THE CHANGING STATUS OF FILIPINO WOMEN ACROSS FAMILY GENERATIONS

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ABSTRACT

Demographic and economic events or outcomes play an important role in determining the position of women in the family, society and economy -- namely educational attainment, age at marriage and occupational choice. Philippine data from the Asian Marriage Survey of 1980 show that comparing two family generations, daughters have higher levels of education than their parents, marry later than their mothers, and are more likely to hold a job in the labor market. The education equation is estimated using a variance component model, while the age at marriage function is estimated as a proportional hazards model. The choices among three types of occupations -- white-collar, blue-collar, farming -- relative to the choice of not having a job were estimated using a multinomial logit model. The family has a profound influence on women's status as evidenced by the impact that parents have on their daughter's education, timing of marriage and labor market attainment. Relative to the fathers, mothers have a stronger influence on status attainment through education. There is no significant difference in the level of education achieved by sons and daughters partly implying that, on average, parents expect the net return to schooling of daughters to be comparable with that of sons. Education of the children does not significantly affect the timing of marriage. However, education improves the chances of obtaining non-agricultural jobs.

INTRODUCTION

Philippine women have a relatively high status, especially when compared with women in other developing countries (Ware, 1981; Roxas-Aleta, 1977; Zaide, 1974). However, there are claims that this image is not accurate. On the one hand, higher educational attainment and increasing participation rates in paid jobs provide a favorable picture of women's status relative to the older generation and to the opposite sex (King, 1982; Smith and Cheing, 1979). On the other hand, due to limited job opportunities in the non-agricultural sector, a rapidly growing labor force, and a depressed and sluggish economy, many educated women do not hold jobs that pay well or match their skills (Tidalgo and Esguerra, 1982; Smith and Domingo, 1977). The heavy economic burden of these women is further exacerbated by a persistently high fertility rate. Though fertility is declining, the total number of children born per woman is still high, being estimated at 5.0 in 1980.[1] Lastly, discriminatory features are present in the laws affecting women (Cortes, 1977).

This study examines how the status of Philippine women has changed in relation to the older generation of women and in relation to men, and what factors have contributed to or detracted from the achievement of women and greater equality between the sexes. It focuses on four demographic and economic events or outcomes that play an important role in determining the position of women in the family, society, and economy -- namely, educational attainment, fertility, age at marriage, and occupational choice.[2] While these dimensions are often studied singly in the literature, they are closely inter-related. Together, they present a clearer picture of the status of women because they result from the same set of underlying individual preferences and characteristics, family background, cultural limitations, and economic constraints. They are the points where cultural influences, mediated through family and society, meet and where the economic needs of the family and the available economic opportunities are articulated.

THE ASIAN MARRIAGE SURVEY DATA

The data used in this paper are drawn from the Asian Marriage Survey (AMS) which was conducted during the period 1978-1980.[3] The analysis is based on a total of 7,789 individuals belonging to over 1,000 households. The primary respondent within each household was a randomly selected ever-married woman aged 15-45 years.[4] The AMS is not based on a national probability sample; the survey areas were purposefully, rather than randomly, selected. Samples of households were drawn to represent three distinct socioeconomic groups, namely, a rural sample, an urban poor sample (referred to as "low urban"), and another urban sample of the same size from selected middle-class districts ("middle-urban"). The subsamples were purposely chosen to represent a culturally and linguistically homogeneous group, in this case, Tagalog Christians. The urban survey areas were located in the city of Manila -- several barangays in Pandacan were chosen as the poor urban site, and the middle-urban respondents were selected from Paco and Santa Ana. The three contiguous barangays of Donacion, Sulukan, and Marungko in the municipality of Angat, Bulacan Province were selected as the rural survey site.

