Wives' Time Allocation and Intrahousehold Power: Evidence from the Philippines

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2006

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This article appeared in *Applied Economics*, 2006, vol 38, pp. 789–804.

Abstract

Utilizing a rich survey data collected in the Southern part of the Philippines, this paper examines the time allocation of wives within the collective household framework by investigating not only the role of socioeconomic factors but also the influence of various intrahousehold power indicators. Analysis of autonomy and finality of intrahousehold decisions discloses that decisions are not unilaterally decided by a single household member, a result which confirms the prediction of collective household framework. Adopting a simple test procedure, this paper also examines which of the competing household models, collective or unitary, best describes these Philippine time use data. Testing results lend support to the validity of the collective household framework.

1 Introduction

Time allocation of individuals, mostly the analysis of labor supply behavior, has occupied a fair share in the literature of labor economics, bulk of which has been done under the assumption that the family acts as one unit to achieve a single objective. This treatment is not problematic as long as either all household members have the same preferences or there exists a dictator in the family. However, household reality, such as dissolution of marriage and siblings' dispute over parental bequests and properties would illustrate that such representation is overly simple. Hence, the collective household framework, which recognizes different preferences among household members, has been developed.

This paper investigates the determinants of wives' time allocation and tests which household model, collective or unitary, best describes these Philippine time use data. Collective framework operates under very few assumption, save for *pareto efficiency*. Hence, studies concerning efficiency in the allocation of resources under one person's command amount to proving or disputing the collective setting as an adequate alternative to the unitary model. In the present study, the resource in question is time. Though this is not the first to analyze time use within the competing household models, studies of Seaton (1997), Barmby and Smith (2001) and Chiappori, Fortin and Lacroix (2002) for example deal only with labor supply.

While it is ideal that time allocation for both husband and wife be analyzed, the data available are limited to women only. This should not become a seri-

ous hurdle since bulk of the evidence shows specialization of time use according to gender (see for example Mueller, 1984 and Jacoby, 1992). This is also indicated by the preliminary investigation on the patterns of responsibilities in Cebu households. Table 1 presents various household activities and the proportion of household members who usually perform the tasks. It reveals that, even for this sample consisting mainly of urban observations, there is an indication of male-female household work dichotomy. Among the household tasks considered, repairing jobs appear to be the only activity that big proportion of husbands are inclined to perform. Food shopping, food preparation, house cleaning, buying and washing clothes and child care are responsibilities primarily delegated to wives who appear to obtain help from children.

The time use analysis is conducted for two subsamples, working and nonworking. To the extent that there are unobservable attributes among the subsamples that systematically influence the manner with which they allocate time, then we are faced by inconsistent estimates. Hence, we also provide estimation of time use corrected for sample selection. While this study is not the first to correct time use estimation for sample selection (see for example, Kooreman and Kapteyn, 1987), studies that have done so are few and within the context of intrahousehold relationships, even fewer. Results reveal that there is indeed sample selection. In particular, working wives have tastes for activities that both have work and leisure components vis-á-vis activities that are in the extreme of the time use spectrum. In contrast, results on nonworking wives suggest that they have tastes for pure leisure (i.e. recreation) vis-á-vis partial leisure (i.e. tending).

The paper is organized as follows: section 2 discusses the theoretical framework and the data; section 4 investigates the autonomy and finality of various intrahousehold choices; section 5 discusses the effects of correcting for sample selection and presents the testing results for both subsamples; section 6 summarizes and concludes.

2 Theoretical Framework

Assume that the household utility is represented by $U(C_h, C_w, X_h^i, X_w^i; d)$ where C is consumption of goods, X is consumption of time and d is a vector of demographic characteristics. X may be spent on various activities such as recreation (X^r), child care (X^{cc}), household chores (X^{hc}) and working (X^w). Within the unitary framework, the household is faced by the budget constraint, $pC + W_h \sum X_h^i + W_w \sum X_w^i = W_h T + W_w T + Y$, where the left hand side is the total consumption and all the nonmarket time has wage as price. Maximization yields the demand for the various consumption of time and the composite commodity demand which take on the following general form: $X_j^i = X_j^i(W_h, W_w, Y; d)$ and $C = C(W^h, W_w, Y; d)$ where $_j$ is an index for husband or wife. Cross-section data is utilized so the assumption of commodity price being equal to unity is tenable.

Within the collective setting, household allocation is a result of a two-stage budgeting process. The first stage consists of household allocation of the nonlabor income to each members according to a sharing rule. The second stage involves the individual allocation of his share to his own time and commodity consumption. Within this framework, the wife is faced by the following maximization problem in the second stage:

$$\max_{(c,X^i)} U(C_w, X_w^i; d) \text{ subject to } pC + W_w \sum X_w^i = W_w T + \phi_w \tag{2.1}$$

where ϕ_w is the share the wife obtains from the first stage. We follow Quisumbing and Maluccio (2003) and assume that $\phi = \phi(a_h, a_w)$ where a_i's are measures of intrahousehold power of husband and wife. The wife's demand for various consumption of time and the composite commodity demand in this case have the following general form:

$$X^i = X^i(W_w, \phi_w(a_h, a_w); d) \tag{2.2}$$

$$C = C(W_w, \phi_w(a_h, a_w); d) \tag{2.3}$$

The budget constraint allows us to drop one equation. To focus on time use, we therefore opt to drop the commodity demand. Differentiate equation 2.2 with respect to the husband and wife's intrahousehold power:

$$\frac{\partial X^i}{\partial a_j} = \frac{\partial X^i}{\partial \phi_w} \frac{\partial \phi_w}{\partial a_j} \tag{2.4}$$

where ^{i} represents various wife's time use and $_j$ indicates husband or wife. Chiappori, Fortin and Lacroix (2002) have proposed a test for pareto efficiency, the distribution factor proportionality, which states that the ratios of the marginal effects of the bargaining power/distribution factors on labor supply should be equal. While their test has been derived for testing labor supply efficiency between husband and wife, the principle remains valid within the present context. From equation 2.4 and using the distribution factor proportionality result of Chiappori, Fortin and Lacroix (2002):

$$\frac{\partial X^{hc}/\partial a_h}{\partial X^{hc}/\partial a_w} = \frac{\partial X^{cc}/\partial a_h}{\partial X^{cc}/\partial a_w} = \frac{\partial X^{w}/\partial a_h}{\partial X^{w}/\partial a_w} = \frac{\partial X^{r}/\partial a_h}{\partial X^{r}/\partial a_w} \tag{2.5}$$

Equation 2.5 constitutes the test for the collective model. Within the unitary setting, none of the bargaining power/distribution factors figure in any of the intrahousehold decision processes: $\partial X^i/\partial a_j = 0$. This constitutes the test for the unitary model.

