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The influence of living with parents on women's decision making participation in the household: Evidence from the Southern Philippines

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Evidence from the Southern Philippines

This paper analyzes the dynamics of women's participation in the decisions made in the household by looking at the effects of events that transpired in the recent period. Results suggest that the wife's participation status is positively affected by the presence of parents, either hers or the spouse', in the household. Results also show that the wife's parents significantly affect participation in minor issues while the spouse's parents significantly affect the more relevant financial issues. The paper also offers a cursory discussion on the role of household headship.

I. Introduction

While empirical research explaining women's participation in household decision making abound, studies done along these lines remain relatively scant in the Philippines. Some inquiries have already been done by Bayudan (2006), Morgan, Stash, Smith and Mason (2002) and Hindin and Adair (2002), but these studies are based on cross section data and are therefore mainly concerned with the determinants of women's role in the household. In recent years, dynamic analyses have been at the forefront of understanding social issues such as poverty. An analysis is yet to be done on the dynamics of intrahousehold decisions, however.

While the scope for policy intervention is not as big as in the case for poverty, understanding the nature of events that potentially affects the chances of gaining foothold on household decisions is an interesting research in its own right. First, at the macroeconomic level, the Philippines is committed to the Millennium Development Goal of gender equality. Based on the 2006 Human Development Report, the country's Gender Development Index and Gender Empowerment Measure have improved between 2002 and 2004. While this is encouraging, the report has acknowledged that these do not necessarily translate to improvements in women's roles and status. Since these indicators are highly aggregated, dynamic studies conducted at the household level will provide complementary perspectives concerning the status of women. Second, to the extent that the well being of women affects the welfare of children, a serious analysis of situations that affect women's roles in the household is considered vital in understanding how children's welfare can be improved.

The paper aims to examine the determinants of the Filipinas' participation in household decision making domains. This will be done using the Cebu Longitudinal Health and Nutrition Survey (CLHNS), a panel dataset that has been collected in the Southern part of the Philippines. Cebu is included in the Central Visayas (RegionVII) and poverty statistics computed by the National Statistical Coordination Board indicate that the poverty incidence for the years 1997, 2000 and 2003 are 30, 32 and 24 percent, respectively. These are slightly higher compared to the overall poverty incidence in the country at 28, 28 and 25 per cent. However, among the Visayas regions, Central Visayas has the lowest poverty incidence. Western Visayas (Region VI) has 37, 37 and 32 per cent and Eastern Visayas (Region VIII) has 40, 38 and 36 per cent.

Some correlates of poverty at the household level are presented in table 2a in the on-line appendix. Figures indicate that the average wife's educational attainment in the CLHNS samples

is at the primary level although the proportion of women with this level of education has decreased overtime. Similar trends can be observed for Central Visayas in the Demographic and Household Survey (DHS), a survey data conducted at the national level. While most of the CLHNS samples have listed well water as the main water supply, well water users have decreased from 1998 to 2002. Many CLHNS households use toilet pit latrine while many DHS samples use flush toilet. The proportion of households with electricity is higher in the CLHNS than in the DHS, however. Similar observations can be said about the ownership of television, refrigerator and bicycle and the proportion of CLHNS households with these durable goods are increasing overtime.

Background on marriage and family formation in the Philippines
The interplay of various factors has shaped the Filipina's role in the family and society today. Prior to the Spanish colonization, customary laws in the Philippines have established gender equality and have given women the right to own and inherit property and engage in trade (Medina, 2001). The country's laws on marriage and family reflect Spanish influences, the most pervasive of which are the Catholic teachings. Divorce is not allowed since marriage is taught to be a sacrament and the family is considered to be the most basic institution. Social norms are against cohabitation, premarital sex and prenuptial childbearing. Children born outside of marriage will not undergo baptism, another sacrament, unless parents go through counseling. Intra – familial marriages up to the fourth degree are not allowed in the Philippines. Compared to South or East Asian countries where joint or stem family household is idealised, conjugal household is emphasised in the Southeast Asian nations (Mason, 1997). The law also stipulates that all properties acquired during the course of marriage are jointly owned by both husband and wife. Women are therefore protected from sudden poverty in cases of unfortunate events such as loss of a husband or marriage breakdown.

Partly due to customary laws and the widespread influence of Catholic teachings on family laws and social norms, women in the Philippines have greater autonomy compared to women from the rest of Asia. Although some studies claim that the Filipinas are still afforded lower social status despite favorable social norms (Williams and Domingo, 1993), increasing evidence in recent years point to the Filipinas gaining a foothold in the majority of household decision making domains (Upadhyay and Hindin, 2007; Hindin and Adair, 2002).

The church teaching that wives should obey their husbands also finds its way to how household headship is determined. Males are typically viewed as the heads of the family in line with "the husband is the pillar and the wife is the light" roles. Unless clarified by the enumerator, respondents would typically designate male members as heads in surveys. In this sense, the assignment of headship is somewhat nominal. Some would equate headship to the ability to provide for the family.

Literature on women's status in the household
While there is a substantial literature on women's status, issues pertaining thereto are usually discussed either within the context of region or religion. This is because women's autonomy, and possibly the lack thereof, is often associated with the prevailing social system and norms that are shared by nations in similar geographic locations. Studies on women's autonomy and its effect on outcomes concerning women are mostly conducted using South Asian data.[1] There are also

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[1] See for example, Jejeebhoy (1991), Vlassof (1991), Murthi, Guio and Dreze (1995), Dharmalingam and Morgan (1996) and Bloom, Wypij and das Gupta (2001) for India, Balk (1994) and Schuler and Hashemi (1994) for Bangladesh and Jejeebhoy and Sathar (2001) for Pakistan). Results from these studies indicate that women's high status in the household, regardless of how it is measured, has positive effects on women's involvement in reproductive decisions.

studies done within the context of religion, social and cultural structure. Kinship (Dyson and Moore, 1983), patriarchy (Malhotra, Vanneman and Kishor, 1995), changes in the household organizations and women's socioeconomic status (Gage, 1995; Hogan, Bernahu and Hailemariam, 1999) are found to affect fertility and contraceptive use.[2] A number of studies on the effect of women's status on children's health outcomes have also been written in the recent years (Hindin and Adair, 2000; Simon *et al*, 2002).

There are very few researches that provide empirical substantiation on women's status in the Philippines (Morgan *et al.* (2002) within the context of religion; Hindin and Adair (2002) for intimate partner violence; Bayudan (2006) for time allocation). These studies have shown that woman's autonomy has a positive effect on the outcomes being studied. However, such researches are done using cross section data, which is deficient in understanding household processes and events that are typically dynamic in nature. For example, a breakdown of family ties, such as divorce, is a household reality that may happen due to the confluence of factors and events that happen over time. Assuming away strong tendencies towards norms such as those imposed by patriarchal culture, intrahousehold gender relations are results of interactions over a long period of time that reveal the preferences of husbands and wives and enhance the symmetry of information available to them.[3]

Using recent CLHNS datasets, the effects of attributes and changes in these attributes are analyzed with a particular focus on the effects of the changes in demographic composition. While some studies (Bloom *et al*, 2001; Jeffery *et al*, 1988) find that women's status in India are enhanced by their proximity to their natal kin, our results indicate that the presence of both the parents and parents-in-law in the Southern Philippines' household is a positive factor on women's participative and interactive role. This is explained within the context of norms on family formation and filial support.

This paper is organised as follows: Section two discusses the empirical strategy in terms of data source and estimation issues and methods. This section also discusses several aspects of intrahousehold decisions, variable definitions, notational conventions and data limitations. Section three provides some trends in household decision making. Section four discusses the results. Tthe last section concludes.

II. Empirical strategy
Data source, sample and limitations
The paper will use the Cebu Longitudinal Health and Nutrition Survey (CLHNS), a dataset collected in the Southern Philippines.[4] Anticipating the data requirement, the paper will use the

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[2] The influx of studies in a recurring theme of fertility outcomes is due to the desire to curb poverty in LDCs by reducing the population growth rate. Where women exert control in the conduct of their lives, they have the power to influence fertility as well (Jejeebhoy, 1991; Balk, 1994; Abadian, 1996; Dharmalingam and Morgan, 1996).

[3] This line of inquiry is stressed in bargaining models found in Fortin and Lacroix (1997) and Browning and Chiappori (1998) where household relations are analyzed within a repeated and cooperative bargaining framework. Within this context, the empirical literature has used sex ratio and divorce laws (Chiappori *et al,* 2002), asset ownership and property rights (Quisumbing and Maluccio, 2003) and human capital brought to marriage (Browning *et al.*, 1994; Aronsson, 2001; Vermeulen, 2005) as measures of bargaining power. The general findings emphasise the role of individually assigned assets on the women's ability to participate on household outcomes.

[4] See appendix I for further information on the survey data.

