantage of newly available data from the American Time Use Survey (ATUS), initiated by the U.S. Bureau of Labor Statistics in 2003. These data provide the best-available national estimates of time spent in household management. This study has implications for a number of areas of research including the gender division of time spent in household labor, and ongoing efforts to place a dollar value on time spent in household activities, including household management.

### **Related Time Use Literature**

The literature devoted to time use in household production tasks is large and burgeoning. Social scientists have examined social and economic factors associated with the distribution of housework tasks in married-couple and cohabiting families (e.g. Blair & Lichter, 1991; South & Spitze, 1994; Hersch & Stratton, 1997; Bittman, England, Sayer,

Folbre, & Matheson, 2003; and Stratton, Bonke, Deding, & Lausten, 2007), trends in the gender division of housework (e.g. Bianchi et al., 2000; Sayer, 2005), and the impact of specialization in household tasks on wages (e.g. Stratton, 2001). A common feature of these studies is that they focus on household production tasks. While “paying bills” may be included as a task, these studies fail to capture time spent in household management, broadly defined.

The one important exception is Mederer (1993). Her study explicitly focused on the critical distinction between time spent in the household managerial function versus time spent performing tasks. She defined household tasks as those that are performed on behalf of household members (cooking and laundry) and activities required to keep up the household itself (cleaning, yard work, paying bills), while household management activities, referred to time allocated to planning meals, getting things ready for the next day, scheduling appointments for household members and for household services and repairs, and making “money decisions.” Using data from a 1989 survey of state of Rhode Island employees, her paper explored gender differences in time spent in management vs. time spent in production tasks and perceptions of fairness regarding the time allocation. Direct comparisons with her empirical work, unfortunately, are limited by the fact that survey respondents were asked to provide information about who undertook specific management activities and household tasks (wife always, wife usually, equally divided between respondent, spouse and/or children, spouse usually, spouse always) rather than length of time in various activities, information collected in standard time use surveys such as the ATUS.

A few studies have utilized some of the information on household management time provided in the ATUS for the explicit purpose of valuing time spent in this function. They offer no discussion, however, about correlates with time spent in this function, what insights these data might provide regarding the gender division of labor, nor an assessment of whether these data are adequate for their intended purpose – valuation of time spent in this function. For instance, Landefeld, Fraumeni, & Vojtech (2005) included a very narrow measure of time spent in household management, basically the record-keeping function, in estimates of nonmarket activity that are subsequently incorporated into “satellite” national accounts. Time spent in household production as well as a value placed on this function has also been calculated in the publication called *Dollar Value of a Day* (Expectancy Data, 2005), a data source for forensic economists.<sup>1</sup> Finally, in their study on valuing child care time, Folbre & Yoon (2005) included time spent in household management on children’s behalf, though again, this function is not the focus of their paper.<sup>2</sup> The detailed data examination undertaken here has important implications for these valuation studies, as will be discussed.

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<sup>1</sup> Forensic economists are those called upon to testify in the case of wrongful death or permanent disability. U.S. courts have long held that household services, broadly defined, can be reasonably included as an element in damages resulting from a personal injury or wrongful death, though most studies neglect this factor (Ireland, 1997). One example is provided in the decision of the U.S. Supreme Court in a very early decision under the Federal Employer’s Liability Act (FELA), the case of *Michigan Central Railroad Company v. Vreeland*, 227 U.S. 59 (1913). The Supreme Court held that a broad interpretation of household services is in order when calculating damages, but that the calculations must be based on some standard and must not include emotional losses, but only pecuniary losses of the surviving spouse. Under the *Vreeland* decision, the loss of household services may be recoverable if they meet two criteria: (1) the service must be valuable even if provided by a stranger (third party); and (2) the service must have a market equivalent in the commercial market (Ireland, 1997). Household management meets these “tests.”

<sup>2</sup> Craig (2007) also includes some aspects of management-related child care such as communication with child care workers, but she does not make an explicit distinction between time spent in management-related activities vs. production tasks.

## **The Household Management Function**

A family can be viewed as a production unit, akin to a firm that functions in the commercial marketplace (Becker, 1991). As discussed in Deacon and Firebaugh (1988), the household manager combines household inputs to provide household outputs.

Managing involves a series of steps involving setting goals, planning, implementing, and evaluating results obtained.<sup>3</sup> Among the decisions to be made, the household manager must determine which services will be provided in-house by family members and which services are going to be purchased from the commercial marketplace.<sup>4</sup>

The existing research literature sheds light on expected patterns regarding time spent in household management. As will be seen shortly, a large proportion of household management time is spent on financial affairs. Time use evidence on the narrower financial category of “bill paying” indicates that financial management tends to be a fairly gender neutral activity. For instance, Blair & Lichter (1991) and Bianchi et al. (2000) found “bill paying” to be much less sex-typed than household cleaning and laundry, which are strongly “female tasks,” or car maintenance, a strongly “male” task. These authors, among others, suggest that factors including gender role ideology and relative economic resources of spouses are important explanatory factors behind the sex-typing of household activities. The literature on how couples manage money, though not focused on time use per se, similarly suggests that money management is not sex-typed. While husbands tend to be in charge of financial affairs in traditional families, wives tend

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<sup>3</sup> A leading textbook in the field of management (Robbins & DeCenzo, 2005) provides a similar description of business management: planning (defining goals and how to achieve them), organizing (identifying set of tasks to be done and by whom), leading (motivating and resolving conflicts), and controlling (monitoring).