3 Data

The testing procedure above is implemented on the Cebu Longitudinal Health and Nutrition Survey (CLHNS), which is mainly composed of samples from urban areas in the southern part of the Philippines. This survey, conducted

by the Carolina Population Center-University of North Carolina together with collaborators[1] in the Philippines has been conceptualized to study infant feeding patterns of mothers who gave birth between May 1, 1983 to April 30, 1984. Since then, a portion of the original 3327 mothers have been resurveyed in 1991-1992, 1994-1995 and 1998-1999. While the survey has retained the focus of health and nutrition of both mother and child, information on intrahousehold decisions have been added on the recent survey waves. In the 1994-1995 resurvey, intrahousehold relationships have been collected, information that are vital to the analysis of collective models. There are, however, very few information gathered concerning other household members, with the exception of member's wage income, highest grade completed, age and sex. Detailed data include the following: characteristics of the index child and his/her siblings, children's diet, IQ, food records and various tests on cognitive skills; characteristics, diet, reproductive history and activities of the mother. Information on household decision-making and sources of nonlabor income are also available.

4 Household Decisions: Autonomy and Finality

The increasing acceptance of the collective approach has paved the way for recent intrahousehold studies to incorporate the role of distribution factors and bargaining power measures. Distribution factors are factors that do not affect preferences or the household budget set but do affect the decision process. In the literature, these include sex ratio and divorce laws and asset ownership/property rights. Most commonly used distribution factors, which qualify as human capital brought to marriage, are age and education difference between couples. Deemed to provide a clue on the bargaining strengths of individuals within the household, these variables are used in drawing inferences on the efficiency of intrahousehold resource allocation.

In this section, we examine various choices intrahousehold outcomes by conducting a simple investigation in autonomy and finality of intrahousehold decisions concerning wide range of issues. While the use of distributions factors have become common in commodity demand/expenditures analysis and have gained grounds in household labor supply estimation, studies on how distribution factors affect other equally important intrahousehold decisions are wanting mainly due to the lack of detailed information in most survey data, save for household level consumption and expenditures. The Cebu dataset, however, is one exception where one block of the questionnaire is devoted to household decisions. Mothers are presented several situations and they are asked who they usually consult with. If they consult anyone from the household members, they are then asked whose words usually prevail. These information allow us to draw inference on the bargaining strengths of couples without having to recover the sharing rule.

Tabulation of issues and decision makers are presented in table 2 in the ap-

pendix. The sample used in the tabulation is limited to married mothers only and hence we refer to these samples as *wives*. From table 2, it can be observed that most wives do not consult with anybody from the household if the decision concerns low ticket expenditures such as purchase of her shoes or children's clothing. In general however, consultation with spouse appears to be the practice. Among those who consult, the figures show that most wives have the final word on their own account purchases. High ticket expenditures, issues concerning children's welfare, family planning and hiring of household help appear to be jointly decided by couples in most households. Nevertheless, there are significant proportion of either husband or wife prevailing in the decision. This is especially so on the choice of a working wife or her travels outside Cebu. These statistics alone indicate that the unitary framework might be an oversimplified characterization of what is going on within the household.

To pave the way for the empirical analysis, we assume that U^* represents a person's cardinal measure of his utility and that $U^* = \beta' x_i + \varepsilon_i$ where x_i is a vector of observable characteristics and ε captures the unobservable factors. U^* is unobserved but U, which we assume to represent the person's ordinal measure of utility, is and the higher the value it takes, the higher his satisfaction level. In the context of decision making process, we assume that one prefers autonomy at best or if some consultation is needed, one prefers that the final decision be his. From the wife's perspective: $U = 0$ if husband is the final decision maker, $U = 1$ if both husband and she are the final decision maker, $U = 2$ if she is the final decision maker and $U = 3$ if she autonomously decides.

Following Greene (2000), U may be written such that there is a one-to-one correspondence between U and U^* and the rankings preserved. Assuming that ε_i has normal distribution, the appropriate estimation method is ordered probit. The x_is include the differences of husband and wife's age, education and wage.[2] Dummies for wives' headship, couple residing with the wife's parents, urban areas and barangay[3] are also included. Marginal effects of these variables are then computed.

Results concerning household expenditures are presented in table 3. It can be observed that the wage difference and the dummy for wives' headship consistently appear to have marginal effects greater than zero in all the expenditure decisions considered. In particular, for both low and high cost items the higher the (predicted log) wage difference, the less likely it is for wives to autonomously decide and the more likely it is for husbands to be the final decision makers. While it has positive impact on $P(U = 2)$ for purchases on wives' and children's accounts, it can be observed that the marginal effect of wage difference on $P(U = 0)$ is greater than $P(U = 2)$. These imply that a household decision maker's higher earning power works to his advantage. Wives' headship, on the other hand, has positive marginal effect on $P(U = 3)$ concerning purchases on her and the children's account. It also has positive effect on $P(U = 2)$ con-

cerning purchase of gifts to relatives. Concerning big ticket items, however, it appears that it has negative marginal effect on $P(U = 3)$ and $P(U = 2)$ and positive marginal effect on $P(U = 1)$ and $P(U = 0)$. This imply that headship does not preclude household discussions on major sale or purchase of household assets although it can be observed that its marginal effect on $P(U = 1)$ is greater than $P(U = 0)$ indicating that wives' headship, while it does not grant her autonomy or finality, it does include her from being part of the final decision. Households located in urban areas, on the other hand, have positive marginal effects on both $P(U = 0)$ and $P(U = 1)$ though it appears that urban households favor husbands more as the final decision maker on high expenditure items. The same observations can be said when couples live together with wives' parent/s.