2002 and 2005 data on the intrahousehold issues even though most of these are also collected in the 1994 survey wave. This makes the dataset semi longitudinal and this possibly deprives the analysis of other explanatory variables which can be found in the earlier surveys. However, there are some plausible reasons for the exclusion of the 1994 survey. First, a temporal difference of eight years is quite long. An employed husband in both 1994 and 2002 could have been moving in and out of the work force within the period. To the extent that husband's employment status affects the wife's participation in intrahousehold decisions, the dynamics that has taken place in between is an important element for analysis but is unfortunately unobserved. Second, the context in which the 1994 issues are decided on could have drastically changed overtime. For example, the purchase of major appliances in recent periods has become easier due to deferred payment schemes over a long period of time with low or zero penalties, a practice that has not yet substantially proliferated in the early 1990s. With these promotions, couples are likely to agree on the purchase and both husband and wife will be recorded as the final decision makers. To bypass this concern, the study is therefore limited to recent periods when the context remains more or less similar. Samples are also selected such that the issues are decided on both periods to create a balanced panel data.

Areas of intrahousehold decisions, variable definitions and some notations
At the core of the CLHNS module are information on how intrahousehold issues have been handled and resolved. The wife is the respondent in the said module. Issues included are the purchase of shoes for herself, clothes for the children, gifts for relatives, land and major appliances, what school the children should go to, whether to consult the doctor for a sick child, what family planning method to use and how to spend her money. For each of these issues, the following question is asked: *Has the respondent/household ever made decision on (issue)?*This is answerable by either yes or no. The wife is then asked *Whose decision on (issue) prevailed*?The respondent will then identify the person that becomes the final decision maker. The issue on the control over household money is taken from the question *Who would respondent say really controls the money that they have as a couple?* For the estimation below, the responses are coded *P* when the final decision rests on either the wife alone, the wife and the husband *or* the wife and other family members and *N* when the final decision rests on either the husband alone *or* the husband and other family members.

For the husband's income remittance, the wife is asked *If respondent's spouse is working, does he give respondent the money he earns*?The wife then answers either no or yes (all) or yes (proportion). For estimation purposes, the response is coded *P* when the answer is yes (regardless whether full or partial remittance) and *N* when the answer is no.

Throughout the text, *t* refers to the year 2002 and *t+3* refers to the year 2005.

Estimation method and data set up
Logit regression is used to analyze the effects of *personal and household attributes* on women's participation in the household decision making. The Logit model is based on the cumulative logistic probability function given by $F(\alpha + \beta X_i) = \dfrac{1}{1 + e^{(-(\alpha + \beta X_i))}} = p_i$, where $e(\cdot)$ is the exponential function. The odds ratio is then given by $\dfrac{p_i}{1 - p_i} = \dfrac{1}{e^{(-(\alpha + \beta X_i))}} = e^{(\alpha + \beta X_i)}$. Taking the logs of both sides yields the log of odds ratio, $\log\left(\dfrac{p_i}{1 - p_i}\right) = \alpha + \beta X_i$. Following Antolin *et al.*

(1999), probabilities from the Logit regression estimates is computed as $\Delta \log\left(\dfrac{p_i}{1-p_i}\right) = \beta_{X_i}$

where $\Delta \log\left(\dfrac{p_i}{1-p_i}\right) \approx \left(\dfrac{1}{p_i} + \dfrac{1}{1-p_i}\right)\Delta p_i = \left(\dfrac{1}{p_i(1-p_i)}\right)\Delta p_i$ and p_i is the probability of being in the a participant state when all the dependent variables are set to zero and is computed as $p_i = \dfrac{e^{-\beta_{\text{int ercept}}}}{1+e^{-\beta_{\text{int ercept}}}}$. To facilitate the empirical exercise, the dependent variables for the Logit regressions are binary indicators that are coded P and N for each of the issue discussed above.

The Logit regression is widely used for analyzing poverty and income dynamics such as those found in Jarvis (1997), Jenkins (2002) and Finnie and Sweetman (2003). Assuming proper data set up, the entry to and exit from a particular state are analyzed by limiting the sample to relevant cohorts. Given the paper's objective of identifying events that lead to changes in the state of the woman's participation in the resolution of intrahousehold issues, logit regression would have been a suitable method. However, preliminary data analysis indicates that only a small portion of the sample remains when the relevant cohorts for the analysis of entry or exit are considered for balanced panel data. Due to these restricted samples, the preliminary maximization of the likelihood function using Logit regression always fails. The Multinomial Logit model is therefore used to analyze the effects of *changes in personal attributes and events* on the probability of being in a particular state of decision making participation. Given the data, the following discrete nominal outcomes are created: 0, not part of the final decision makers in both periods; 1, part of the decision maker at time *t* but not at time *t+3*; 2, not part of the decision makers at time *t* but part at time *t+3*; 3, part of the decision makers in both periods. The probability that the wife is in a particular state is given by $p_{ij} = p(state = j) = \dfrac{e^{\beta X_{it}}}{1+\sum\limits_{k=1}^{3} e^{\beta X_{it}}}$ for $j = 0,1,2,3$.

While other estimators for discrete outcomes are available like the Ordered Probit to understand wife's autonomy in the Philippines (see for example Bayudan, 2006), the Multinomial Logit is more appropriate since the data are extracted from the module that does not ask the respondents for rankings in relation to their preferences on how various decisions are made. Instead, respondents are asked if the issue has been decided in the household and if it is, who are the decision makers and whose decision ultimately prevails. Based on these information, it is not easy to assume that wives will have a higher utility from being in state $j = 3$ than in $j = 2$ since there are issues for which the wife or the other major household decision maker may be indifferent to. Husbands may not be part of the decision making on issues such as buying gifts for relatives or items for the children because the wives typically have the better information on preferences, availability of the merchandise and local prices.

Aggregate measures pertaining to household issues are also constructed using the score generated by the principal component analysis (PCA). The PCA score is generated using all the issues enumerated above. PCA scores are also generated for three categories: *minor* issues consisting of buying shoes for herself, clothes for the children and gifts for the relatives, *major* issues including where to send the child for school, seeing a doctor for a sick child, what family planning method to use, buying land and major appliances and *finance* composed of issues such as husband's income remittance, the decision makers on her earnings and who controls the household money. A binary variable is then created equal to 1 (P) if the PCA score is greater than zero to represent

high participation in household decision making and 0 (N) otherwise. Similar to the construction above, The values of the dependent variable in the Multinomial Logit are based on the following combinations, namely, 00 (NN), 10 (PN), 01 (NP) and 11 (PP) at time t and $t+3$ for $j = 0,1,2,3$, respectively.

Endogeneity of work status and living arrangements
In the literature of wage and income inequality, studies by Heckman (1976) and Behrman and Wolfe (1984) indicate that women's labor force participation is affected by personal attributes and social roles and is therefore treated as an endogenous variable. Within the context of the current research, treating the work status of both husband and wife as endogenous is also a necessary step to avoid the sample selection bias introduced by the fact that the unobservable attributes determining labor force participation may also determine the propensity to participate in household decision making.To do this, the presence of a baby in the household is used as an instrumental variable. Following the literature on the use of instrumental variable technique (see for example Beegle *et al.*, 2004), the validity of the instrument depends on its relevance (induces variation in the labor force participation), its exogeneity and the validity of imposed exclusion restrictions (affects intrahousehold issues only through labor force participation).[5] As shown in table 3a in the on-line appendix, results indicate that the baby's presence does not have a significant effect on 2005 outcomes such as wife's headship, household income and the presence of parents/parent/s-in-law in the household. The presence of a baby three years earlier does not significantly affect intrahousehold issues in 2005 as well. These evidence provide empirical support for the validity of the presence of a baby as a plausible instrument for labor force participation.

Living arrangements with parents can be an outcome of household decision making as well. To check for the correlation of the residuals of the household issue and the presence of parents in the household, the conditional mixed process in Stata is used.[6] As shown in table 4a in the on-line appendix, the correlation coefficients are not statistically significant in almost all of the household issues considered. These indicate that the unobserved attributes that determine the wife's participation in household issues are not related to the unobserved characteristics governing the presence of either the wife's or spouse's parents in the household. This allows us to use the uninstrumented presence of the wife's and the spouse's parents as explanatory variables in the estimation below.

III. Trends
Decision makers in 2002 and 2005
Table 5a in the on-line appendix tabulates the distribution of decision makers in 2002 and 2005 by household issues. The following notations are adopted: W for the wife, S for the spouse or other household members, C for both wife and spouse and Z for wife and others. Pairwise combinations are formed, with the first letter representing the decision makers in 2002 and the second representing the decision makers in 2005.

Figures in table 5a indicate that a large sample of wives participate in minor issues, either as participants in both years or in collaboration with the spouse or other household members. The distribution of decision makers with respect to major issues is more dispersed, though. For issues

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[5] Discussion of the plausibility of the presence of a baby in the household can be found in appendix III.

[6] This is an estimator that allows the simultaneous estimation of equations with different types of dependent variables (i.e. dichotomous, continuous).

such as children's school, doctor consultation and family planning method, a large portion of the wives have indicated to be the sole decision makers for both periods (WW). Although collaboration in both years (CC) appears to be the practice of five to nine per cent of the sample, there is a shift towards a collaborative decision making between husband and wife in the recent year. With the husband, the wife or others as the sole decision maker in 2002, around 21 per cent have indicated that issues are decided by both husband and wife in 2005 (WC and SC combinations). In the recent year, around 15 to 18 percent of wives are accounted for by SW and CW combinations.