<sup>4</sup> While not the focus of this study, the management role is even more complex in families operating their own businesses. See, for instance, Duncan, Zuiker, & Heck (2000), Fitzgerald, Winter, Miler, & Paul (2001), Lee, Danes, & Shelley (2006), and Yoon, Hong, & Rowe (2006).

to control family finances in lower-income families, and in higher income families, wives' financial role in the household increases with own earnings (Paul, 2000; Mano-Negrin & Katz, 2003). Thus, it is expected that the gender division of time in household management will be more equal than for core housework activities.

In addition to managing financial affairs, household management time also includes time spent outsourcing activities such as child care and house cleaning. Outsourcing, while important, is not typically captured in time use analyses. This omission is important because outsourcing may be an important explanation behind recent declines in time spent performing housework tasks (Bianchi et al. 2000). That is, it may not be that houses are (much) dirtier, but rather that someone outside of the household is doing the cleaning. Ideally, to fully investigate recent trends, one would want a data set that includes data on both expenditures on outsourcing and time devoted to it, but no such data set exists. However, information on time spent purchasing household services such as cleaning services and child care, as captured in the ATUS, provides at least some insight into households' outsourcing activities, alongside time spent performing production tasks. Previous researchers examining expenditures on outsourced goods and services found that that families with greater household resources (as measured by income and/or educational attainment) spent significantly more money on these activities given their greater financial means (de Ruijter, Treas, & Cohen, 2005). Similarly, one would expect such households to spend more *time* outsourcing, at least to some degree.

While all households must allocate at least some time to management during the course of a week, a study by Hochschild (1997) on the time bind suggests that household

management is especially critical to the successful operation of dual-earner households juggling paid work and family. In her book, she referred to the management function required in these families as the “third shift.” Consistent with Hoschschild’s argument, Orrange et al. (2003) found that the level of household management in dual-earner couples, as gauged by the score on a management scale developed in earlier research, was positively and significantly associated with spouses’ work hours and the presence of small children. One would similarly expect a positive association between these factors and *time* spent in household management.

It is possible to speculate on other likely correlates with household management time, as well. For instance, time spent in household management is expected to be higher among retirees than those in their twenties, both because they have more financial affairs to manage, and also because they have more available time to do so. In addition, older Americans may have difficulties undertaking some specific household tasks themselves such as cleaning gutters, raking leaves, and shoveling snow, which would increase time spent outsourcing these activities.

The relationship between education and household management is theoretically ambiguous. On the one hand, highly-educated individuals have more valuable assets to manage and/or superior management skills that they can put to this task. Further, more highly-educated individuals tend to have greater resources and so are financially able to outsource more tasks, which in turn requires some management time. On the other hand, these same individuals are also more likely to use time-saving technology such as on-line banking (Kolodinsky, Hogarth, & Hilgert, 2004), and would also be expected to be more efficient managers of time, given the higher opportunity cost for uses of their time.

## **Measuring Time Spent in Household Management**

This section examines the usefulness of available data sets in providing information on time spent in management and provides best available estimates. U.S. time use surveys, with the exception of the American Time Survey (ATUS), whether based on a time diary or direct question format, provide only limited information on this topic. For instance, the Panel Study of Income Dynamics (PSID), which is the basis for much of the analysis on gender differences in housework, asks respondents a very broad, direct question: “About how much time do you spend on housework in the average week—I mean time spent cooking, cleaning and other work around the house?” Responses may or may not include time spent in the household management function since it is not part of the example. Moreover, with such a general question, respondents’ perceptions of what constitutes “housework” likely differ considerably. The National Survey of Families and Households (NSFH) takes a slightly more nuanced approach and asks direct questions about nine specific household tasks including laundry, cleaning house, and paying bills. While one might regard paying bills as part of the management function, this activity constitutes only a small part of this set of activities.

Time diary methods are generally regarded as the superior method for obtaining information on time use, though again, prior surveys have incompletely captured time spent on household management. In a time diary survey, respondents are asked to report on their activities and how long they engaged in them over a recent period. Well-known time diary surveys include those conducted by the University of Michigan (1965, 1975, 1981-82) and subsequently by the University of Maryland (1985, 1992-94, 1995, 1997-

98). These survey data are coded using the categories set forth by Szalai (1972). Szalai created 96 detailed codes including code 19, “dealing with bills and various other papers.” A recent study by Bianchi et al. (2000), which used data from the 1965, 1975, 1985, and 1995 time diary surveys, reported information on this very narrow category separately and included it as part of total household time.