The AMS collected data on the parents and siblings of female respondents. The following information about the parents are known: year of death (if applicable), educational attainment, land ownership, occupation, and residence; about the mother: age at marriage. For the respondent and each of her siblings (whether living or not), information is available on sex, parity, date of birth, current marital status, age at first marriage, educational attainment, and occupation at the time of the survey.[5]

RISING EDUCATION LEVELS, LATER AGE AT MARRIAGE, AND GREATER LABOR SUPPLY

The AMS data indicate that, comparing two family generations, daughters have higher levels of education than their parents, marry later than their mothers, and are more likely to hold a job in the labor market (Tables 1-3). The increasing trend in

educational levels between generations is seen in the large differences between parents and offsprings both in urban and rural areas. For example, comparing the mean education of daughters aged 18 years and above with their mothers' schooling shows a difference ranging from 3.1 years of schooling in the rural areas to 3.6 years in the middle-urban areas in favor of the former. Moreover, whereas a wide schooling gap exists between mother and father -- the schooling level of mothers being 0.5 to 1.5 year lower than fathers' education -- within the younger generation, there is less difference between the sexes. These comparisons are shown more clearly in Table 1.

The higher schooling attained by sons and daughters relative to their parents is undoubtedly a response to increasing opportunities for education in the Philippines. The greater gender parity in education gives credence to the claim that the Filipino woman begins her adult life on a par with men. Similar to these AMS findings, the 1980 Census shows that the percentage of girls among elementary and high school graduates is only slightly lower than that of boys (49.2 and 50.8 per cent, respectively), and that this relative position is reversed when college graduates and post-graduates are con-

Table 1. Proportions of Respondents by Years of Schooling and Mean Years of Schooling

Years of Schooling	DAUGHTERS Aged >15			SONS Aged >15			MOTHER			FATHER		
	MU	LU	RU	MU	LU	RU	MU	LU	RU	MU	LU	RU
0 years	0.3	9.7	0.8	0.4	0.8	0.5	5.3	8.0	10.9	5.0	4.9	2.6
> 6 years	75.5	61.7	31.7	77.7	65.4	32.3	34.2	15.4	2.7	50.9	57.4	7.6
>12 years	24.7	5.3	6.9	20.5	3.1	3.6	8.1	1.2	0.0	19.5	3.4	0.3
Mean years for those aged >18	10.3	8.3	6.5	10.2	8.2	6.6	6.7	5.0	3.4	8.2	6.2	3.9
Sample size	773	601	984	737	644	965	322	324	395	322	321	395

Notes: R's = The AMS female respondents. The mean schooling of respondents did not differ significantly from their female siblings

    MU = Middle-urban sample

    LU = Low-urban sample

    RU = Rural sample

sidered. Some attribute this pattern to the confidence that families have in the woman's sense of responsibility (Lynch and Makil, 1970). Parents are viewed as relying on their daughters more than on their sons to study conscientiously, keep stable jobs, and provide support in their old age. Equipping a daughter to earn a living through education represents a kind of insurance for the future (Hollnsteiner, 1970).

Accompanying these trends in educational levels has been a delay in entry to marriage, which is the institution that has traditionally been the main source of economic and social status for women. Delayed entry to marriage is a direct result of the increasing importance of education and market work as viable alternatives to early marriage. Improved opportunities to pursue higher education and to engage in gainful activity make these choices possible. A late age of marriage also extends a woman's period of self-discovery, achievement, and personal mobility. The trend of later marriage shows up clearly when comparing mothers with their daughters (Table 2). In both urban and rural areas, 66 to 82 per cent of the mothers married before age 20. These proportions are twice as large as those for their daughters who were at least 25 years old during the survey. Although age at marriage among males has also been increasing, the change has been smaller.