For the purchase of land or major appliances, a small percentage of wives are the sole final decision makers in both periods. While 26 to 27 per cent of the sample manifests joint decisions, the percentage of wives who indicated collaboration with husbands on the purchase of big ticket items in both periods is around eight to 12 per cent. Around 16 per cent indicated that the spouse is the sole decision maker in the purchase of appliances and 20 per cent for the purchase of land. 13 to 15 per cent of the samples have indicated that they became the sole decision maker only in the recent period.

Looking at financial issues, a very large portion of the wives have exercised full control of earnings. Half of the sample also indicated they have the full control over the household income in both periods while around 14 per cent has shifted to joint control of income in 2005. In terms of husband's remittance of earnings, 60 per cent of the sample indicated that they received their husband's earnings in full, 14 per cent indicated a downgrade of remittance either from full to partial or partial to none and 13 per cent indicated an upgrade either from partial to full or none to full.

Rates of Exit from and entry to participation state
Table 5b in the on-line appendix shows the entry and exit rate. Entry to participation state is computed as the number of women who are nonparticipants in 2002 but are participants in 2005 divided by the number of participant women at 2002. The exit rate from participation state is computed as the number of participant women in 2002 but not in 2005 divided by the number of nonparticipant women in 2002.

Results indicate that for individual issues, the entry rate is higher except for the purchase of children's clothes and is substantially higher with respect to the purchase of big ticket items.

Entry and exit rates are also computed for aggregate indicators based on the principal component analysis. The entry rate is higher than the exit rate except for the issue of finance and is substantially higher for major issues.

Attributes, events and status of participation
From table 5c in the on-line appendix, figures indicate that most of the samples are from the city and regardless of urbanity, there is a higher percentage of women who are in the NP state compared to the PN state for all issues. Majority of wives are younger than their husbands. There is a higher percentage of wives in the NP state with respect to major issues while on the issue of finance, there is a higher percentage of wives in the PN state. In addition, more than half of the sample consists of women whose educational attainment is either at the elementary or high school level. A similar trend can be observed regarding the spouse's educational attainment. Regardless of the spouse' educational attainment, there is a higher percentage of wives in the NP state for major issues while there is a higher percentage of wives in the PN state on the issue of finance.

There are relatively more wives whose parents' educational attainments are either at the elementary or high school level. Regardless of the parent's educational attainment, there is a higher percentage of wives in the NP state on major issues while there is a higher percentage of wives in the PN state on the issue of finance.

Majority of households in the sample has not experienced changes in household headship over the two year period and the husband headship is the predominant structure. For those who experienced a shift to husband headship, there is a higher percentage of women to be in the NP state for major issues. Changes in the working status of both husband and wife have shown interesting patterns as well. Compared to PN, there is a higher percentage of women in the NP state when they moved from nonworking to working status for minor and major issues while higher percentage of women are in the PN state when there is no change in their labor market participation. Whether the husband has become employed or unemployed in 2005, there is a higher percentage of women in PN for the issue of finance.

Majority of the households do not live with the wife's parent/s. However, there is a higher percentage of women in the NP state when their parent/s live with them in both periods for all and major issues. For women whose parents have moved out in 2005, there is a higher percentage of women in the PN on major issues and the issue of finance. Similarly, majority of the households do not live with the husband's parent/s in both periods but for those who do, there is a higher percentage of women in the NP state. When the parent/s-in-law moved out in 2005, there is a higher percentage of women in the PN for all issues except the major ones.

IV. Results and discussion
Specific household issues: effects of attributes
The probabilities based on the Logit regression estimates are reported in panel 1 of table 1. Using uninstrumented work status, results indicate that working increases the probability of participating in all issues considered except family planning method. It has the biggest effect on the issue of purchasing major appliances. On the other hand, the husband's work status decreases the chances of the wives' participation in issues such as child' school, doctor consultation for sick child, purchase of land and hiring of household help.

As presented in panel 2 of table 1, results based on instrumented work status[7] indicate that the high probability of a working wife does not have a statistically significant effect on participation in intrahousehold issues considered except for school choice. While the effect of the husband's work status remains negative, it is lower than the effect of the uninstrumented work status. To the extent that people's leadership qualities increase the chance of labor market participation and these uncontrolled attributes are the same characteristics that determine their ability to participate in household issues, uninstrumented work status is expected to have a larger effect than the one estimated with instruments. This result is in line with Horowitz and Wang (2004). Figures also indicate that the levels of statistical significance or signs corresponding to the other explanatory variables are not affected by the use of the instrumented work status. The magnitude of the probabilities is not significantly altered as well. These reinforce the validity of the instrument used. To the extent that the presence of a baby in the household positively affects the presence of

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[7] A Probit regression on the wife's labor force participation is run against the dummy for the presence of a baby in the household, occupation dummies and highest grade completed of her mother and occupation dummies and highest grade completed of her father. Similar set of variables pertaining to the husband's parental attributes are also used for the husband's labor force participation. The probabilities of positive outcomes are then predicted for both husband and wife.

the extended family, its effect is likely to be picked up by higher probabilities associated with the presence of wife or husband's parent/s in the household. Comparison of figures show that the difference in the probabilities ranges from zero to one per cent.

In addition, the effect of household nonwage income as proxy for household economic status is also explored but results shown in tables 6a to 6c in the on-line appendix, indicate that its effect is statistically insignificant and its exclusion from the set of explanatory variables does not lead to any material changes in the coefficients of the other independent variables. The subsequent discussions are therefore based on results pertaining to instrumented work status and without household nonwage income.

As shown in panel 2 of table 1, results indicate that the presence of the wife's parent/s in the household increases the probability of the wife deciding on issues such as child's school choice, doctor consultation for a sick child, purchase of big ticket items and remittance of husband's income. The presence of husband's parents in the household increases the probability of the wife as part of the final decision makers on issues such as doctor consultation and family planning method. The wife having higher educational attainment than the husband increases the probability of wife's participation in deciding on issues such as family planning method, purchase of big ticket items and control over the household money. The spouse or other household members as household head decreases the probability, on the other hand.

Panel 3 of table 1 explores the effects of gender and number mix of children in the household and its interaction with the presence of grandparents in the household. Compared to the results shown in panel 2 of table 1, panel 3 indicates that the presence of grandparents in the household does not have any significant effect on most of the intrahousehold issues. Similar observations can be said regarding the interactions of grandparents with the number of boys. The interaction of grandparents with the number of girls is significant only with respect to school and family planning method issues. With this caveat in mind, we compare the impact of the wife's parents with (panel 3) and without (panel 2) the interactions. Compared to panel 2, results in panel 3 show that the total effect[8] of the wife's parents is higher on the issue of sending a sick child to the doctor and on the purchase of land. Results in panel 3 also show that the total effect[9] of spouse' parents is higher on issues such as the school the children should attend to, family planning method and the control over household resources.

Overall indicator of participation in intrahousehold decisions: effects of attributes
Results on the Logit regression which is used to analyze the effects of personal and household attributes on aggregated indicators are presented in table 2. There are several points that can be noted. First, being in the labor market has no significant effect except on the issue of finance. Second, the presence of a wife's parent/s in the household has a significant effect on her chances to be part of decision making on minor issues while the presence of her parent/s-in-law increases her chances to decide on financial matters. The interaction between parents and the number of

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[8] Computed as the sum of the probabilities associated with woman's parents + woman's parents*number of boys + woman's parents*number of girls.

[9] Computed as the sum of the probabilities associated with spouse's parents + spouse's parents*number of boys + spouse's parents*number of girls.

children in the household has no significant effect on minor and major issues. With this limitation in mind, it can be observed that the total effect of the presence of both the wife's and spouse's parents in the household enhances the wife's participation in intrahousehold decisions. The total effects of the presence of the spouse' parents in the household are relatively higher, however. This disparity is six times higher when all issues are considered. On the issue of finance, the effect of the spouse's parents is 13 times higher than the effect of the wife's parents. Third, educational attainment is a positive factor. Fourth, the probability of wife's participation decreases when the spouse or other household member is the household head. However, other household member as head decreases the chances of the wife's participation in all and major issues and finance by around twice and on minor issues by thrice the decrease in probability as when the spouse is the head.

Overall indicator of participation in intrahousehold decisions: effects of events or changes in attributes
To analyze the effects of events or changes in the attributes on state of the wife's decision making participation, the marginal effects from the Multinomial Logit estimates are computed and presented in table 3. The events analyzed are changes in the presence of parent/s or parent/s-in-law in the household, changes in household headship and increases in the number of boys and the number of girls in the household. Dummies for high probability of being in the labor market, wife's educational attainment in relation to her husband's and urbanity are also included as additional explanatory variables. High probability of working is set so that the predicted value from the Probit regression on the labor force participation is at least 80 per cent.