The richest data set on information on time spent in household management in the U.S. is the American Time Use Survey (ATUS), conducted by the Bureau of Labor Statistics. This ongoing survey, initiated in 2003, reflects the U.S. government’s first-ever effort to systematically collect information on how Americans spend their time.

The ATUS sample is collected as follows: one randomly selected individual (age 15+) is interviewed from selected households completing the 8<sup>th</sup> (final) month of the Current Population Survey. At the ATUS interview, which occurs 2 to 5 months after the final CPS interview, each ATUS respondent completes a time diary, in which he or she records activities completed, as well as their duration, over the course of the prior 24-hour period.<sup>5</sup> The respondent systematically records information on primary activities, as well as time spent in secondary child care, defined as having “a child under age 13 in one’s care while doing other things” (Bureau of Labor Statistics, 2006).

The scheme used by the ATUS to code time diary reports most closely follows the scheme used in the 1997 Australian Survey, and provides a much finer level of detail than Szalai’s (Shelley, 2005): It has 17 major categories (coded with 2 digits), 105 second tier activities (coded with 4 digits), and 438 third tier activities (coded with 6 digits). The first tier category of Household Activities (02) includes 2<sup>nd</sup> tier activities such as

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<sup>5</sup> Specifically, the respondent reports on activities that took place from 4:00 a.m. on the day prior to the ATUS interview through 4:00 a.m. on the day of the ATUS interview.

Housework (0201) and Food and Drink Prep (0202), and most notably, Household Management (0209).

This study examines three definitions of household management using data from the ATUS, for purposes of sensitivity testing. The narrowest is titled “ATUSmanage” and employs the same definition as in published reports by the Bureau of Labor Statistics (BLS, 2005; BLS 2006). This definition includes the following third tier codes within Household Management: Financial Management, Household Personal Planning and Organization and Household Security but excludes time spent on Personal and Household Mail and E-mail. Appendix A provides details.

A second, somewhat broader measure, is titled DVDmanage. This measure replicates the categories included in the definition of household management from the publication *The Dollar Value of a Day* (also called, DVD, Expectancy Data, 2005). This measure is defined as ATUSmanage *plus* handling Household and Personal Mail and Messages, Using Paid Child Care Services, Using Banking and other Financial Services, Using Legal Services, Activities related to Real Estate, and Using Social Services.

The third and broadest measure is titled ExpandedDVD. This measure includes categories contained in DVDmanage plus other management activities identified in the ATUS but not previously included: Organizing and Planning for HH Children and HH Adults, Comparison Shopping, Purchasing Household Services, and Calls related to Purchasing HH Services and Child-Related Services.

In addition to the three measures of household management, this study also examines two broader measures of household activities, labeled here as ALLHH and FAMILYCARE. ALLHH is defined as household tasks (principally housework) plus

associated management time, and FAMILYCARE is defined as ALLHH plus time spent shopping and caring for household family members, plus associated management time.<sup>6</sup>

Appendix A provides detailed definitions and codes for all five measures.

Despite the usefulness of the ATUS in better identifying management activities than in past U.S. surveys, these data nevertheless provide a conservative estimate of time spent managing the household for two reasons. First, the ATUS asks about primary activities only. Thus, it will miss secondary management time. For instance, an individual who is scheduling appointments on the phone while loading the dishwasher may report “loading the dishwasher” as the primary activity. The focus on primary activities is perhaps even more problematic in calculating time spent in household management for paid workers, to the extent that they “organize their lives” at the remote or home office. The ATUS would likely capture the primary activity, “at paid employment” but completely miss time at work spent surfing the internet to plan vacations or time spent on the phone scheduling home repairs or interviewing nannies. And with the advent of cell phones, individuals may be driving around and scheduling their appointments at the same time (National Research Council, 2005, p. 49). A second difficulty in fully capturing time spent in management is that this activity, albeit important, is often done throughout the day in very small blocks of time. Like any activity of short duration, it may not be counted and/or may be forgotten. In other instances, you need a large block of time, such as when managing financial affairs. Thus, it is not all too surprising that individuals either report spending zero minutes on this activity on a given interview day, or as much as an hour.

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<sup>6</sup> While household management time is included in these aggregates, such time is very low as a proportion of the total. Thus, they largely reflect time spent in household production *tasks*.

Another limitation of the ATUS data, which is characteristic of the majority of time diary data sets, is that they provide information on just one respondent per household (Winkler, 2002). Nonetheless, these data can be used to draw inferences about the average amount of time that husbands and wives, though not married to one another, spend in management and household tasks.<sup>7</sup>

### **Evidence on Time Spent in Household Management from the ATUS**

This section analyzes data on time spent in household management from the combined 2003 and 2004 ATUS surveys to gauge the sensitivity of estimates obtained to the definition used and to identify key correlates. The primary sample consists of any adult respondent in the ATUS who is age 18 and over and is 1) the reference person of their household; or 2) the spouse of the reference person; or 3) an unmarried partner of the reference person. The sample thereby excludes 19 year olds who live in their parents' household as well as married persons who head subfamilies living in the household of another family. The total sample size is 30,032 based on data from the ATUS 2003 and 2004 surveys. When the data is broken out by marital status, the sample is further restricted to couples where both spouses are ages 20 or older to eliminate teen couples.