Concerning various issues, table 4 indicates again that the marginal effect of wage difference is greater than zero in almost all the issues considered. In particular, there appears to be a consensus of negative effect on $P(U = 3)$, $P(U = 2)$ and $P(U = 1)$ and a positive effect on $P(U = 0)$ indicating once more that higher earning capacity grants a person a higher chance of being the final decision maker. Wives' headship dummy also affects the probabilities in the same pattern discussed above. On the other hand, the presence of wives' parent/s appear to have favorable effect on either $P(U = 2)$ and $P(U = 1)$ while urban dummy has favorable impact on $P(U = 1)$ concerning children's school, working wife and wife's travel outside Cebu.

Concerning money matters, table 5 reveals that the higher the wage difference between husbands and wives, the more likely that the wives decide on their own money and the more likely for husbands' either partial or full remittance. Wives' headship, the presence of the wives' parents in the household and household located in urban areas allow wives to decide over their own money. In addition, wives' headship and urban dummies have positive impact on either full or partial remittance though it is clear that both have higher impact on the former. In under no issues considered can the marginal effects of nonlinearities in age difference be detected.

Based on the results, wage difference has been a consistent significant explanatory variable in all of the intrahousehold issues considered. In particular, it appears that higher earnings allow one to exert influence in the autonomy and finality of intrahousehold decisions. While wives' headship does not grant wives autonomy and finality in decision making, it does allow them to be part of the final decisions. This may suggest that headship does not automatically preclude others from being part of the decision. In fact, one may believe that it is the head's responsibility to initiate communication and consolidate opinions as means of strengthening intrahousehold relationships. The presence of wives' parents in the household also does not grant wives autonomy of decision. Rather, it appears to favor joint decision making suggesting that there may be parents'

role in balancing, rather than tilting, the fulcrum of intrahousehold power. This is also observed regarding the effects of urban dummy. This is not surprising given that urban areas are more progressive and more liberal compared to rural areas where patriarchal and conservative households may still abound.

Depending on the issues, this exercise illustrates that autonomy and finality of intrahousehold decisions are affected by the distribution factors. These results indicate that the household decisions are not unilaterally decided by a single household member. This is in sharp contrast with what the representation of unitary models would have us believe.

5 Time Use Analysis

To facilitate the estimation of women's time use and the testing procedure described in section 2, we hypothesize that time allocation is affected by socioeconomic and intrahousehold power indicators and formulate the following estimating equation:

$$\begin{aligned} T_i = {} & \alpha_0 + \alpha_1 age + \alpha_2 noeduc + \alpha_3 maidnum + \alpha_4 ageoldestch + \alpha_5 nuclear \\ & + \alpha_6 hhmother + \alpha_7 roomnum + \alpha_8 othincom + \alpha_9 predlogwage + \alpha_{10} fullimit \\ & + \alpha_{11} nolimit + \psi_1 pwordtravel2 + \psi_2 pmaid + \psi_3 pspendfather + \varepsilon \end{aligned} \tag{5.1}$$

where i represents the time spent on the ith activity. Demographic variables include age (age) and a dummy for no education ($noeduc$). Several variables deemed to affect the wife's productivity at home are included: number of household help ($maidnum$), age of the oldest child ($ageoldestch$), dummy for nuclear household ($nuclear$) and number of rooms in the house ($roomnum$). Nonlabor income ($othincom$), wage ($predlogwage$) and headship ($hhmother$) are also expected to affect time use. In addition, dummies of physical constraints to perform various tasks are included ($fullimit$ and $nolimit$). Partially limited capacity is the left out category. ε is the residual term.

From the preceding section, human capital brought to marriage such as age and education are utilized to estimate the probabilities of autonomy and finality of decisions concerning various household issues. To the extent that these probabilities capture the decision process within the household, these may serve as indicators of bargaining strengths between couples. For example, the high probability of a husband having the final words on working wife is indicative that he exerts strong influence over household decisions. Since we have no reason to believe that these probabilities are endogenous to time use, the outcome being investigated, the following indicators of intrahousehold powers are utilized: probability of husband having the final decision on wife's travel outside Cebu ($pwordtravel2$), probability of wife autonomously deciding on hiring household help ($pmaid$) and the probability of husband deciding how wife's money should be spent ($pspendfather$). High probability of husband having the final decision

on wife's travels and over wife's money are indicators of high intrahousehold power of husbands; high probability of wife's autonomous decision hiring household help is indicator of high intrahousehold power of wives.

Equation 5.1 is jointly estimated for two subsamples: working and nonworking wives. For the nonworking samples, time use is partitioned into four groups: child care, recreation, household chores and tending gardens/animals. For the working sample, time spent working is added as additional category. Recreation includes napping, watching tv, gambling, embroidering and talking with neighbors. Child care are activities performed to/with children such as bathing them, dressing them up, helping then with home works and taking them for a walk. Household chores are combinations of time spent on food preparation and housekeeping while tending includes watering plants or feeding/bathing animals. The working category is further divided into working at home and working outside of home. Working at home includes opening/closing stores and doing other people's laundry. We assume that working is on the one extreme of time use and recreation is on the other extreme with child care, tending and household chores in between. This imply that activities in between the extremes have both work and leisure components. Summary statistics of the variables used in the estimation are presented in table 6.

Given that supplying labor to the wage market or working is just one component of time use, selection bias may also exist in time use estimation when limiting the sample to, say, working or nonworking samples. Selection bias occurs when estimation using observed wages and hours worked does not take into account sample censoring (Heckman, 1979). To see this, suppose that the time use and wage earner functions are $T_j = \alpha' x_i + u_i$ and $P = \gamma' w_i + v_i$ respectively. Assuming that u_i and v_i have bivariate normal distribution, $E(T_j|\text{wife is wage earner}) = \alpha' x_i + E(u_i|v_i > -z_i)$ where $z_i = \frac{\gamma' w_i}{\sigma_v}$. If $E(u_i|v_i > -z_i)$ is not equal to zero, then we are faced with inconsistent estimates. This happens when there are unobservable characteristics among the wage earners that influence the manner in which they allocate their time resources. Indeed, it is hardly surprising that people who have strong inclination to earn or supply labor to the wage market are the ones less likely to devote time in housekeeping.

To address this, the estimation procedure adopted in this section consists of the following steps:

1. Conduct a probit estimation having dependent variable coded 1 if the individual is a wage earner, 0 otherwise. All observations are utilized. Compute the inverse of the Mills' Ratio relevant to the truncation point (see Greene, 2000 p899).

2. Conduct (log of) wage regression including the inverse of Mills' Ratio computed from step 1 as regressor. Predict wage. Sample is limited to working wives only.