Table 2. Proportions of Respondents by Selected Age at Marriage and Mean Age at Marriage

Country and Age at Marriage	DAUGHTERS			S O N S			MOTHER		
	MU	LU	RU	MU	LU	RU	MU	LU	RU
All aged >25	(568)	(392)	(683)	(560)	(396)	(703)	(322)	(324)	(395)
Married by 16	4.0	6.1	5.1	1.2	0.8	1.0	20.8	32.1	13.4
Married by 18	13.7	18.9	19.0	4.5	9.6	10.1	40.4	53.7	33.7
Married by 20	27.3	35.5	37.0	15.9	20.4	28.4	70.2	81.8	66.1
Married by 25	58.1	61.0	73.4	45.9	45.0	66.9	92.9	96.9	91.4
Mean age at marriage of those aged >16	22.0	20.8	21.2	24.0	22.9	22.7	19.8	18.6	20.3

Notes: MU = Middle-urban sample
     LU = Low-urban sample
     RU = Rural sample

Table 3. Percentage Distribution by Type of Occupation

Type of Occupation	DAUGHTERS Aged >15			S O N S Aged >15			MOTHER			FATHER		
	MU	LU	RU	MU	LU	RU	MU	LU	RU	MU	LU	RU
With occupation	42.0	37.5	55.1	82.8	74.7	89.5	34.4	35.5	33.1	97.7	98.3	97.9
White-collar	71.7	41.6	29.0	38.9	20.5	12.4	59.0	32.7	40.8	35.7	15.2	5.8
Blue-collar	24.3	49.1	59.0	47.8	61.3	36.3	36.3	47.9	39.3	34.6	47.7	22.9
With no occupation	58.0	62.5	44.9	17.2	25.3	10.5	65.6	64.5	66.9	2.3	1.7	2.1
Sample size	773	593	981	722	634	962	320	318	392	317	309	388

Notes:

MU = Middle-urban sample

LU = Low-urban sample

RU = Rural sample

Age at marriage differs widely for urban and rural families. For example, only 27 per cent of the middle-urban younger females (aged 25 and over) were married by age 20, as compared with 36 and 37 per cent of the low-urban and rural females. This pattern seems consistent with the income and educational differences among the sample areas. Moreover, the type of job opportunities available to more highly educated middle-urban women may induce them to postpone marriage and childbearing.

Finally, the occupational distributions of males and females in the two family generations are considered.[6] Female labor force participation has increased and greater numbers now hold professional jobs. The data indicate a labor force participation rate of about 40-55 per cent for daughters compared to about 35 per cent for mothers, and 75-90 per cent for sons. The ratios of the participation rates of daughters and mothers are about equal in the urban areas (at 1.2 and 1.1 in the middle- and low-urban areas, respectively), but higher in the rural areas at 1.7.[7] Sales-related jobs account for a significant fraction of the female workers in both generations, with proportionally less of the younger women in such occupations. Among younger women, especially those in the middle-urban areas, other white-collar occupations have become increasingly important. In fact, a comparison of the younger women and men shows them to have roughly similar proportions in professional occupations. Among rural women, the higher level of par-

ticipation appears to be due to higher blue-collar employment. Comparing the mothers and daughters suggests that manual wage work has become more prevalent in rural areas in recent years.

The observed dominance of young single females in the urban-rural migration streams bears directly on these observed changes in the nature of involvement of women in the work force (Eviota and Smith, 1979; Raymundo, 1972; Perez, 1976). The influx of rural women to the city to obtain higher education, and the propensity of the better trained and more educated to remain there have broadened their choices of available jobs and their chances to utilize their training and skills in more productive and financially-rewarding jobs. Migration out of the rural areas has also served to free women from traditional biases and prejudices against working women.

In the next sections, the factors that have brought about these shifts in education levels, timing of marriage, and occupation of Philippine women are examined. By focusing on the family, the study reveals aspects of the dynamics that help shape female status. The availability of opportunities through education or labor market employment and the way in which families respond to a complex set of choices and opportunities, given their resource constraints, influence this dynamics.