For each ATUS respondent, the following information is available: 1) time diary data that is collected at the ATUS interview; 2) data on usual hours worked and other variables from the set of CPS questions administered at the time of the ATUS interview;

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<sup>7</sup> For further discussion, see Schwartz, Herz, & Frazis (2002). Alternatively, Connelly & Kimmel (2007) utilize a matching process to produce "synthetic couples," thereby permitting a comparison of time usage on a given interview day of a matched wife and husband. This approach is not without its drawbacks, including the issue of whether the interview day is representative of the two partners' time use patterns, especially for tasks that are performed irregularly.

and 3) data on usual hours worked and educational attainment from the linked CPS survey administered 2-5 months prior to the ATUS survey.

The ATUS collects information on time use, measured in minutes per day, for both weekdays and weekend days. In a number of the tables presented here, these data are converted into average weekly hours, since this is the standard unit of time reported in the time use literature and permits a direct comparison. Average weekly hours are calculated as a weighted sum that counts weekdays as five-sevenths and weekends as two-sevenths of the weekly total. Figures are weighted using ATUS survey weights. In addition, multivariate models are estimated using individual-level data on minutes spent per day in household management. These models are estimated using Tobit. This estimation technique is preferred to the method of ordinary least squares because of the censoring of the dependent variable: some individuals do not report any time use in household management on a given day.<sup>8</sup>

The top of Table 1 provides information on the key variable of interest, average hours per week in household management activities, using the three alternative definitions as well as information on time spent in all household activities and in family care. The most striking, but perhaps not unexpected finding given the prior discussion, is that average weekly hours spent in household management is quite low, even when broadly defined, as compared to time spent in other household activities. As reported in Table 1, adults spend 1.04 hours per week in household management based on the narrowest measure, ATUSmanage, which largely reflects time spent in financial management, and as much as 1.64 hours per week when measured using the broadest

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<sup>8</sup> For other recent applications of Tobit in time use analyses, see Kalenkoski, Ribar, & Stratton (2006), Kimmel and Connelly (2006), and Bianchi, Wright, & Raley (2005).

measure analyzed here, ExpandedDVD.<sup>9</sup> As shown in Table 1, average weekly hours are considerably larger among those who report spending at least some time in these activities, around 5.7 to a little over 6 hours per week, depending on the measure considered.

Table 2 provides more detailed information on average weekly hours spent in household management by specific management activity for selected subgroups of interest. For instance, time spent managing financial affairs, as largely captured by ATUSmanage, is significantly higher among older (age 55+) versus younger individuals (age 18-34): 1.32 versus .65 hours per week. Table 2 reveals other interesting patterns, as demonstrated by looking at time spent in household management using the broadest definition, ExpandedDVD. For instance, time spent in household management is *positively* and significantly associated with education. Highly-educated women, defined as those with four years of college or more, spend nearly twice as much time in management (2.4 hours per week), as less-educated women, defined as those who completed high school or less education (1.4 hours per week). A similar pattern is found for men, though not displayed in Table 2.

Table 2 also reveals that employed women spend significantly less time in management, as well as all household activities. Specifically, employed women spend 1.5 hours per week in management, while non-employed women spend 2.3 hours per week in this activity. One explanation is that employed women have less available time for all nonmarket activities. The low amounts of management time reported may also

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<sup>9</sup> For adults age 18+, the mean of ExpandedDVD (1.64) is the sum of: ATUSmanage (1.04), HH & Personal Mail (.23), Purchasing Household & Childcare Services (.152), Banking & Legal & Real Estate (.12), Obtaining Social Services (.002), Organizing and Planning for Children and Adults (.038), Calls to Household and Childcare Providers (.045), and Comparison Shopping (.007).

result from the fact that employed persons are likely to report paid work as their primary activity during the work day though they may spend some of this time organizing their personal lives. The cross-tabulations presented in Table 2 also indicate that management time is significantly lower when a pre-school age child is present (1.5 vs. 2.1 hours per week), a finding that is contrary to what one might expect given the potential role of management as a strategy to overcome the “time bind.”

Table 3 provides results from a multivariate Tobit estimation, where the dependent variable is minutes per day spent in household management, measured using the broadest definition. The covariates included in the model reflect time availability and household resources following earlier multivariate work on time spent on household production tasks and correlates with household management (e.g. Bianchi et al., 2000; and Orrange et al., 2003).<sup>10</sup> As discussed earlier, wives’ time is especially likely to be limited in households where they are employed, and especially where children are present. Employment is included as an indicator variable, where it is coded as 1 if the individual is employed and 0 otherwise. The presence of children is modeled as a three category variable: preschool child is present, only an older child is present, or no child is present, where the latter group is omitted. Household resources are captured using two variables: age, which is a continuous variable, and educational attainment, a five category dummy variable. The omitted educational category is those who completed high school only. Finally, the analysis controls for differences in family structure using a three-category dummy: married, cohabiting, and single, where the latter group is omitted.