3. Conduct time use regression including the relevant inverse of Mills' Ratio computed from step 1 and the predicted wage computed from step 2 as regressors.

Estimates

Working Sample

Results[4], presented in table 7, indicate that extra hands allow wives to pursue activities outside the confines of her homemaker responsibilities. This may be inferred from the positive(negative) effect of the number of maids to recreation and working outside of home(household chore). This is also supported by the positive(negative) impact of the age of the oldest child to recreation(child care, household chores and tending). In addition, wives who belong to nuclear households devote less time in recreation and more time in household chores. That there are attached responsibilities to being a household head finds support from the negative(positive) effect of the dummy for wives' headship on her recreation and working outside of home(child care and working at home).

Dummies for capacity to perform household tasks reveal that physical well being may also play an important role in time allocation. Wives with full limitation spend more time tending while those without limitation spend more time in household chores suggesting that tending gardens/animals, at least for this sample, may have high leisure component. Travel time has negative effect on time spent on activities other than working outside of home. These may mean that, given higher travel time, wives maximize their time in the work place to avoid back lags on work that entail additional time spent away from other and possibly more pleasurable activities.

While nonlabor income negligible effects, the log of wage negatively affects recreation and tending activities which both have work and leisure components and positively affects working at home and outside of home. These results are in line with Mueller's (1984) hypothesis that time allocations are responsive to economic incentives.

High intrahousehold power of husbands, assumed to be indicated by high *pwordtravel2*, has negative effect on household chores, an activity which, as presumed above, may have leisure component as well. On the other hand, high *pspendfather*, another indicator of husband's intrahousehold power, has negative impact on recreation but has positive effect on tending and working at home. These may suggest that time allocation responds to intrahousehold indicators depending on which source the power is coming from. For example, when there is a high probability of husbands' deciding over wives' money, results indicate that wives spend less time working outside but spend more time working at home where the flow of income can be easily monitored or controlled. As a consequence of devoting more time working at home, activities having leisure components are also undertaken. In contrast, *pmaid*, an indicator of wives' intrahousehold

power, has positive effect on recreation and working outside of home and negative impact on child care and working at home. Working outside is preferred than working at home possibly because of the prestige attached to institution affiliation or possibly because of the satisfaction one may derive simply from dressing up.

The sample selection term ($mills$) is negative and significant on recreation and working outside of home and is positive and significant in child care and tending. These indicate the presence of sample selection effects in these time uses and its inclusion has corrected the bias induced by sample selection. Following the interpretation of Dolton and Makepeace (1989) concerning the sign of $mills$, results indicate that wives who are more likely to become wage earners are the ones less likely to spend more time at work and at pure leisure relative to those who are less likely to become wage earners. Studies concerned with labor supply categorize time use into two groups, work and leisure, and hence their interpretation of $mills$ has an automatic implication on leisure. Ham (1982) for example, has concluded based on the correlation coefficients between the labor supply and probit estimations that "...both the unemployed and the underemployed possess below average tastes for leisure...". However, based on our results, $mills$ is actually negative for both work and leisure and positive for activities with both leisure and work component such as child care and tending. These suggest that one should not be too quick in drawing conclusions when the view is partial which also imply the importance of time use analysis even if one is interested only in one of its components. In addition, the results suggest that there are unobservable attributes among the working wives that are correlated with the manner in which they allocate time. It appears that they have tastes for activities that both have work and leisure components vis-á-vis activities that are in the extreme of the time use spectrum.

Non-Working Sample

For the non-working sample, personal characteristics, such as age, appear to affect time use as well. For example, results in table 10 show that older wives devote less(more) time in child care(recreation and household chores). Extra hands, assumed to be captured by the number of maids and the age of the oldest child, appear to negatively affect household chores and positively affect recreation respectively. This is supported by the positive effect of the nuclear dummy in household chore. As in the working sample, these results indicate that extra hands allow wives to devote time away from her household responsibilities. Headship has negative(positive) effect on recreation(tending). Similar to the working sample, nonlabor incomes are insignificant in all the time uses considered.

Results on whether she has physical constraints in performing various tasks reveal that wives with full limitation spend more time in pure leisure and less time in household chores while wives with no limitations spend more time in

child care.

Strong wives' intrahousehold power, presumed to be indicated by the high probability of her autonomous hiring household help decisions, has negative effect on household chores and tending and positive impact on recreation. Strong intrahousehold power of husbands, presumed to be indicated by the high probability of power over wife's money, has positive effect on tending and negative impact on recreation. The probability of husband's final decision on wife's travels, also an indicator of husbands' strong intrahousehold power, on the other, does not have significant effects to any of the time use considered. In general, results indicate that time allocation of nonworking wives also responds to bargaining indicators in a manner predicted by the collective household theory.

Since there is no observable wage for the non-working sample, we skip step 2 in the procedure enumerated in section 5 and computed the relevant *mills* for the non wage earners. Results are presented in table 10. For this non-working sample, *mills* has negative impact on recreation, meaning wives who are less likely to become wage earners are the ones more likely to spend more time in pure leisure and performing household chores. Similarly, they are also the ones less likely to spend more time in tending and child care. Again, these suggest that there are unobservable characteristics (i.e. innate laziness, aversion to strenuous tasks) among the non-working samples that are correlated to their time allocation. It appears that they have taste for pure leisure (i.e. recreation) vis-á-vis partial leisure (i.e. tending) and if they do perform household tasks, they choose the task requiring less time and responsibilities (household chores vis-á-vis child care).

Testing Results

Working Sample

To evaluate the implication of the unitary model, linear Wald tests are conducted on the following null hypothesis: $\psi_1 = \psi_2 = \psi_3$. Rejection of these hypothesis indicates that intrahousehold power of husbands and wives have different impact on the outcomes in question, a result that sharply contrasts with the prediction of unitary models. These tests are performed across time use equations. Full cross equation testing, $\psi_1^i = \psi_2^i = \psi_3^i$, where i represent various time uses, are also conducted. Results are presented in table 8. The off diagonals are cross equation testing while the figures on the diagonal are testing on that particular equation alone. The last column (labelled *overall*) represents the full testing of the hypotheses across equation. Tests on household chores indicate that the null hypotheses cannot be rejected. The same holds true for the cross tests between child care & household chores. The rest of the test indicates that the null hypotheses are all rejected. Overall tests allow us to claim the same conclusion.