Conditional on the probability of labor force participation, the disparity between couples' educational attainment and urbanity, several results can be noted with respect to the results in *all* issues. First, the presence of the wife's parent/s in period *t+3* has a positive effect on her participation. This is indicated by the increase in the likelihood of being in the PP by 31 per cent and by the likely decrease of being in the PN state by 13 per cent. The presence of the wife's parents in both periods is likely to increase being in the PP state by 19 per cent and to decrease being in the NN state by 15 per cent. The presence of her parent/s-in-law also enhances her participation as indicated by the 25 per cent chance of moving from nonparticipation to participation state and by the 22 per cent decrease in being a nonparticipant in both periods. Second, the change in headship in favor of either the wife or her spouse has a positive effect on maintaining the status quo of participation. Third, an increase in the number of daughters in the households does not have any significant effect on any of the participation states while an increase in the number of sons increases the chances of being in the PP state.

Disaggregation of the issues into minor, major and finance indicates that the trends observed above also hold true. First, the presence of the wife's parents in *t+3* reinforces while the presence of the husband's parents in *t+3* improves the wife's decision making participation. The reinforcing effect of the presence of the wife's parents is indicated by the increase in the probability of being in the PP state on major issues and finance when the woman's parent/s are in the household for both periods or when they joined the household in *t+3*. The improvement brought about by the presence of the husband's parents is indicated by the decrease in the probability of being in the NN or PN state when the husband's parent/s joined the household at *t+3*. Second, a change in the headship from others to the husband increases the wife's chances of being in the PP state for major issues while the wife as head at *t+3* decreases her chances of being in the NN state for major issues and finance. Third, an increase in the number of daughters does not have significant effect on all issues while an increase in the number of sons decreases the chances of the wife being in the PN state and increases her chance of being in the PP state for minor issues.

Based on the results above, the presence of the extended families enhances or reinforces the wife's participation in decision making in the household. Parents, being the authorities in years and experience in domestic matters, tend to enrich intrahousehold relationships by acting as a balancing element in the household. While the wife's high probability of labor market participation does not have a significant effect on her state of participation in the decision making, the husband's labor market participation and household headship in the recent year is a positive factor for the wife's participation in major issues.

V. Conclusion
The ability to participate in household decision making is an intrahousehold relation that not all women in the rest of the world enjoy. For the women in Southern Philippines, their domestic relations are enhanced by the household presence of either her parents or her parents-in-law. This is in sharp contrast to the experiences of other women in Asian nations where women leave their natal homes, join their husbands' family and face an already existing structure of authority and domestic relations. In some parts of South Asia, traditional practices such as dowry - giving (Jejeebhoy and Sathar, 2001) and closer ties with natal kin (Bloom *et al* 2001) positively affect women's household status.

The positive effect of both the parents and parents-in-law in the household is a robust result that we find using specific or aggregate measures of decision making participation and using attributes or changes in these attributes as explanatory variables. This result can be explained by the kinship structure, attitudes towards elderly, norms on filial support and on marriage formation in the Philippines. The Filipino family follows a bilateral kinship pattern with the nuclear family as the core unit and with relatives, friends, and neighbors as supporting units (Lopez, 1991). A newlywed couple is not expected to share the home of the husband's family and even if they do, it is mostly transitory mainly because it is an aspiration of every Filipino family to build a home of their own. Still, younger generations have the responsibility to provide support to the older generations. Retirement homes are almost non existent in rural areas. While some retirement institutions are established in urban areas, putting a parent in a retirement home is frowned upon in general. Given these, parents are the ones likely to join their children's homes and when they do, they will act as balancing elements to preserve their children's marriage rather than act as distortionary forces to a sacrament. This can be seen from the results where parents have positive effects on women's participation. In some results, the spouse's parents in the household have a higher effect on the wife's participation to decide on specific issues compared to the effect of the wife's parents. In addition, the wife's parents significantly affect minor issues while the spouse's parents significantly affect the more relevant financial issues.

There are no events or changes in attributes considered here that pose a significant barrier to women's participative and interactive roles in the household. While there is a general tendency to assume that the wife's participation in the labor market will have a positive impact on her intrahousehold relations by virtue of the fact that she brings financial resources to the household, results using the instrumented work indicator show that it does not have a significant effect on her state of participation to decide on issues except on the minor ones.

Headship change in favor of the spouse in the recent period has a positive effect on the wife's participation. This is in line with Bayudan (2006) who suggests that household heads facilitate communication and consolidate opinions as means for strengthening intrahousehold relationships. However, the analysis of the role of headship on women's status is cursory since the current data do not have adequate information on headship. In the absence of detailed basis on why and how household headship is determined, we largely assume that it is based on norms dictated by

religion or economic forces. Interesting results can be culled when the reasons behind the headship is taken into account. For example, does headship determined through the basis of financial contributions affect women's participation in the same way as when the basis is largely patrilineal or matrilineal succession?Understanding the forces that determine household headship can have significant contributions in understanding the dynamics of women's status in the household and is an interesting avenue for future research.

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Table 1: Effects of *attributes* on being part of the final decision making, Detailed household issues and using Logit regression

	Which school to send the child to	Whether or not to send the child to doctor when sick	What family planning method to use	When buying major appliances	When buying land	Say over husband's earnings	Control over the household money
Un instrumented work status							
Wife: working	0.05***	0.03**	0.01	0.15***	0.10***	-0.02	0.05
Spouse: working	-0.07***	-0.05**	0.00	-0.04	-0.06*	0.00	-0.08
Wife's parents in the house	0.11**	0.11***	0.03	0.12*	0.13**	0.08*	0.00
Spouse parent/s in the house	-0.01	0.08*	0.08*	-0.13*	0.00	0.06	-0.04
Wife education>spouse education	0.02	0.01	0.02	0.09*	0.10***	0.00	0.04
Wife education<spouse education	-0.09***	-0.05***	0.00	-0.04	-0.06*	0.05*	-0.01
Head: Spouse	-0.04	-0.05	-0.01	-0.19***	-0.15**	0.06*	-0.14
Head: Others	-0.21**	-0.19**	-0.09*	-0.35**	-0.27*	-0.10	-0.04
Number of Observations	2676	2676	2676	2676	2676	2196	2440
Log likelihood	-1229	-1050	-998	-1658	-1674	-1100	-1094
Wald chi2(17)	115	101	54.34	173	147	35	51
Prob > chi2	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Instrumented work status							
Wife: high probability of working	0.01	-0.01	0.00	0.03**	-0.01	0.00	-0.01
Spouse: high probability of working	-0.03*	0.01	0.01	0.03	0.01	-0.02	-0.02
Wife's parents in the house	0.10**	0.12***	0.03	0.13*	0.11*	0.07*	0.00
Spouse parent/s in the house	0.00	0.07*	0.08*	-0.11	0.01	0.07	-0.03
Wife education>spouse education	0.02	0.01	0.02	0.09*	0.10**	-0.01	0.04
Wife education<spouse education	-0.09***	-0.05***	0.00	-0.04	-0.06*	0.05**	0.00
Head: Spouse	-0.05*	-0.05*	-0.02	-0.16***	-0.21***	0.08**	-0.15
Head: Others	-0.23***	-0.19***	-0.09*	-0.35***	-0.46***	-0.12	-0.09
Number of Observations	2676	2676	2676	2676	2676	2196	2440
Log likelihood	-1262	-1071	-1017	-1713	-1718	-1111	-1117
Wald chi2(17)	110	100	58	164	152	39	33
Prob > chi2	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Instrumented work status with gender-number interactions							
Wife: high probability of working	0.01	-0.01	0.00	0.03*	-0.01	0.00	-0.01
Spouse: high probability of working	-0.03*	0.01	0.01	0.03	0.01	-0.02	-0.02
Wife's parents in the house	0.08	0.13	-0.06	-0.01	-0.09	0.14	-0.08
Spouse parent/s in the house	0.05	0.28*	0.17*	-0.08	0.00	-0.07	0.14
Wife's parents in the house*number of boys	0.00	-0.01	0.02	0.03	0.05	0.00	0.02
Wife's parents in the house*number of girls	0.02	0.02	0.04*	0.04	0.06	-0.04	0.02
Spouse' parents in the house*number of boys	0.02	-0.01	0.02	0.06	0.05	0.01	-0.04
Spouse' parents in the house*number of girls	-0.04	-0.07*	-0.05*	-0.07	-0.05	0.06	-0.03
Number of boys	0.02***	0.00	0.00	-0.01	-0.01	0.01	0.00
Number of girls	0.01	0.00	0.00	-0.02**	-0.02*	0.01	-0.01
Wife education>spouse education	0.03	0.01	0.02	0.09**	0.09**	-0.01	0.04
Wife education<spouse education	-0.08***	-0.06***	0.00	-0.04	-0.06*	0.05	0.00**
Head: Spouse	-0.05*	-0.05*	-0.01	-0.16**	-0.21***	0.08	-0.15**
Head: Others	-0.23***	-0.21***	-0.09*	-0.35***	-0.46***	-0.11	-0.09

Number of Observations	2676	2676	2676	2676	2676	2196	2440
Log likelihood	-1256	-1068	-1013	-1707	-1714	-1109	-1114
Wald chi2(23)	117	96	62	170	157	42	38
Prob > chi2	0.00	0.00	0.00	0.00	0.00	0.01	0.03

Note: Estimated with year and urban dummies. */**/*** significant at 10/5/1per cent level. Omitted category for the difference in the education between husband and wife is "wife education=spouse" education. Omitted category for the household headship dummy is "wife as head". The probabilities are computed based on the estimates of Logit regression and following Antolin *et al.* (1999).