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<sup>10</sup> Studies of time spent in production tasks, including Bianchi et al. (2000), also include a measure of gender ideology since many tasks are sex-typed based on custom. A measure of gender ideology is not available in the ATUS, but as discussed earlier, management is generally regarded as a more “neutral” activity relative to specific production tasks.

The Tobit regressions largely confirm the descriptive patterns identified in Table 2.<sup>11</sup> Results from these models show that controlling for other sociodemographic factors, time in household management has a positive significant relationship with education and age, and a significant negative relationship with employment status (for all results,  $p < .01$ ). Contrary to the descriptive findings of Table 2, the Tobit estimation indicates an expected positive relationship between female management time and the presence of a preschool age child, but this association is only marginally statistically significant ( $p < .10$ ).

Table 4 provides figures on average weekly time use for wives and husbands by the couple's employment status.<sup>12</sup> Figures for all husbands and wives, regardless of employment status, are also included from Table 1 for comparison purposes. It is important to keep in mind that these spouses are not married to one another given that the ATUS only provides one report per household. Rather, this table compares the average time use of a husband in a dual-earner family with average time use of a wife in a dual-earner family. The figures in Table 4 show several interesting patterns. Among these, dual-earner wives spend significantly less time in all household activities, whether management or task-related, than non-employed wives. This result mirrors the significant negative relationship between employment and measured management time for all women identified previously in Tables 2 and 3.

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<sup>11</sup> In looking at Table 3, the focus of the discussion is on the sign of the Tobit coefficient and the coefficient's statistical significance. Unlike OLS coefficients, Tobit coefficients do not directly indicate marginal effects. Marginal effects for continuous variables, such as age, are calculated using the following formula:  $(B \times \text{PDF}(BX/\sigma))$ . For discrete variables, the formula is somewhat more complicated. For further discussion, see Wooldridge (2006).

<sup>12</sup> For a discussion of this approach, see Schwartz, Herz, & Frazis (2002).

The figures in Table 4 further show that time spent in household activities, whether management or task-related are more equally shared in dual-earner than in husband-only employed families. For instance, in dual-earner vs. husband-only employed families, the ratio of wives' to husbands' management time (ExpandedDVD) is 1.3 vs. 2.1 and the ratio of time spent in all core housework activities is 1.57 vs. 3.04, respectively. Regardless of couple's employment type, these figures also suggest a much more equal distribution of time on management-related activities versus housework and childcare.

Table 5 presents multivariate Tobit regression results of time spent in household management for the set of dual-earner wives and husbands. These models are estimated for this narrower group given particular interest in how dual-earner spouses manage the "time bind." The definition of the independent variables in these models are largely the same as those for the full sample presented in Table 3, with a few exceptions. For one, these models include indicator variables for the level of educational attainment for both wives and husbands. Second, since the sample is restricted to dual-earners, the employment variable indicates whether both spouses are employed full-time or both are not.

In the most time-constrained couples, those where both spouses are employed full-time, results in Table 5 show that wives' management time is significantly *lower* than for less time-constrained couples. This result, consistent with findings in prior tables, suggests that wives in such families are performing fewer of all activities, whether management or task-related.<sup>13</sup> An important qualification mentioned earlier but worth

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<sup>13</sup> As a strategy to manage the time bind, one might speculate that dual-earner wives may be more likely than non-employed wives to undertake management, but then spend less time in this function given time

repeating is that the ATUS only captures primary management time: During some of the time reported as paid work, organizing personal affairs may be a secondary activity.

For dual-earner wives, the presence of a preschool age child is positively and significantly associated with management time, as would be expected as a strategy to juggle the time bind. For dual-earner husbands, there is no significant relationship.

### **Implications for Valuing Household Management**

Recent efforts to value household management have followed the standard approach used for household production activities like housecleaning and lawn care: they multiplied time spent in the activity by a relevant commercial wage rate for the activity. Landefeld, Fraumeni & Vojtech (2005) estimated household management time of about one hour per week of time in this activity, close to the value of figures reported in Table 1 for ATUSmanage. They then valued this category in a number of ways, including use of a quality-adjusted “specialist” wage rate for business and professional services of \$13 per hour.<sup>14</sup> Similarly, the *Dollar Value of a Day* publication (Expectancy Data, 2005) multiplied a somewhat broader measure of management time by a weighted wage rate based on commercial management services of approximately \$12 per hour. The obvious concern, raised by this paper, is that the time use estimates in these calculations considerably underestimated time spent in this function, thereby yielding low valuations of the household manager role.

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constraints. This possibility, however, is not supported with the ATUS data. In results not reported here, these data show that dual-earner wives are significantly less likely to undertake household management *and* spend significantly less time on this activity, conditional on participation.

<sup>14</sup>This figure is the \$17.46 reported in their Appendix 2 multiplied by .75 to reflect the authors’ assumption that the quality of this task is not as high as if performed by a specialist.