To evaluate the implication of the collective model, nonlinear Wald test are con-

ducted on the following null hypothesis: $\psi_1/\psi_2 = \psi_3/\psi_2$. Full cross equation testing, $\psi_1^i/\psi_2^i = \psi_3/\psi_2^i$, where i represent various time uses, is also conducted. Rejection of these hypotheses indicates the rejection of Pareto efficiency, a crucial assumption of collective models. Results, presented in table 9, appear to indicate that the hypothesis of efficiency is rejected in the cross tests between recreation & working outside and tending & working at home. Overall test, however, indicates that the hypothesis cannot be rejected. These may be taken as an evidence to the efficiency of working wives' time allocation to various activities.

Nonworking Sample

Tests results of the unitary implication are presented in table 11. These indicate that the null hypothesis is rejected in all time use tests, save for the child care. Overall tests indicate the same conclusion. Tests results on the collective implication are presented in table 12. These show that while the hypothesis is rejected in the cross test between recreation & tending, results on the overall tests indicate that we cannot reject the null hypothesis. As in the working sample, the time allocations of nonworking wives are also efficient.

6 Summary

This paper has utilized human capital brought to marriage as distribution factors deemed to affect various intrahousehold choices. Results indicate that higher earnings allow one to exert influence in the autonomy and finality of intrahousehold decisions. While wives' headship does not grant wives autonomy and finality in decision making, it does allow them to be part of the final decisions. This may suggest that headship does not automatically preclude others from being part of the decision. The presence of wives' parents in the household also does not grant wives autonomy of decision. Rather, it appears to favor joint decision making suggesting that there may be parents' role in balancing, rather than tilting, the fulcrum of intrahousehold power. Results on the various intrahousehold decisions considered indicate that the household decisions are not unilaterally decided by a single household member. This is in sharp contrast with what the representation of unitary models would have us believe. The distribution factors used, however, are limited. Future data collection on household surveys should therefore include not only data on decision makers on various intrahousehold issues but information on assignable assets and individual income sources as well.

This paper has also analyzed the determinants of time allocation of working and nonworking wives by including as explanatory variables not only socioeconomic factors but also some intrahousehold power indicators. This is in the attempt to extend the time use model in the collective household framework. Results indicate that time allocations respond to both factors as predicted by the theory. Various tests conducted to verify that intrahousehold power indicators do not

affect time allocation reveal that this is rejected. This may be taken to imply the rejection of unitary model. Various tests conducted to verify efficiency, on the other hand, support the validity of collective model.

Notes

[1]Collaborating institutions are Nutrition Center of the Philippines, Office of the Population Studies and the University of San Carlos.

[2]Wages are predicted from the maximum likelihood estimation. Estimates are available from the author upon request.

[3]Barangay is the basic political unit in the Philippines and is roughly equivalent to a village.

[4]Time use estimates without sample correction are available from the author upon request.

Acknowledgements

The author would like to acknowledge the Japanese Government for financial support and the Carolina Population Center-University of North Carolina for making the data used in this paper available. Insights and comments of Professor Kenn Ariga are also gratefully acknowledged

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TABLE 1: Tabulation of Household Members who Usually Perform the Tasks

	Food Shop		Food Preparation		Cleaning after Meal		House Cleaning		Buying Clothes		Washing Clothes	
	Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent
Task not Done in the Household	2	0.09	5	0.24	3	0.14	2	0.09			1	0.05
Wife	1702	80.09	1550	72.94	1055	49.65	1283	60.38	2014	94.78	1482	69.74
Husband	260	12.24	161	7.58	59	2.78	63	2.96	59	2.78	38	1.79
Mother/Mother-in-law	27	1.27	41	1.93	27	1.27	18	0.85	5	0.24	16	0.75
Father/Father-in-law	7	0.33	7	0.33	2	0.09	1	0.05			2	0.09
Other Female Relatives	19	0.89	42	1.98	54	2.54	56	2.64	3	0.14	30	1.41
Other Male Relatives	4	0.19	12	0.56	19	0.89	13	0.61	1	0.05	4	0.19
Son or Daughter	92	4.33	241	11.34	822	38.68	608	28.61	40	1.88	383	18.02
Hired House Help	10	0.47	64	3.01	82	3.86	80	3.76			155	7.29
Other	2	0.09	2	0.09	2	0.09	3	0.14	1	0.05	14	0.66
Observations	2125		2125		2125		2125		2125		2125	

	Child Care		Fetching Water		Gathering Firewood		Tending Animals		Tending Plants		Repairing	
	Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent
Task not Done in the Household	114	5.36	346	16.28	1468	69.08	863	40.61	741	34.87	17	0.8
Wife	1667	78.45	300	14.12	124	5.84	438	20.61	802	37.74	144	6.78
Husband	80	3.76	335	15.76	127	5.98	428	20.14	151	7.11	1656	77.93
Mother/Mother-in-law	22	1.04	2	0.09	10	0.47	17	0.8	31	1.46	9	0.42
Father/Father-in-law	1	0.05	7	0.33	5	0.24	15	0.71	7	0.33	38	1.79
Other Female Relatives	17	0.8	18	0.85	6	0.28	4	0.19	21	0.99	3	0.14
Other Male Relatives	1	0.05	34	1.6	6	0.28	19	0.89	15	0.71	25	1.18
Son or Daughter	173	8.14	1017	47.86	376	17.69	321	15.11	322	15.15	68	3.2
Hired House Help	44	2.07	34	1.6	2	0.09	12	0.56	33	1.55	35	1.65
Other	6	0.28	32	1.51	1	0.05	8	0.38	2	0.09	130	6.12
Observations	2125		2125		2125		2125		2125		2125	