Table 2: Effects of *attributes* on being part of the final decision making, Aggregated indicators based on the PCA of household issues and using Logit regression

	All issues	Minor issues	Major issues	Finance
Wife: probability of working	-0.03	0.00	-0.01	-0.02*
Spouse: probability of working	-0.01	-0.02	-0.01	-0.02
Wife's parents in the house	-0.2	0.11*	-0.02	-0.03
Spouse parent/s in the house	0.16	0.18	0.14	0.34*
Number of boys	0.00	0.03***	0.00	0.00
Number of girls	-0.01	0.01*	-0.01	0.00
Wife's parents in the house*number of boys	0.14**	0.00	0.05	0.03
Wife's parents in the house*number of girls	0.08**	0.00	0.04	0.02
Spouse' parents in the house*number of boys	0.02	0.01	0.06	-0.11**
Spouse' parents in the house*number of girls	-0.06	-0.06	-0.06	0.02
Wife education>spouse education	0.07*	0.05	0.08**	0.04*
Wife education<spouse education	-0.09**	-0.02*	-0.08***	-0.01
Head: Spouse	-0.21***	-0.03	-0.14***	-0.06
Head: Others	-0.41**	-0.13	-0.42***	-0.07
Number of observations	2032	2504	2506	2034
Log likelihood	-1329	-1510	-1702	-1043
Wald chi2(23)	130	64	160	35
Prob > chi2	0.00	0.00	0.00	0.05

Note: Estimated with year and city/municipality dummies. */**/*** significant at 10/5/1 per cent level. Omitted category for the difference in the education between husband and wife is "Wife education=spouse education". Omitted category for the household headship dummy is "wife as head". The probabilities are computed based on the Logit regression and following Antolin *et al.* (1999).

Table 3: Effects of *events/changes in atttributes* on the status of wife's participation to decision making, Aggregated indicators based on the PCA of household issues and using Multinomial Logit

	All issues				Minor issues				Major issues				Finance			
	N/N	P/N	N/P	P/P	N/N	P/N	N/P	P/P	N/N	P/N	N/P	P/P	N/N	P/N	N/P	P/P
No change, with Wife's parent/s	-0.15***	0.03	-0.07	0.19*	-0.07*	-0.05*	-0.05	0.16**	-0.07*	0.06	-0.13*	0.14*	-0.05	-0.03	-0.09**	0.17**
	(0.06)	(0.09)	(0.09)	(0.11)	(0.04)	(0.03)	(0.06)	(0.07)	(0.05)	(0.08)	(0.08)	(0.10)	(0.04)	(0.06)	(0.05)	(0.08)
With change, without Wife's parent/s now	-0.05	0.07	-0.09	0.07	-0.02	-0.03	-0.10*	0.15*	-0.05	0.15*	-0.02	-0.07	0.08	-0.02	-0.03	-0.03
	(0.08)	(0.11)	(0.10)	(0.11)	(0.06)	(0.04)	(0.05)	(0.08)	(0.06)	(0.11)	(0.10)	(0.10)	(0.09)	(0.07)	(0.07)	(0.12)
With change, with Wife's parent/s now	-0.08	-0.13***	-0.11	0.31**	-0.11***	0.01	-0.09	0.19**	-0.07	-0.13***	-0.16*	0.35***	-0.09***	-0.13***	-0.04	0.26***
	(0.10)	(0.03)	(0.13)	(0.15)	(0.03)	(0.06)	(0.07)	(0.10)	(0.08)	(0.03)	(0.11)	(0.12)	(0.03)	(0.03)	(0.09)	(0.10)
No change, with spouse' parent/s	-0.08	-0.01	0.21*	-0.12	-0.11***	0.00	0.13	-0.02	0.01	-0.02	-0.03	0.04	0.01	-0.02	0.18*	-0.17
	(0.10)	(0.11)	(0.15)	(0.12)	(0.03)	(0.06)	(0.12)	(0.13)	(0.10)	(0.10)	(0.12)	(0.13)	(0.10)	(0.10)	(0.14)	(0.15)
With change, without spouse' parent/s now	0.04	-0.01	0.00	-0.03	0.10	0.07	-0.11**	-0.06	-0.04	0.05	-0.03	0.01	-0.09***	0.05	-0.07	0.10
	(0.12)	(0.11)	(0.13)	(0.13)	(0.11)	(0.08)	(0.05)	(0.12)	(0.08)	(0.12)	(0.11)	(0.12)	(0.03)	(0.12)	(0.07)	(0.13)
With change, with spouse' parent/s now	-0.22***	0.05	0.25*	-0.09	0.02	-0.01	0.02	-0.03	-0.09	-0.13***	0.16	0.06	-0.09***	-0.13***	0.01	0.20*
	(0.04)	(0.16)	(0.19)	(0.16)	(0.12)	(0.08)	(0.12)	(0.16)	(0.09)	(0.03)	(0.17)	(0.17)	(0.03)	(0.03)	(0.13)	(0.14)
Number of boys in the household has increased in 2005	-0.03	-0.03	0.00	0.07*	0.00	-0.04**	-0.01	0.05*	-0.01	-0.02	0.01	0.02	-0.03*	0.01	-0.01	0.03
	(0.03)	(0.03)	(0.04)	(0.04)	(0.02)	(0.02)	(0.02)	(0.03)	(0.02)	(0.02)	(0.03)	(0.03)	(0.02)	(0.03)	(0.03)	(0.04)
Number of girls in the household has increased in 2005	-0.01	-0.01	0.00	0.03	0.00	-0.01	0.03	-0.03	-0.01	-0.02	-0.01	0.04	0.00	-0.01	-0.01	0.03
	(0.03)	(0.03)	(0.04)	(0.04)	(0.02)	(0.02)	(0.03)	(0.03)	(0.02)	(0.02)	(0.03)	(0.03)	(0.02)	(0.03)	(0.02)	(0.04)
Change in headship/spouse now	-0.06	-0.06	-0.10	0.22**	-0.03	0.02	-0.03	0.04	-0.04	-0.13***	-0.09	0.26***	-0.09***	-0.03	0.06	0.06
	(0.08	(0.07	(0.10	(0.12	(0.05	(0.05	(0.07	(0.09	(0.06	(0.03	(0.08	(0.09	(0.03)	(0.07)	(0.09)	(0.11)
Change in headship/Wife now	-0.03	-0.06*	-0.03	0.12*	0.03	-0.01	-0.01	-0.01	-0.07*	-0.03	-0.01	0.10*	-0.09***	-0.05	-0.08**	0.21***
	(0.06)	(0.04)	(0.07)	(0.07)	(0.04)	(0.03)	(0.04)	(0.06)	(0.04)	(0.04)	(0.06)	(0.06)	(0.03)	(0.04)	(0.04)	(0.06)
Number of observations	1016				1252				1253				1017			
Pseudo R2	0.02				0.02				0.02				0.03			
Log likelihood	-1298				-1369				-1593				-1001			

Prob>chi2	0.07	0.04	0.00	0.14

Note: Estimated with dummies for high probability of being in the labor market, dummies for the wife's educational attainment in relation to her husband's and urban dummies. */**/*** significant at 10/5/1per cent level.

Standard errors in parenthesis. Omitted category for the change in the household headship dummy is "change in headship/others now". Omitted category for the presence of parents is "No change/no parent/s".

APPENDIX

I.   ADDITIONAL INFORMATION ON THE SURVEY DATA

The CLHNS was conducted by the Carolina Population Center and the University of North Carolina together with collaborators in the Philippines. This has been conceptualised to study infant feeding patterns of mothers in Cebu who gave birth between May 1, 1983 to April 30, 1984. Since then, a portion of the original 3327 mothers and children have been resurveyed in 1991 to 1992, 1994 to1995 and 1998 to1999, 2002 and 2005. 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 to 1995 resurvey for example, information on abuse, husband's remittance of income and decision makers in minor and major purchases have been collected. In the 2002 and 2005 survey, detailed modules of intimate partner violence for both mother and child have been added as well. Employment data and intrahousehold relationships for the children are also collected.