To fully understand the challenges of valuing time spent in household management it is useful to compare it with valuing child care, since the two activities share an important characteristic.<sup>15</sup> Both activities are highly personalized in nature, though child care services and household management services can be purchased in the private market with varying degrees of substitutability. Nevertheless, the measurement and valuation of household management is much more problematic using the ATUS. First, as noted, household management is much more likely to be done in very small blocks of time, and hence go unreported. Second, much of what is generally regarded as “child care” consists of specific tasks, such as giving a bath or providing a meal, rather than management per se, and is more likely to be captured as a primary activity.<sup>16</sup> Finally, the ATUS systematically captures time spent in what researchers refer to as “secondary,” “passive” or “supervisory” child care, but not time in other secondary activities. Thus, the ATUS data are more likely to underestimate time household management time than total child care time.<sup>17</sup>

## **Conclusion**

This study used newly available data from the American Time Use Survey (ATUS) to investigate time spent in household management, a critical function in the household production process. Time spent planning, monitoring, and coordinating are ongoing

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<sup>15</sup> Regarding child care, see Folbre & Yoon (2005).

<sup>16</sup> As noted earlier, Folbre & Yoon (2005) define child care very broadly to include some management-related activities. Nevertheless, time devoted to this activity is very small in comparison to time in tasks.

<sup>17</sup> Instead of using time use data, an alternative method of valuation would be to look for a shadow price for the household management function as a whole. As of 2006, a full-time household manager earned anywhere from \$25,000-\$120,000 per year (Bick, 2006; Buntic, 2007). This figure is substantially higher than 1 - 1 ½ hours per week multiplied by a commercial wage rate of \$12 -\$13, as assumed in earlier studies. Such a method would, however, substantially *overstate* the value of household management per se because individuals hired for this occupation are likely to simultaneously or sequentially perform other tasks in the household.

activities that occur over the course of the whole day, though often performed while “doing something else.” Data from the ATUS are the most detailed available on this topic, but they nevertheless yield extremely conservative estimates of time spent in this function: about 1 - 1 1/2 hours per week. One chief reason is that time spent in secondary activities, apart from time spent being responsible for children, is not included in the ATUS time diary. Further, even when management is the primary activity it may be done in such small blocks of time that it goes unrecorded.

Despite the inadequacies of the ATUS data, several expected patterns are identified. Among these, measured time spent in household management appears to significantly increase with age and educational attainment. For dual-earner wives, management time is also significantly higher when a preschool-age child is present. This result is consistent with management serving as strategy to overcome the time bind. The results also indicate that time spent in management is more equally distributed between husbands and wives than core household tasks, in line with previous research on couples’ money management patterns. Interestingly, employed women are found to spend significantly less time in measured management time. A simple interpretation is that time-constrained women have less time for this activity, but a firm assessment requires a fuller reporting of how paid workers spend their work day.

In sum, ATUS data have proven fruitful for many purposes, including deepening our understanding of how much time individuals report that they work when asked about “usual hours” versus how much time they actually work as captured in a time diary (Frazis and Stewart, 2004). As mentioned, these data also contain rich information on child care time. The lack of information on secondary activities, apart from supervisory

child care, however, is an important deficiency of the ATUS design. One implication of this study, relevant to recent efforts to place a value on household activities, is that calculations based on these data will yield a substantially understated lower bound on the value of the household management function.

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Table 1. Average Hours Per Week Spent in Household Management Activities, Comparison of Measures, 2003-2004 ATUS

	All, <u>age 18+</u>	Women, <u>age 18+</u>	Men, <u>age 18+</u>	<u>Single-Person HH</u>		Married Women, <u>age 20+</u>	Married Men <u>age 20+</u>
				Women, <u>Age 20+</u>	Men <u>Age 20+</u>		
<b>ATUSmanage</b>							
Total Hours	1.04	1.18	0.88	1.49	0.86	1.17	0.91
% with Hrs>0	16.9%	19.1%	14.4%	20.8%	14.1%	19.4%	14.9%
Hrs Hrs >0	6.15	6.16	6.14	6.12	6.15	6.06	6.12
Total Hours/Total ALLHH	7.3%	6.7%	8.4%	10.1%	8.9%	6.0%	8.2%
<b>DVDmanage</b>							
Total Hours	1.45	1.63	1.23	2.17	1.27	1.59	1.26
% with Hrs>0	26.1%	29.6%	22.2%	34.8%	23.2%	29.1%	22.6%
Hrs Hrs >0	5.59	5.58	5.62	5.66	5.59	5.54	5.66
<b>ExpandedDVD</b>							
Total Hours	1.64	1.86	1.38	2.41	1.43	1.85	1.40
% with Hrs>0	29.0%	33.3%	22.2%	37.3%	25.0%	33.2%	24.6%
Hrs Hrs >0	5.69	5.65	5.74	5.76	5.80	5.63	5.76
Total Hours/Total FAMILYCARE	6.6%	6.1%	7.5%	11.3%	9.6%	5.5%	7.1%
<b>ALLHH (All Household Activities)</b>							
Total Hours	14.31	17.64	10.53	14.82	9.66	19.36	11.06
% with Hrs>0	78.9%	88.4%	68.1%	83.7%	69.7%	90.9%	68.4%
Hrs Hrs >0	18.14	19.96	15.44	16.11	13.90	21.30	16.11
<b>FAMILYCARE (ALLHH+ Shop + HH Care)</b>							
Total Hours	24.72	30.31	18.36	21.40	14.96	33.74	19.62
% with Hrs>0	88.7%	94.6%	82.0%	89.6%	79.9%	96.3%	83.1%
Hrs Hrs >0	27.87	32.06	22.36	23.59	18.73	35.05	23.59
<b>ATUS Paid Work</b>							
Total Hours	24.82	19.49	30.90	16.47	25.62	19.05	31.95
% with Hrs>0	46.1%	39.1%	54.2%	31.7%	45.1%	38.9%	56.1%
Total Sample Size	30,032	17,199	12,833	4,183	2,729	9,674	8,753