TABLE 2: Household Decision Makers, in Percent

Persons Consulted by Wife	Household Decisions Concerning Various Issues							Low Ticket Expenditures			High Ticket Expenditures	
	Taking Sick Child to Doctor	Children's School	Hiring Help	Working Wife	Wife's Travel outside Cebu	FP Use	FP Method	Her Shoes	Children's Clothes	Gifts to Relatives	Buy/Sell Land	Purchase of TV
No one	41.15	16.48	20.02	28.11	9.83	10.75	11.6	66.35	61.93	36.28	2.91	7.25
Spouse	57.2	80.93	79.31	71.42	89.12	69.95	68.54	31.76	35.58	62.49	95.83	91.46
Son or Daughter	0.14	1.65	0.08	0.24	0.29	0	0	1.13	2.16	0.71	0.1	0.86
Parents/In-Laws	0.9	0.58	0.31	0.1	0.53	0.56	0.38	0.05	0	0.09	0.75	0.14
Other Adults	0.61	0.28	0.31	0.14	0.19	17.83	18.68	0.7	0.33	0.33	0.3	0.24
Spouse&Other Adults	0	0.09	0	0	0.05	0.89	0.81	0	0	0.09	0.1	0.05
Observations	2124	2124	1324	2117	2105	2120	2104	2125	2125	2117	1992	2100
Post Consultation Decision Makers												
Woman herself	20.96	5.81	10.95	27.2	21.71	24.15	22.96	58.4	40.67	20.98	3.05	5.55
Spouse	8.72	10.71	18.13	27.56	32.88	7.4	6.99	18.91	11.74	13.49	12.25	14.65
Woman and Spouse	69.84	81.62	70.35	45.07	45.21	67.81	69.35	22.27	45.36	65.01	84.23	79.18
Son or Daughter	0	1.47	0.09	0.13	0.05	0	0	0.42	1.98	0.37	0.05	0.46
Parents/In-Laws	0.24	0.34	0.37	0	0.1	0.11	0.05	0	0	0	0.37	0
Other Adults	0.24	0.06	0.09	0	0	0.53	0.65	0	0.25	0	0.05	0.1
Spouse&Son/Daughter	0	0	0	0	0.05	0	0	0	0	0.07	0	0
Observations	1250	1774	1059	1522	1898	1892	1860	714	809	1349	1934	1945

TABLE 3: Marginal Effects of the Explanatory Variables on Various Household Expenditures

	Small Ticket Household Expenditures											
	Wives' Shoes				Children's Clothes				Gifts to Relatives			
	$P(Y=0)$	$P(U=1)$	$P(U=2)$	$P(U=3)$	$P(U=0)$	$P(U=1)$	$P(U=2)$	$P(U=3)$	$P(U=0)$	$P(U=1)$	$P(U=2)$	$P(U=3)$
Age Difference	-0.002	0.001	-0.001	0.002	-0.002	0.000	0.000	0.002	-0.005	0.000	0.001	0.005
Square of Age Difference	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Education Difference	0.007	-0.003	0.002	-0.006	0.008	-0.002	0.002	-0.008	0.000	0.000	0.000	0.000
(Predicted) Log of Wage Difference	0.072	-0.028	0.025	-0.070	0.045	-0.011	0.009	-0.043	0.108	-0.001	-0.013	-0.094
Dummy:												
Mother's Headship	0.000	-0.001	0.000	0.000	-0.004	-0.011	0.006	0.009	-0.003	0.004	0.017	-0.018
Co-Residence with Wife's Parents	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-0.001
Urban	0.001	-0.006	0.002	0.002	0.000	-0.001	0.001	0.001	0.000	0.000	0.000	-0.001
Observations	2090				2076				2080			

	Big Ticket Household Expenditures							
	Purchase of TV				Buying/Selling Land			
	$P(U=0)$	$P(U=1)$	$P(U=2)$	$P(U=3)$	$P(U=0)$	$P(U=1)$	$P(U=2)$	$P(U=3)$
Age Difference	-0.004	0.002	0.001	0.001	0.001	-0.001	0.000	0.000
Square of Age Difference	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Education Difference	-0.003	0.002	0.001	0.001	0.002	-0.002	0.000	0.000
(Predicted) Log of Wage Difference	0.067	-0.035	-0.012	-0.020	0.044	-0.033	-0.005	-0.006
Dummy:								
Mother's Headship	0.044	0.108	-0.007	-0.145	0.010	0.054	-0.017	-0.046
Co-Residence with Wife's Parents	0.003	0.001	-0.001	-0.003	0.003	0.003	-0.002	-0.004
Urban	0.015	0.005	-0.004	-0.016	0.005	0.003	-0.003	-0.006
Observations	2053				1953			

The sum of the marginal effects of each variables should be equal to zero. However, some do not add up due to rounding.

TABLE 4: Marginal Effects of the Explanatory Variables on Various Intrahousehold Decisions

	Children's Doctor				Children's school				Hiring Help			
	$P(U=0)$	$P(U=1)$	$P(U=2)$	$P(U=3)$	$P(U=0)$	$P(U=1)$	$P(U=2)$	$P(U=3)$	$P(U=0)$	$P(U=1)$	$P(U=2)$	$P(U=3)$
Age Difference	0.000	0.000	0.000	0.000	-0.002	0.001	0.000	0.001	-0.005	0.001	0.001	0.003
Square of Age Difference	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Education Difference	-0.004	0.000	0.000	0.003	0.006	-0.002	-0.001	-0.003	-0.001	0.000	0.000	0.000
(Predicted) Log of Wage Difference	0.055	0.000	-0.003	-0.053	0.066	-0.022	-0.008	-0.036	0.083	-0.016	-0.016	-0.052
Dummy:												
Mother's Headship	-0.159	0.011	0.100	0.048	-0.001	0.015	0.001	-0.015	0.012	0.016	0.006	-0.033
Co-Residence with Wife's Parents	-0.003	0.001	0.006	-0.004	-0.002	0.017	0.001	-0.016	0.001	0.001	0.000	-0.001
Urban	0.000	0.000	0.000	0.000	0.001	0.004	0.000	-0.005	0.005	0.004	0.001	-0.010
Observations	2087				2062				1288			

	Working Wife				Wife's Travel				FP method			
	$P(U=0)$	$P(U=1)$	$P(U=2)$	$P(U=3)$	$P(U=0)$	$P(U=1)$	$P(U=2)$	$P(U=3)$	$P(U=0)$	$P(U=1)$	$P(U=2)$	$P(U=3)$
Age Difference	-0.003	0.000	0.001	0.003	-0.002	0.000	0.001	0.001	-0.004	0.000	0.002	0.002
Square of Age Difference	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Education Difference	-0.004	0.000	0.001	0.003	0.001	0.000	0.000	0.000	-0.001	0.000	0.001	0.001
(Predicted) Log of Wage Difference	0.065	-0.001	-0.013	-0.051	0.017	-0.003	-0.007	-0.007	0.041	-0.005	-0.018	-0.018
Dummy: Mother's Headship	0.000	0.000	0.001	-0.002	-0.002	0.011	0.003	-0.012	0.000	0.004	0.001	-0.005
Co-Residence with Wife's Parents	-0.004	0.005	0.017	-0.018	0.000	0.003	0.001	-0.004	-0.001	0.014	0.008	-0.021
Urban	0.000	0.000	0.000	-0.001	-0.001	0.011	0.002	-0.012	0.000	0.001	0.000	-0.001
Observations	2084				2070				2060			

The sum of the marginal effects of each variables should be equal to zero. However, some do not add up due to rounding.