II.   COMPARISON OF SOCIOECONOMIC INDICATORS IN CEBU USING CLNHS AND DHS DATA SETS

Table 2a: Proportion of households, Socioeconomic indicators in DHS and CLHNS data

				DHS (Central Visayas)			CLHNS		
				1998	2008	2003	1998	2002	2005
Educational level of household population	Wife	Level of education	No education	4	6	8	2	2	2
			Primary	57	47	46	54	52	51
			Secondary	24	31	27	29	33	30
			Higher	15	17	18	15	13	16
	Spouse		No education	4	6	7	2	2	2
			Primary	52	41	45	54	57	56
			Secondary	28	34	30	29	31	29
			Higher	16	19	18	15	10	13
Housing characteristics		Source of drinking water	Piped water	41	35	56	39	43	
			Well water	45	18	25	49	42	
			Surface water	13	8	11	10	8	
			Rainwater	0	2	1	1	0	
			Tanker truck	1	0	0			
			Bottled water/Demi John	0	33	7	1	0	
			Other	0	4	0			
		Type of toilet facility	Flush toilet	67	75	76	4	5	6
			Pit toilet latrine	10	3	8	73	75	78
			No facility	1	22	16	23	20	16
			Other	21	1	0	0	0	0
		Has electricity	No	38	22	26	13	9	

Household durable goods

Television	43	64	53	57	61	63
Refrigerator	25	34	32	37	39	41
Bicycle	18	21	21	26	28	29
Private car	5	9	9	3	3	4

III.   DISCUSSION OF THE PLAUSIBILITY OF THE BABY'S PRESENCE IN THE HOUSEHOLD AS AN INSTRUMENT

As an instrument, having a baby in the household is relevant in the participation to the labor market of both husband and wife. Child rearing typically falls under the wife's sphere of responsibility while providing economic resources for a growing family is expected from the husband. The instrument is likely to be exogeneous since the outcomes to be investigated the (decision making participation) take place three years after having observed the presence of a baby.

To satisfy the exclusion restriction, it is necessary to establish that the instruments affect the labor force participation but not the other outcomes that can have possible effects on the decision making participation. To do this, the impact of having a baby in 2002 on various outcomes in 2005 is analyzed. It is possible that having a baby earlier can lead to changes in the demographic structure of the household through the integration of parents or parents-in-law as extra help or overseer in the children's daily domestic activities. It is also possible that the baby's presence may affect the work hours of husband and wife and therefore slow down the accumulation of future household income. It can also lead to a possible change in the household head especially in the case when headship is strongly associated with the individual who brings home the majority of the household's financial resources. Results, shown in the table below, suggest the validity of the baby's presence as instrument for labor force participation.

Table 3a: Marginal effect of having a baby in 2002 on each of the 2005 outcome

Outcomes in 2005		
Presence of either wife or husband's parent/s	0.28	(0.25)
Household income	0.21	(0.24)
Household head	0.10	(0.21)
Which school to send the child to	-0.02	(0.23)
Whether or not to send the child to doctor when sick	0.08	(0.27)
What family planning method to use	0.00	(0.25)
When buying major appliances	-0.12	(0.18)
When buying land	-0.22	(0.18)
Say over husband's earnings	0.04	(0.20)
Control over the household money	0.06	(0.22)

Note: Each Probit regression on the outcome in 2005 is estimated with city/municipality dummies.
Standard errors in parenthesis.

IV. TESTING FOR THE CORRELATION OF THE RESIDUALS OF THE PARENTS' PRESENCE IN THE HOUSEHOLD AND THE INTRAHOUSEHOLD ISSUES

It is possible that living arrangements can be an outcome of intrahousehold decisions as well. When this happens, using the uninstrumented presence of parents in the household can lead to estimation bias since the unobservable characteristics driving the decision processes may be the same unobservable characteristics explaining the presence of parents. To check for this possibility, the conditional mixed process (CMP) in Stata, which simultaneously estimates equations with different types of dependent variables (i.e. continuous, binary, censored), is used. The following equations are estimated by the CMP:

1   $issue = f\,(\text{womparents, spouparents, numboys, numgirls, educdiff, head, citymuni})$

2   $womparents = f\,(\text{rsibling}_{w}, \text{grademagrp}_{w}, \text{gradepagrp}_{w})$

3   $spouparents = f\,(\text{sibling}_{s}, \text{grademagrp}_{s}, \text{gradepagrp}_{s})$

where the specific household issue is hypothesized to be a function of the presence of parents, number of children in the households, educational difference, headship and geographical dummies. The presence of the wife's parents in the household is hypothesized to be a function of the number of her siblings and the educational attainment of her parents**.** The presence of the spouse's parents in the household is hypothesized to be a function of similar variables that pertain to the spouse and his parents' data. Equations 1, 2 and 3 are estimated by simultaneous Probit regression. Below is the summary of the results on the statistical significance of the correlation coefficients.

Table 4a: P-values of the correlation coefficients of equations 1, 2 and 3 estimated by the conditional mixed process

	Intrahousehold Issues							
	When buying her shoes	When buying children's clothes	Whether or not to send the child to doctor when sick	When buying major appliances	Which school to send the child to	When buying land	What to do with her earnings	Husband's income remittance
/atanhrho_12	0.34	0.31	0.50	0.68	0.95	0.37	0.68	0.66
/atanhrho_13	0.06	0.51	0.80	0.54	0.60	0.21	0.16	0.87
/atanhrho_23	0.35	0.40	0.60	0.46	0.38	0.21	0.41	0.51
Number of observations	1338	1338	1338	1338	1370.00	1338	1338	1098
Log likelihood	-562.26	-891.45	-741.22	-1153.44	-850.15	-1159.04	-452.91	-436.24
Wald chi2 (13)	46.96	41.53	28.53	78.85	50.34	65.78	16.38	25.31
Prob > chi2	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.01

Note: 1 refers to the issue equation, 2 refers to the presence of the wife's parents equation, 3 refers to the presence of the spouse parents equation.

V.   DESCRIPTIVE STATISTICS, CLHNS

Table 5a: Decision makers in 2002-2005 (per cent), CLHNS

Decision makers in 2002 and 2005	Minor Issues			Major Issues					
	Buying her shoes	Buying clothes for the children	Buying gifts to relatives	Which school to send the child to	Whether or not to send the child to doctor when sick	What family planning method to use	When buying major appliances	When buying land	Say o her mone
WW	80.73	61.31	57.44	38.74	50.45	42.84	17.87	15.67	80.88
WS	3.6	10.91	4.36	5.96	4.55	3.8	6.91	5.26	1.3
WC	3.7	7.01	15.07	14.01	15.37	16.67	9.46	9.06	7.71
WZ	0.1	0.6	0.55	0.4		0.05	0.4	0.35	0.15
SW	7.46	8.56	7.06	9.36	9.51	8.36	10.81	9.06	3.05
SS	1.45	4.3	2.35	5.06	3.2	3.7	21.72	21.62	0.45
SC	0.4	1.7	2.45	8.41	5.21	4.85	16.52	18.22	0.65
SZ		0.15		0.15	0.15		0.35	0.15	
CW	1.65	2.85	6.01	6.41	5.51	9.51	4.35	4.15	4.1
CS	0.35	1	0.7	2.5	1.35	1.65	3.75	4.55	0.25
CC	0.5	1.35	3.81	8.61	4.7	8.56	7.66	11.81	1.4
CZ		0.05	0.1	0.1			0.1	0.05	
Z X	0.05	0.2	0.1	0.3			0.1	0.05	0.05

Note: W for wife, S for spouse and others, C for both Wife and spouse and Z for wife and others. The first letter represents the decision maker in 2002 and the second represents the decision maker in 2005. X is WSCZ combined. F for full remittance, G for partial remittance and H for no remittance.

Table 5b: Entry to and exit from the participation state, 2002-2005 (per cent)

	Entry to participation state (1)	Exit from participation state (2)	Net change (1-2)
Buying her shoes	8.22	4.14	4.09
Buying clothes for the children	11.57	13.35	-1.78
Buying gifts to relatives	10.24	5.44	4.80
School to send the child to	22.17	10.59	11.58
Doctor consultation for sick child	17.13	6.81	10.32
Family planning method to use	15.08	6.23	8.85
Buying major appliances	52.07	20.06	32.02
Buying land	51.12	18.38	32.74
What to do with her earnings	3.67	1.54	2.13
Remittance of husband's earnings	3.04	2.01	1.03
Control over the household money	13.46	13.39	0.07
Based on PCA scores			
All issues	52.90	40.00	12.90
Minor issues	24.30	23.98	0.32
Major issues	52.44	25.41	27.03
Finance	21.93	24.13	-2.20