Notes: All figures are weighted. Participation figures are for given interview day. Definitions are provided in Appendix A.

Table 2. Average Hours Per Week in Household Activities, For Selected Groups

	Females, Ages 18+									
	By Age		By HH Income		By Education		By Employment		By Presence of Child	
	18-34	55+	\$0-\$40K	\$40K+	Low-Ed	High-Ed	Emp.	Not Emp.	Pre-K Child	w/No Child
ATUSmanage	0.65	1.32 ***	0.82	1.15 ***	0.89	1.51 ***	0.98	1.45 ***	0.90	1.34 ***
ExpandedDVD	1.04	2.17 ***	1.36	1.79 ***	1.43	2.41 ***	1.53	2.33 ***	1.52	2.09 ***
ALLHH	10.92	16.86 ***	14.51	13.67 ***	19.43	15.61 ***	14.09	22.67 ***	18.33	17.20 ***
FAMILYCARE	24.56	24.03 *	24.04	24.96 ***	30.67	30.72	26.32	35.97 ***	45.18	24.49 ***
Sample Size	6,236	10,340	11,929	14,299	7,224	5,015	10,149	7,050	3,458	9,522

Notes: All figures are weighted.

Low-ed if completed high school or less; high-ed if completed four years of college or more. Adults with some college omitted.

Adults with HH income missing omitted.

p-value indicates whether difference in means is statistically different. \* p < .10; \*\* p < .05; \*\*\* p < .01

Table 3. Estimated Tobit Models of Time Spent in Household Management for Full Sample, Stratified by Gender

	Variable Means		Tobit	
	Female	Male	Female	Male
Age	44.46	42.74	0.71 *** (.07)	0.79 *** (.10)
< HS (1=yes)	0.19	0.21	-30.89 *** (3.13)	-21.5 *** (4.22)
Some College (1=yes)	0.26	0.23	17.87 *** (2.37)	13.94 *** (3.38)
4 Yrs of College (1=yes)	0.16	0.16	31.66 *** (2.67)	32.34 *** (3.57)
> 4 Yrs of College (1=yes)	0.08	0.09	35.08 *** (3.25)	41.35 *** (4.02)
Employed (1=yes)	0.58	0.71	-8.41 *** (2.02)	-10.1 *** (3.06)
Married (1= yes)	0.53	0.57	-2.61 (1.90)	-1.50 (3.01)
Cohabit (1= yes)	0.04	0.04	1.63 (5.2)	-0.97 (6.91)
Weekend Interview (1=yes)	0.28	0.28	-17.21 *** (1.79)	-14.8 *** (2.41)
Summer Interview (1=yes)	0.25	.25	-3.57 * (2.06)	1.06 (2.78)
Preschool Child Present (1=yes)	0.16	0.14	5.41 * (2.92)	6.32 (4.01)
Older Child Only Present (1=yes)	0.28	0.27	6.80 *** (2.39)	3.20 (3.27)
Constant			-87.14 *** (5.07)	-124 *** (6.7)
Sigma			99.28 (1.00)	108.35 (.39)
Log Likelihood			-42807	-24790
Sample size	19,518	15,175	19518	15175

Notes: Dependent variable is measured as minutes in ExpandedDVD.

Omitted education category is HS only; omitted child category is no child present; omitted marital status is single.

Variable means are weighted; regressions are unweighted.

Standard errors of coefficient estimates are in parentheses.

\*p<.10; \*\* p < .05; \*\*\*p < .01.