TABLE 5: Marginal Effects of the Explanatory Variables Concerning Money Matters

	Who Decides How Wife's Money Should be Spent?			Does Husband Remit Income to Wife?		
	Husband Decides	Both Decide	Wife Decides	Zero Remittance	Part Remittance	Full Remittance
Age Difference	0.001	0.000	-0.001	0.001	0.000	-0.001
Square of Age Difference	0.000	0.000	0.000	0.000	0.000	0.000
Education Difference	0.005	-0.002	-0.003	0.005	-0.001	-0.004
(Predicted) Log of Wage Difference	-0.031	0.013	0.018	-0.044	0.008	0.036
Dummy:						
Mother's Headship	-0.129	-0.020	0.149	0.009	-0.024	0.016
Co-Residence with Wife's Parents	-0.010	-0.012	0.022	0.000	-0.001	0.001
Urban	-0.001	-0.006	0.008	0.002	-0.019	0.018
Observations		2082			2092	

The sum of the marginal effects of each variables should be equal to zero. However, some do not add up due to rounding.

TABLE 6: Descriptive Statistics of the Variables Used in the Three-Stage Least Squares Time Use Estimation

	Working Sample		Nonworking Sample	
Variables	Mean	SD	Mean	SD
Dependent Variables:				
Recreation	3.038	2.176	5.878	2.891
Child Care	1.015	1.303	2.544	2.584
Household Chores	3.714	1.954	6.535	2.215
Tending	0.247	0.531	0.400	0.799
Working at Home	2.841	3.975		
Working Outside of Home	5.084	4.878		
Explanatory Variables:				
Age	37.926	5.898	37.578	6.052
No Education	0.016	0.126	0.027	0.163
Number of Maids	0.141	0.466	0.064	0.271
Age of the Oldest Child	15.591	4.727	15.334	4.801
Nuclear Family	0.676	0.468	0.723	0.448
Mother is the Household Head	0.044	0.205	0.047	0.213
Number of Rooms	2.806	1.240	2.664	1.224
Nonlabor Income	10787	35619	14441	42863
(Predicted) Wage	4.465	0.420		
Full Limitation due to Health Problems	0.003	0.058	0.005	0.074
No Limitation due to Health Problems	0.972	0.165	0.961	0.195
Travel Time	0.213	0.354		
Probability of Husband Having the Final Decision over Wife's Travels	29.909	7.825	29.822	7.696
Probability of Wife Autonomously Deciding on Hiring Household Help	19.403	8.364	18.349	8.006
Probability of Husband Deciding how Wife's Money Should be Spent	2.495	1.265	2.433	1.348
Mills	0.508	0.128	-1.097	0.190

TABLE 7: Wife's Time Use: Working Sample, Corrected for Sample Selection

	Recreation	Child Care	Household Chore	Tending	Working at Home	Working Outside Home
Age	0.023**	-0.028*	0.010**	0.010*	-0.030**	0.031**
	(0.014)	(0.008)	(0.012)	(0.003)	(0.023)	(0.027)
No Education	-0.790	-0.220	0.230	-0.171	0.941	0.180
	(0.499)	(0.281)	(0.431)	(0.119)	(0.851)	(0.974)
Number of Maids	0.427*	0.057	-0.861*	-0.050	-0.287	0.775*
	(0.147)	(0.083)	(0.127)	(0.035)	(0.251)	(0.287)
Age of the Oldest Child	0.038**	-0.024**	-0.035**	-0.010**	0.044	0.011
	(0.017)	(0.010)	(0.015)	(0.004)	(0.029)	(0.034)
Nuclear Family	-0.244***	-0.088	0.485*	0.047	0.074	-0.204
	(0.145)	(0.082)	(0.126)	(0.035)	(0.248)	(0.284)
Mother is the Household Head	-1.518*	0.612*	-0.044	0.159	1.923*	-1.348***
	(0.424)	(0.238)	(0.366)	(0.101)	(0.722)	(0.826)
Number of Rooms	-0.041	-0.021	0.093**	0.038*	-0.042	-0.073
	(0.055)	(0.031)	(0.048)	(0.013)	(0.094)	(0.108)
Nonlabor Income	0.000*	0.000	0.000	0.000	0.000	0.000**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
(Predicted) Log Wage	-0.628*	-0.097	-0.060	-0.072***	0.558***	0.659***
	(0.182)	(0.102)	(0.157)	(0.043)	(0.310)	(0.355)
Full Limitation due to Health Problems	0.667	-0.546	-0.167	1.049*	-1.441	-0.114
	(1.134)	(0.638)	(0.979)	(0.270)	(1.933)	(2.213)
No Limitation due to Health Problems	0.129	-0.356	0.803**	0.114	-0.186	-0.484
	(0.401)	(0.226)	(0.346)	(0.096)	(0.684)	(0.783)
Travel Time	0.043	-0.513*	-1.195*	-0.180*	-4.511*	6.896*
	(0.177)	(0.100)	(0.153)	(0.042)	(0.302)	(0.346)
Mills	-1.304**	3.771*	-0.569	0.650*	0.290	-4.170*
	(0.522)	(0.293)	(0.450)	(0.124)	(0.889)	(1.018)
Probability of Husband Having the Final Decision over Wife's Travels	-0.001	-0.008	-0.018**	-0.002	0.007	0.026
	(0.010)	(0.006)	(0.009)	(0.002)	(0.017)	(0.020)
Probability of Wife Autonomously Deciding on Hiring Household Help	0.032**	-0.022*	-0.016	-0.004	-0.063*	0.071*
	(0.013)	(0.007)	(0.011)	(0.003)	(0.021)	(0.025)
Probability of Husband Deciding how Wife's Money Should be Spent	-0.139**	-0.042	-0.073	0.057*	0.241**	-0.161
	(0.056)	(0.032)	(0.049)	(0.013)	(0.096)	(0.110)
Constant	4.913*	2.274*	4.430*	-0.211	2.187	0.552
	(1.053)	(0.592)	(0.909)	(0.251)	(1.795)	(2.055)
R^2	0.06	0.17	0.13	0.10	0.18	0.29
Observations	1185	1185	1185	1185	1185	1185

Figures in parentheses are standard errors.
*/**/***Significant at 1/5/10 percent level.