Table 5c: Attributes and event, by status of participation in 2002-2005

	All issues			Minor issues			Major issues			Finance		
	% PN	% NP	Freq	% PN	% NP	Freq	% PN	% NP	Freq	% PN	% NP	Freq
Urbanity												
Rural	17	26	524	14	18	585	12	31	585	25	13	524
Urban	19	23	1339	19	18	1536	14	26	1536	25	14	1339
Age Difference												
No age difference	14	30	188	16	19	197	11	36	197	15	18	188
<=5, Wife is older	15	30	311	15	17	332	10	33	332	23	14	311
>=6, Wife is older	11	22	37	22	38	45	13	18	45	38	16	37
<=5, Spouse is older	19	23	880	17	16	952	13	26	952	25	13	880
>=6, Spouse is older	10	19	90	20	16	100	15	19	100	26	12	90
Grade completed at 2005, Wife												
No grade completed	24	41	29	14	24	29	21	34	29	24	10	29
Elementary level	14	26	880	11	21	889	12	32	889	20	14	880
High school level	16	25	457	15	14	463	11	28	463	21	15	457
College level	15	27	178	20	17	183	11	28	183	20	19	178
Post-graduate	20	30	20	25	20	20	20	25	20	20	15	20
Grade completed at 2005, Spouse												
No grade completed	15	21	34	6	18	34	12	29	34	21	12	34
Elementary level	15	27	797	12	20	807	12	29	807	18	14	797
High school level	15	27	478	15	18	483	10	33	483	24	15	478
College level	15	24	246	15	16	250	13	30	250	22	18	246
Post-graduate	22	11	9	30	10	10	30	10	10		11	9
Grade completed of Wife's father												
No grade completed	16	26	214	13	16	251	12	32	251	21	11	214
Elementary level	19	23	1033	18	18	1155	13	26	1155	27	12	1033
High school level	15	26	277	20	17	312	13	29	312	22	16	277
College level	16	24	98	18	14	118	14	26	118	27	24	98
Post-graduate	43		7	50	13	8	25		8	14	14	7
Grade completed of Wife's mother												
No grade completed	17	22	310	15	18	373	14	27	373	23	12	310
Elementary level	18	25	1109	18	18	1237	13	27	1237	25	12	1109
High school level	17	24	221	20	17	252	14	27	252	27	17	221
College level	21	24	66	21	13	76	13	25	76	24	20	66
Post-graduate	33		3			3	33		3	33		3
Change in headship												
No change in headship/Wife	37	16	57	15	14	232	11	18	232	33	16	57
No change in headship/spouse	15	26	1427	14	18	1438	12	29	1438	20	14	1427
No change in headship/others		17	6	33	27	15	7	20	15	50	33	6
Change in headship/spouse now	14	26	93	19	10	96	9	25	96	24	19	93
Change in headship/Wife now	27	16	166	15	20	182	8	35	182	42	8	166
Change/others	24	29	21	17	26	32	14	34	35	24	10	21
Change in the working status, Wife												
No change in work status	16	25	1169	13	18	1179	12	29	1179	21	14	1169
From working to nonworking	13	31	201	14	19	204	14	34	204	18	17	201
From nonworking to working	13	31	127	12	24	129	9	37	129	19	15	127
Change in the working status, Spouse												

No change in work status	13	29	1244	13	19	1251	12	30	1251	16	15	1244
From working to nonworking	31	15	189	14	19	197	10	32	197	46	10	189
From nonworking to working	25	11	64	17	13	64	19	19	64	22	6	64
Change in the demographic composition, Wife's parents												
No change/no parents	18	24	1756	18	18	1990	13	28	1990	25	14	1756
No change/both parents		25	4	14	43	7	29	29	7	75		4
No change/only the father	27	9	11	17	8	12	17	17	12	36		11
No change/only the mother	10	21	29	12	10	41	10	22	41	21	14	29
With change/no parents in 2005	22	17	36	17	12	42	19	26	42	28	8	36
With change/either Wife's parents have joined in 2005	25	21	24	12	19	26	15	15	26	25	17	24
Change in the demographic composition, Spouse' parents												
No change/no parents	18	24	1812	17	18	2067	13	27	2067	25	14	1812
No change/only the father		50	2	50		2			2			2
No change/only the mother	14	50	14	7	33	15	13	33	15	21	29	14
With change/no parents in 2005	24	19	21	19	10	21	14	24	21	29	5	21
With change/either Wife's parents have joined in 2005	15	38	13	13	20	15		33	15	15	8	13

Note: Freq is sum of the row.

VI.   MARGINAL EFFECTS FROM LOGIT AND MULTINOMIAL LOGIT WITH HOUSEHOLD NONWAGE INCOME INCLUDED AS EXPLANATORY VARIABLE

Table 6a: Effects of attributes on being part of the final decision making, Detailed household issues and using Logit regression

	Which school to send the child to	Whether or not to send the child to doctor when sick	What family planning method to use	When buying major appliances	When buying land	Say over husband's earnings	Control over the household money
Work status instrumented							
Wife: high probability of working	0.01	-0.01	0.00	0.03*	-0.01	0.00	-0.01
Spouse: high probability of working	-0.02*	0.01	0.00	0.03	0.01	-0.02	-0.02
Household income	**0.00****	**0.00**	**0.00****	**0.00**	**0.00**	**0.00**	**0.00***
Wife's parents in the house	0.10**	0.12*	0.03	0.13*	0.11*	0.07*	0.00
Spouse parent/s in the house	0.00	0.08*	0.07*	-0.11	0.00	0.07	-0.03
Wife education> spouse education	0.02	0.01	0.02	0.09***	0.10**	-0.01	0.04**
Wife education<spouse education	-0.09***	-0.05***	0.00	-0.04	-0.06*	0.05**	-0.01
Head: Spouse	-0.05*	-0.05*	-0.01	-0.16***	-0.21***	0.08**	-0.15***
Head: Others	-0.23***	-0.19***	-0.10*	-0.35**	-0.46***	-0.12	-0.08
Number of Observations	2676	2676	2676	2676	2676	2196	2440
Log likelihood	1260	1070	-1014	-1713	-1717	-111	-1115
Wald chi2(18)	113	101	61	164	152	40	36
Prob > chi2	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Work status instrumented with gender-number interactions							
Wife: high probability of working	0.01	-0.01	0.00	0.03**	-0.01	0.00	-0.01
Spouse: high probability of working	-0.02*	0.01	0.00	0.03	0.01	-0.02	-0.02

Household income	**0.00****	**0.00**	**0.00****	**0.00**	**0.00**	**0.00**	**0.00***
Wife's parents in the house	0.08	0.13	-0.07	-0.01	-0.09	0.14	-0.08
Spouse parent/s in the house	0.06	0.29*	0.16	-0.08	0.00	-0.07	0.14
Wife's parents in the house*number of boys	0.00	-0.01	0.02	0.03	0.05	0.00	0.02
Wife's parents in the house*number of girls	0.02	0.02	0.04*	0.04	0.06	-0.03	0.02
Wife's parents in the house*number of boys	0.02	-0.01	0.02	0.06	0.05	0.01	-0.04
Spouse' parents in the house*number of girls	-0.04	-0.07*	-0.05*	-0.07	-0.05	0.06	-0.03
Number of boys	0.02***	0.00	0.00	-0.01	-0.01	0.01	0.00
Number of girls	0.01	0.00	0.00	-0.02**	-0.02***	0.01	-0.01
Wife education>spouse education	0.03	0.01	0.02	0.09**	0.09**	-0.01	0.04**
Wife education<spouse education	-0.09***	-0.06***	0.00	-0.04	-0.06*	0.05**	0.00
Head: Spouse	-0.05*	-0.05*	-0.01	-0.16***	-0.20***	0.08**	-0.15***
Head: Others	-0.22***	-0.21***	-0.09*	-0.35**	-0.46***	-0.11	-0.08
Number of Observations	2676	2676	2676	2676	2676	2196	2440
Log likelihood	-1253	-1067	-1010	-1707	-1714	-1108	-1113
Wald chi2(24)	120	98	66	170	157	42	40
Prob > chi2	0.00	0.00	0.00	0.00	0.00	0.00	0.02

Note: Estimated with year and urban dummies. */**/*** significant at 10/5/1per cent level. Omitted category for the difference in the education between husband and wife is "wife education=spouse" education. Omitted category for the household headship dummy is "wife as head". The probabilities are computed based on the Logit regression and following Antolin *et al.* (1999).

Table 6b: Effects of attributes on being part of the final decision making, Aggregated indicators based on the PCA of household issues and using Logit regression

	All issues	Minor issues	Major issues	Finance
Wife: working	-0.02	0.01	-0.01	-0.01
Spouse: working	-0.01	-0.01	0.00	-0.03
Household income	**0.00**	**0.00***	**0.00***	**0.00***
Wife 's parents in the house	0.04	0.16*	0.06	0.05
Spouse parent/s in the house	0.13	0.12	0.10	0.39*
Wife's parents in the house*number of boys	0.07	0.00	0.03	0.02
Wife's parents in the house*number of girls	-0.02	-0.03	-0.01	-0.01
Spouse' parents in the house*number of boys	0.01	0.03	0.05	-0.10*
Spouse' parents in the house*number of girls	-0.04	-0.05	-0.05	0.00
Number of girls	-0.01	0.00	-0.01	0.00
Number of boys	0.01	0.02***	0.00	0.00
Wife education>spouse education	0.05	0.04*	0.07**	0.05*
Wife education<spouse education	-0.06*	-0.01	-0.05*	-0.01
Head: Spouse	-0.22***	-0.04	-0.14***	-0.08*
Head: Others	-0.38**	-0.12	-0.28**	-0.14*
Number of observations	2032	2504	2506	2034
Log likelihood	-1328	-1472	-1700	-1043
Wald chi2(24)	131	67	162	37
Prob > chi2	0.00	0.00	0.00	0.05

Note: Estimated with year and city/municipality dummies. */**/*** significant at 10/5/1 per cent level. Omitted category for the difference in the education between husband and wife is "wife education=spouse education". Omitted category for the household headship dummy is "wife as head". The probabilities are computed based on the Logit regression and following Antolin *et al.* (1999).