Table 4. Average Hours Per Week in Household Management, Husbands and Wives, ages 20+

	By Couple's Employment Status		
	All	Husband Employed Only	Dual-Earner
<b>Wives' Average Time Use</b>			
ATUSmanage	1.17	1.46	0.99 ***
ExpandedDVD	1.85	2.37	1.57 ***
ALLHH	19.40	25.42	15.48 ***
FAMILYCARE	33.81	46.21	29.50 ***
Paid Work (diary)	19.04	0.15	31.86 ***
sample size	9,607	2,264	5,073
<b>Husbands' Average Time Use</b>			
ATUSmanage	0.91	0.82	0.78
ExpandedDVD	1.41	1.15	1.21
ALLHH	11.07	8.36	9.84 ***
FAMILYCARE	19.62	17.42	17.99
Paid Work (diary)	31.96	42.03	42.08
sample size	8,713	2,248	4,445
<b>Wives' Time/Husbands' Time</b>			
ATUSmanage	1.29	1.78	1.27
ExpandedDVD	1.31	2.06	1.30
ALLHH	1.75	3.04	1.57
FAMILYCARE	1.72	2.65	1.64
Paid Work (diary)	0.60	0.00	0.76

Notes: All figures are weighted. Definitions are in Appendix A.

Couple's employment status defined using information on usual hours worked.

p-value indicates whether difference in means by couple's employment type is statistically significant.

\* p < .10; \*\* p < .05; \*\*\* p < .01.

Table 5. Estimated OLS and Tobit Models of Time Spent in Household Management for Dual-Earner Wives and Husbands, Ages 20+

	Variable Means		Tobit		
	Wives	Husbands	Wives	Husbands	
Own Age	42.41	44.33	0.87 ***	1.08 ***	
Wife's Education			(.20)	(.23)	
< HS (1=yes)	0.05	0.07	-22.06 ***	-5.45	
			(10.68)	(11.35)	
Some College (1=yes)	0.29	0.29	11.6 ***	-1.85	
			(4.55)	(5.58)	
4 Yrs of College (1=yes)	0.24	0.24	20.44 ***	4.28	
			(5.07)	(6.06)	
> 4 Yrs of College (1=yes)	0.12	0.13	18.61 ***	7.96	
			(6.02)	(7.31)	
Husband's Education					
< HS (1=yes)	0.07	0.07	-15.99 *	-31.6 ***	
			(8.49)	(11.23)	
Some College (1=yes)	0.28	0.27	-0.97	7.75	
			(4.54)	(5.6)	
4 Yrs of College (1=yes)	0.24	0.23	8.82 *	19.6 ***	
			(4.93)	(7.11)	
> 4 Yrs of College (1=yes)	0.13	0.13	12.7 **	19.51 ***	
			(5.88)	(7.11)	
Both Full-Time Employed (1=yes)	0.61	0.65	-11.45 ***	-5.03	
			(3.27)	(4.04)	
Weekend Interview (1=yes)	0.28	0.29	-5.34 *	-4.75	
			(3.18)	(3.89)	
Summer Interview (1=yes)	0.27	0.26	-5.19	-1.88	
			(3.68)	(4.52)	
Preschool Child Present (1=yes)	0.22	0.23	11.02 **	9.37	
			(5.00)	(5.96)	
Older Child Only Present (1=yes)	0.32	0.31	12.30 ***	1.17	
			(3.91)	(4.83)	
Constant			-96.09 ***	-129.8 ***	
			(11.32)	(14.05)	
Sigma			91.62	97.13	
			(1.75)	(2.41)	
Log Likelihood			-11517.83	-7637.24	
Sample size			5,073	4,445	

Notes: Dependent variable is measured as minutes in ExpandedDVD.  
Omitted education category is HS only; omitted child category is no child present.  
Variable means are weighted; regressions are unweighted.  
Standard errors of coefficient estimates are in parentheses.  
\*p<.10; \*\* p<.05; \*\*\* p< .01.

Appendix A. Codes from 2003-2004 ATUS

Measure	Verbal Definition	ATUS Codes
Household Management Measures ATUSmanage	Household management as reported in BLS published tables. Includes Financial Management, Household and Personal Organizing and Planning, Home Security, HH Management, NEC. Excludes HH & Personal Mail & Messages as well as HH & Personal E-mail.	020901-020999 (except 020903 and 020304).
DVDmanage	ATUSmanage plus: HH & Personal Mail and Messages, Purchases of Child Care, Banking, Legal, Real Estate, and Social Services. Also includes HH activities, NEC. includes HH activities, NEC.	ATUSmanage codes plus 020303, 029999, 080101-080399, 080601-080699, 100102.
Expanded DVD	DVDmanage plus: Org. & Planning for Children, Org. & Planning for Adults, Purchasing HH Services, Calls to Child Care and HH Service Providers, Comparison Shopping. Excludes HH activities, NEC.	DVDmanage codes plus 030108, 030502, 070201-070299, 080100-080199, 090101-099999, 160103-160108 less 029999.
All Household Activities (ALLHH)	Household activities as reported in BLS published tables. Thus, includes associated travel time but excludes HH and Personal E-mail and Mail.	020000-020902,020905,020999,029999,170201-170299.
Family Care (FAMILYCARE)	AllHH plus Shopping, and Caring for HH members, including associated travel and management time.	ALLHH codes plus 070000-099999, 100101-100199,100301-100302, 100399, 100400-100999, 170700-170799, 170800-170899, 170900-171003, 171099, 030100-039999, 170300-170399.
Paid Work	Time spent on primary and secondary jobs.	050100-050200.