A MODEL OF EDUCATION, NUPTIALITY, AND OCCUPATION

Educational attainment, timing of marriage, together with labor force participation and type of occupation are interrelated choices or outcomes. Although these three outcomes may be viewed as taking place in a sequential fashion, with completion of formal schooling occurring first and then followed by nuptial and labor force choices, in large part they are simultaneous choices. By "simultaneity" is meant that the decision when to marry is not independent of when a woman leaves school and of her labor market intentions and experience.[8] However, timing of marriage will not be as closely associated with variance in schooling levels and the simultaneity issue may not be important in areas where most women get little education (either because of low returns to schooling, discrimination in school enrollment, or absence of schools).

Type of occupation and nuptiality may be negatively related for women for either or both of two reasons: one, there may be cultural norms restricting the labor market activities of married women (e.g., role of the wife as primarily a homemaker and mother); and two, large desired family size may prevent her from being actively engaged in work outside the home due to the demands of childrearing. To capture one aspect of this interrelatedness, marital status is included as a variable in explaining type of occupation. The relationship between a woman's fertility and her occupation is not estimated because information on fertility is not available for all observations.

In the next section, the following set of relationships is estimated:

$$E = \alpha_0 + \alpha_1 Y + \alpha_2 N + \mu \qquad (1)$$

$$AM = \beta_0 + \beta_1 Y + \beta_2 N + \beta_3 E + \varepsilon \qquad (2)$$

$$Q = \phi_0 + \phi_1 Y + \phi_2 N + \phi_3 E + \phi_4 M + e \qquad (3)$$

where:

E = educational attainment
AM = age at first marriage
Q = type of occupation
Y = parental resources
W = number of siblings

The explanatory variables include parental resources (Y), which pertain to parents' educational attainment, their ages and occupations, mother's age at marriage, and ownership of land.[9] It has been found that parents with higher education and socioeconomic status and greater wealth tend to invest more in their children's schooling. These parents are also able to provide attractive alternatives to early marriage of their children or offer financial support for older unmarried children. Domingo (1982) found that, women whose fathers had a white-collar job and had at least graduated from high school, tended to marry later.

Number of siblings (N), or "sibsize", affects these different adult outcomes. The quantity-quality of children model (Becker and Lewis, 1973) provides a framework for expecting sibsize to be negatively associated with a child's educational level. The more children there are in a family, the more costly it would be to increase their average level of schooling. For example, if parents' time is an input into the schooling process, then the larger the family size, the less time and effort parents can spend with each child. But, family size can exert a countervailing effect. The negative relationship hypothesized in the quantity-quality model is based largely on the assumption that parents are the main providers of child quality. Though parental income serves as an effective constraint when children are still young, its importance diminishes as children age.

One aspect of the sibsize-education relationship that deserves greater attention is that older siblings do not necessarily take away from family resources, but may even contribute to family resources. Thus, they may be an important source of support for siblings who desire or are better able to obtain higher schooling. When networks of support among kin exist, siblings are able to supplement parental resources, and the quantity-quality substitution is weakened. This may even imply a positive relationship between family size and education levels. Transfers of income from children to parents or among siblings are common in Filipino families. For example, the 1983 National

Demographic Survey (NDS) shows that 23 per cent of ever- married women respondents from Luzon financially supported their siblings before they themselves married. A part of this support is for the schooling of siblings (Domingo, 1984).

The relationship between sibsize and timing of marriage has generally not been looked into the demographic literature. The effect of sibsize on timing of marriage depends on the relative magnitudes of two forces. On the one hand, a larger sibsize could mean greater pressure from parents and siblings to provide support for the rest of the family and thus to delay one's own family formation. On the other hand, fewer resources per family member is an inducement to leave home early; for Filipino women, leaving home is synonymous with starting their own families.