Table 6c: Effects of events on the status of the wife's participation to decision making, Aggregated indicators based on the PCA of household issues and using Multinomial Logit

	All issues				Minor issues				Major issues				Finance			
	N/N	P/N	N/P	P/P	N/N	P/N	N/P	P/P	N/N	P/N	N/P	P/P	N/N	P/N	N/P	P/P
Wife dummy for high probability of working	0.02	0.01	0.07*	-0.10*	-0.01	-0.01	0.07*	-0.04	0.02	-0.01	0.08*	-0.09*	-0.01	0.05	0.04	-0.07*
	(0.04)	(0.04)	(0.05)	(0.05)	(0.04)	(0.04)	(0.05)	(0.05)	(0.03)	(0.02)	(0.05)	(0.05)	(0.02)	(0.05)	(0.04)	(0.05)
Spouse: dummy for high probability of working	-0.04	-0.03	-0.05	0.13**	-0.06*	0.02	-0.04	0.08	-0.03	-0.01	-0.02	0.07	0.03	-0.07**	-0.01	0.04
	(0.04)	(0.04)	(0.05)	(0.07)	(0.04)	(0.05)	(0.04)	(0.06)	(0.04)	(0.03)	(0.05)	(0.06)	(0.03)	(0.03)	(0.04)	(0.06)
No change, with wife's parent/s	-0.12**	0.00	-0.07	0.19**	-0.10**	-0.08*	-0.03	0.21***	-0.08*	0.04	-0.12*	0.15*	-0.03*	-0.05	-0.10**	0.18***
	(0.05)	(0.06)	(0.08)	(0.10)	(0.05)	(0.05)	(0.07)	(0.09)	(0.04)	(0.06)	(0.07)	(0.09)	(0.02)	(0.05)	(0.04)	(0.06)
With change, without wife's parent/s now	-0.04	0.05	-0.04	0.03	-0.03	-0.07	-0.10*	0.20**	-0.04	0.13*	0.01	-0.11	0.04	-0.02	0.01	-0.04
	(0.07)	(0.09)	(0.10)	(0.11)	(0.07)	(0.06)	(0.07)	(0.10)	(0.06)	(0.09)	(0.09)	(0.10)	(0.06)	(0.07)	(0.08)	(0.11)
With change, with wife's parent/s now	0.00	0.02	-0.14*	0.11	-0.06	0.06	-0.12*	0.12	0.00	-0.01	-0.16**	0.18*	-0.05**	0.00	-0.01	0.06
	(0.10)	(0.10)	(0.10)	(0.14)	(0.08)	(0.11)	(0.07)	(0.13)	(0.08)	(0.06)	(0.08)	(0.12)	(0.02)	(0.08)	(0.08)	(0.11)
No change, with spouse' parent/s	-0.07	-0.03	0.25*	-0.14	-0.14***	0.00	0.13	0.01	-0.02	0.01	-0.02	0.03	-0.01	-0.04	0.15	-0.11
	(0.08)	(0.08)	(0.14)	(0.13)	(0.04)	(0.10)	(0.12)	(0.13)	(0.08)	(0.07)	(0.11)	(0.13)	(0.05)	(0.08)	(0.13)	(0.14)
With change, without spouse' parent/s now	0.05	-0.04	0.03	-0.04	0.09	0.08	-0.08	-0.09	0.01	0.01	-0.03	0.01	-0.05**	0.03	-0.07	0.09
	(0.11)	(0.08)	(0.13)	(0.14)	(0.12)	(0.10)	(0.08)	(0.12)	(0.08)	(0.07)	(0.10)	(0.12)	(0.02)	(0.10)	(0.06)	(0.11)
With change, with spouse' parent/s now	-0.19***	0.01	0.16	0.02	0.10	-0.05	-0.02	-0.03	-0.04	-0.10***	0.04	0.10	-0.05**	-0.12***	-0.03	0.20*
	(0.04)	(0.12)	(0.18)	(0.18)	(0.15)	(0.10)	(0.12)	(0.15)	(0.08)	(0.03)	(0.14)	(0.15)	(0.02)	(0.04)	(0.10)	(0.10)
Number of boys in the household	0.00	-0.01	0.00	0.01	-0.01	-0.02**	-0.01	0.04***	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)	(0.01)	(0.01)	(0.00)	(0.01)	(0.01)	(0.01)
Number of girls in the household	0.01	0.01	0.00	-0.01	0.00	0.00	0.00	0.01	0.01	0.01	0.00	-0.01*	0.00	0.00	0.01	-0.01
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)	(0.01)	(0.01)	(0.00)	(0.01)	(0.01)	(0.01)
Wife education > spouse education	-0.04*	0.06*	-0.01	0.00	-0.03	0.03	-0.04*	0.05)	-0.04*	0.01	-0.02	0.05*	-0.02*	0.00	-0.03	0.05*
	(0.03)	(0.04)	(0.04)	(0.04)	(0.03)	(0.03)	(0.03)	(0.04	(0.02)	(0.02)	(0.03)	(0.04)	(0.01)	(0.03)	(0.02)	(0.03)
Wife education <spouse education	0.00	0.04*	0.05*	-0.10***	0.02	-0.02	0.01	-0.01	0.01	0.03*	0.07**	-0.11***	0.00	0.00	0.01	-0.01
	(0.03)	(0.03)	(0.04)	(0.04)	(0.03)	(0.02)	(0.03)	(0.03)	(0.02)	(0.02)	(0.03)	(0.03)	(0.01)	(0.02)	(0.02)	(0.03)
Change in	-0.08	0.02	-0.09	0.15*	-0.02	0.04	-0.06	0.04	-0.06*	-0.08***	-0.08	0.22***	-0.03	-0.01	0.02	0.02

headship/spouse now

(0.06)	(0.07)	(0.08)	(0.10)	(0.07)	(0.07)	(0.06)	(0.09)	(0.04)	(0.03)	(0.07)	(0.08)	(0.03)	(0.06)	(0.07)	(0.09)

Change in headship/wife now

-0.02	-0.06*	-0.05	0.13*	0.02	-0.01	0.00	-0.01	-0.05*	-0.03	0.00	0.09*	-0.05**	-0.06*	-0.04	0.15***
(0.05)	(0.04)	(0.06)	(0.07)	(0.05)	(0.04)	(0.04)	(0.06)	(0.03)	(0.03)	(0.05)	(0.06)	(0.02)	(0.04)	(0.04)	(0.05)

Urban

0.07**	0.00	-0.04*	-0.03	0.08*	0.04	-0.02	-0.10***	0.09**	0.02	-0.06**	-0.05	0.01	0.07*	-0.01	-0.07*
(0.04)	(0.03)	(0.03)	(0.04)	(0.05)	(0.04)	(0.03)	(0.04)	(0.04)	(0.03)	(0.03	(0.04)	(0.02)	(0.04)	(0.02)	(0.04)

Change in income: improved quantile

0.01	**0.04***	**0.02**	**-0.07****	**0.00**	**0.00**	**0.01**	**-0.01**	**0.03***	**0.01)**	**-0.01**	**-0.04**	**0.02**	**0.00**	**-0.02**	**0.00**
(0.03)	**(0.03)**	**(0.03)**	**(0.03)**	**(0.02)**	**(0.02)**	**(0.03)**	**(0.03)**	**(0.02)**	**(0.02**	**(0.03)**	**(0.03)**	**(0.02)**	**(0.02)**	**(0.02)**	**(0.03)**

Change in income: worse-off quantile

0.02	**-0.02**	**0.04**	**-0.04**	**-0.01**	**-0.02**	**0.01**	**0.02**	**0.02**	**-0.02**	**0.01**	**-0.01**	**0.01**	**-0.01**	**0.00**	**0.00**
(0.03)	**(0.02)**	**(0.03)**	**(0.04)**	**(0.03)**	**(0.02)**	**(0.03)**	**(0.03)**	**(0.02)**	**(0.02)**	**(0.03)**	**(0.03)**	**(0.02)**	**(0.02)**	**(0.02)**	**(0.03)**

Number of observations	1016	1252	1253	1017
Pseudo R2	0.03	0.02	0.03	0.03
Log likelihood	-1293	-1368	-1589	-1000
LR chi2(51)	68.52	64.11	82.56	57.25
Prob > chi2	0.05	0.10	0.00	0.25

Note: Estimated with urban dummies. */**/*** significant at 10/5/1per cent level. Standard errors in parenthesis. Omitted category for the difference in the education between husband and wife is "wife education=spouse education". Omitted category for the change in the household headship dummy is "change in headship/others now".