TABLE 8: Unitary Testing: Working Sample, Corrected for Sample Selection

	Recreation	Child Care	Household Chores	Tending Tending	Working at Home	Working out of Home	Overall
Recreation	15.99 (0.000)	21.11 (0.000)	17.35 (0.002)	36.78 (0.000)	28.24 (0.000)	28.73 (0.000)	66.71 (0.000)
Child Care		5.59 (0.061)	6.91 **(0.141)**	25.82 (0.000)	12.7 (0.013)	28.23 (0.000)	55.48 (0.000)
Household Chores			1.36 **(0.508)**	23.16 (0.000)	14.5 (0.006)	22.43 (0.000)	45.79 (0.000)
Tending Garden/Animals				20.3 (0.000)	25.61 (0.000)	42.62 (0.000)	44.01 (0.000)
Working for Pay at Home					7.73 (0.021)	21.41 (0.000)	21.41 (0.000)
Working for Pay Outside Home						21.19 (0.000)	21.19 (0.000)

Figures in parentheses are p-values. Figures above the parentheses are Chi^2.
Null hypothesis being tested is $\psi_1 = \psi_2 = \psi_3$.

TABLE 9: Testing for Pareto Efficiency: Working Sample, Corrected for Sample Selection

	Child Care	Household Chores	Tending Tending	Working at Home	Working out of Home	Overall
Recreation	4.87 (0.18)	5.25 (0.15)	5.48 (0.14)	5.37 (0.15)	6.74 **(0.08)**	13.61 (0.26)
Child Care		2.23 (0.53)	2.88 (0.41)	5.50 (0.14)	3.64 (0.30)	9.59 (0.39)
Household Chores			2.91 (0.41)	6.06 (0.11)	3.74 (0.29)	8.54 (0.29)
Tending				6.19 **(0.10)**	3.74 (0.29)	7.43 (0.19)
Working for Pay at Home					5.40 (0.14)	5.40 (0.14)

Figures in parentheses are p-values. Figures above the parentheses are Chi^2.
Null hypothesis being tested is $\psi_1/\psi_2 = \psi_3/\psi_2$.

TABLE 10: Wife's Time Use: Nonworking Sample, Corrected for Sample Selection

	Recreation	Child Care	Household Chores	Tending Garden/Animals
Age	0.038***	-0.052**	0.043**	0.006
	(0.023)	(0.020)	(0.019)	(0.007)
No Education	0.191	-0.158	-0.101	0.129
	(0.610)	(0.537)	(0.496)	(0.175)
Number of Maids	0.130	0.831**	-0.630**	-0.088
	(0.373)	(0.328)	(0.303)	(0.107)
Age of the Oldest Child	0.095*	-0.078*	-0.015	0.011
	(0.030)	(0.026)	(0.024)	(0.008)
Nuclear Family	-0.287	-0.295	0.498*	0.070
	(0.231)	(0.203)	(0.187)	(0.066)
Mother is the Household Head	-1.336***	-0.023	0.703	0.597*
	(0.686)	(0.603)	(0.557)	(0.197)
Number of Rooms	-0.141***	0.076	0.105	0.057**
	(0.084)	(0.074)	(0.068)	(0.024)
Nonlabor Income	0.000*	0.000**	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Full Limitation due to Health Problems	4.055*	0.771	-3.934*	-0.131
	(1.412)	(1.242)	(1.147)	(0.406)
No Limitation due to Health Problems	-0.339	0.763[a]	0.316	0.109
	(0.536)	(0.472)	(0.436)	(0.154)
Mills	-5.337*	5.672*	-1.544*	0.630*
	(0.541)	(0.476)	(0.440)	(0.155)
Probability of Husband Having the Final Decision over Wife's Travels	0.016	-0.010	0.006	0.000
	(0.017)	(0.015)	(0.014)	(0.005)
Probability of Wife Autonomously Deciding on Hiring Household Help	0.050**	-0.009	-0.042**	-0.013**
	(0.021)	(0.018)	(0.017)	(0.006)
Probability of Husband Deciding how Wife's Money Should be Spent	-0.136***	-0.051	-0.050	0.131*
	(0.081)	(0.071)	(0.066)	(0.023)
Constant	-3.112*	11.797*	3.304*	0.328
	(1.281)	(1.126)	(1.041)	(0.368)
R^2	0.19	0.22	0.09	0.13
Observations	737	737	737	737

Figures in parentheses are standard errors.
*/**/***Significant at 1/5/10 percent level.

TABLE 11: Unitary Testing: Nonworking Sample, Corrected for Sample Selection

	Recreation	Child Care	Household Chores	Tending	Overall
Recreation	7.7	13.95	17.79	46.25	66.29
	(0.02)	(0.01)	(0.00)	(0.00)	(0.00)
Child Care		0.33	11.9	40.81	54.32
		(0.85)	(0.02)	(0.00)	(0.00)
Household Chores			10.92	51.78	51.78
			(0.00)	(0.00)	(0.00)
Tending Garden/Animals				39.99	39.99
				(0.00)	(0.00)

Figures in parentheses are p-values. Figures above the parentheses are Chi^2.
Null hypothesis being tested is $\psi_1 = \psi_2 = \psi_3$.

TABLE 12: Testing for Pareto Efficiency: Nonworking Sample, Corrected for Sample Selection

	Child Care	Household Chores	Tending	Overall
Recreation	2.58	3.64	7.03	10.50
	(0.46)	(0.30)	**(0.07)**	(0.16)
Child Care		1.00	5.19	6.88
		(0.80)	(0.16)	(0.23)
Household Chores			5.92	5.92
			(0.12)	(0.12)

Figures in parentheses are p-values. Figures above the parentheses are nonlinear Chi^2.
Null hypothesis being tested is $\psi_1/\psi_2 = \psi_3/\psi_2$.