The effect of marriage (M) on a woman's contribution to the labor supply depends on whether some types of work are more compatible with childrearing than others. Wage employment away from home may be less compatible with raising children than non-wage activities and unpaid family work that have flexible hours and take place close to home. According to Ho (1980), mothers in the Philippines whose market chores takes place at home or close to home devote as much time for the care of children as mothers who do not have any market activities, while mothers who are employed outside the home tend to spend fewer hours on child care.[10]

The education equation is estimated using a variance components model. Family effects enter the estimations not only through measurable characteristics of the family but also through the error terms as a random effect (Wallace and Hussain, 1969). This takes into account the correlation in schooling levels among siblings in computing the standard errors. The dependent variable is measured as the reported highest completed years of schooling of each individual at the time of the survey.[11]

The age at marriage function is estimated as a proportional hazards model in order to deal with the right-censoring problem associated with observing individuals who were still unmarried during the survey and thus did not report age at marriage. A proportional hazards model allows the utilization of information on the timing of marriage not only on uncensored observations (that is, those who were married at the survey date), but also on censored observations (that is, those who had not married at the survey date). Family-specific effects are also considered in the estimation of the test statistics as in a variance components model.

The choices among three types of occupations -- white collar, blue-collar, farming -- relative to the choice of not having a job are estimated using a multinomial logit model. The "white-collar" category includes professionals, managers, clerical and sales workers. The "blue-collar" category pertains to production and production-related work. "Farm" includes farmers (owner-operator as well as landless farmers) and farm-related

workers. "Non-employed" refers to housewives, students, and unemployed persons. These estimates are obtained using a discriminant function approach developed by Haggstrom (1983). The method involves fitting a linear equation by least squares using the polychotomous dependent variable to separate the sample into subpopulations, and then deriving the test statistics from maximum likehood estimation.[12] Sibling correlation was estimated with respect to occupation and it was found that type of occupation is more closely correlated among female siblings than among male siblings, although, in general, sibling correlation is not high.

The next sections presents the estimates of the model presented above. The discussion will focus on selected groups of variables. The full sets of estimates are presented in Appendix Tables 2-4.

FAMILY BACKGROUND AND PARENTS' CHARACTERISTICS

The family has a profound influence on women's status as evidenced by the impact that parents have on their daughters' education, timing of marriage, and labor market attachment. Father's education, which serves as a proxy for permanent household income and thus measures the amount of resources available to finance children's education, exerts a positive effect on the education level of children. However, this effect is significant only in urban areas. In low-urban families, a one per cent increase in father's education, ceteris paribus, would raise the education of sons and daughters by 11 per cent; in middle-urban families, the effect is lower at 7 per cent. The effect of father's education becomes more interesting in the light of the effect of mother's education. The impact of mother's education is significant and larger than that of father's education in the case of daughters. Its effect is largest in middle-urban families where a one per cent increase in mother's education raises the educational level of daughters by 15 per cent. Its effect is slightly weaker in low-urban and rural families at 12 and 11 per cent, respectively (Table 4).

Neither father's education nor mother's education appears to influence their daughters' type of occupation. This is partly because daughters' education already captures the effect of parents' education on their work aspirations. However, mothers'education seems to have a perverse effect on her sons' labor force participation: significantly negative effect is obtained in middle-urban families indicating that sons are less likely to be in any occupation and more likely to be out of work if their mother is more highly educated. This result is interpreted to mean that sons are more likely to stay longer in school when their mother has a higher education. The latent job category in the logit estimation includes those who were full-time students.

Mother's age at marriage also has a significantly positive effect on children's education. In the specifications where the coefficients are statistically significant, their signs are positive and indicate an effect mostly larger in magnitude than that of father's

or mother's education. These results imply that families in which mothers marry later tend to provide greater education for children. Mother's age at marriage also affects children's timing of marriage, though the direction of this effect is not clear. In middle-urban Manila, daughters of women who marry later tend to marry at an earlier age. In contrast, the effect is significantly negative for sons in rural areas. Since mother's educational attainment is controlled for and the difference between that and father's education, mother's age at marriage is not a proxy variable for her education but really for her role or status in the decision-making process in the family, it is contended that mothers who did not marry at very young ages tend to have a stronger position in the family's decision-making than those who did.

Table 4. Elasticities at Means from the Education Equation

Variables	Middle-Urban		Low-Urban		Rural	
	Males	Females	Males	Females	Males	Females
Father's schooling	.07*	.07	.11**	.11**	-.01	.04
Mother's schooling	.11**	.15**	.09**	.12**	.07*	.11**
Father in white-collar job	.01	.01	.01	.003	.003	.0003
Father in farming	-.04**	-.05**	-.004	.02**	-.01**	-.07**
Mother with no occupation	-.03	-.05**	.01	.005	-.08**	.01
Mother in farming	-.004**	-.004**	-.01**	-.01**	-.01**	-.02**
Father living	.01	-.004	-.02	.04	.13**	.12**
Mother living	.004	-.01	.03	.02	.04	.08
Mother's age at marriage	.14	.22**	.42**	.28**	.12	.32**
Parents own land	.05**	.04*	-.005	.01	.07**	.04**

Notes: * Significantly different from zero at the 10% level.
        ** Significantly different from zero at the 5% level.

Parents' occupation provides a proxy measure for permanent family income. Although a three-way distinction is made among the occupation groups, no difference between "white-collar" and "blue-collar" fathers is found, but a significant difference between farmer fathers and "blue-collar" fathers is observed. The results indicate that children of farmer fathers have about 5 per cent less education in the middle-urban samples, 1 and 7 per cent less for the rural males and females, respectively. The exception is low-urban females for whom the effect is small but positive. These slum dwellers who have farmer fathers may have had a more steady source of funds for education than those whose fathers were engaged in blue-collar work, especially if they are of low skill and hired as casual workers. The effect of a mother having a farm occupation has a similar, although smaller effect as father's farm occupation.

Mothers in farming, those with non-farm occupations, and those with no occupation are the three groups of mothers considered in this study. Daughters of mothers with no occupation tend to have less education than daughters of those who do. There is no effect on sons' education levels.

Mother's type of occupation seems to be an important factor of nuptiality only in low-urban Manila. Whether the mother has an occupation or not affects her children's timing of marriage: those whose mothers have no occupation tend to marry earlier. For the rest of the samples, mother's type of occupation does not have a significant effect apart from its impact via the educational attainment of children. Father's type of occupation also exerts greater influence on the timing of marriage of children. A weak pattern that emerges is that sons but not daughters of fathers with a white-collar occupation tend to marry later.

How does mother's labor market attachment affect daughter's work participation rates and type of occupation?[13] The logit estimates show that non-participation of mothers in the labor force tends to decrease the likelihood that daughters will work outside the home. This effect is evident in the low-urban and rural areas, but not in the middle-urban sample. Moreover, in the rural sample, if the mother is a farmer, the probability that her daughters will also engage in farming is greater. In low-urban families, if the mother is a farmer, her daughters are more likely to be out of the labor force. In general, the results suggest that both sons and daughters are more likely to choose farming as their occupation if their parents were farmers themselves, but that this choice of occupation does not seem to depend crucially on land ownership. The land variable coefficients in the rural sample are negative for sons, suggesting that the wealth effect dominates the greater opportunity cost of sons' time in landed families. Moreover, the wealth effect also seems to result in sons being more likely to stay in school longer.

Lastly, land ownership has a positive effect on children's education; this effect is statistically significant in middle-urban and rural families. Education levels are 4 to

7 per cent higher among children in families with land. Since family size (which indicates the size of the potential family labor force) is controlled for, the land variable measures its wealth effect on education rather than the opportunity cost of children's time in farm production. However, land ownership does not appear to influence timing of marriage of children, except that of females in middle-urban Manila, for whom the effect is to increase the probability of marriage.

In summary, the findings on the effect of mother's education and age at marriage, as well as mother's occupation and labor force attachment, suggest that mothers have a large degree of influence on the educational attainment, marriage and jobs of their children. First, mother's characteristics tend to be mirrored in her daughters, and the extent to which she can affect family choices determines the relative outcomes about sons and daughters. Women who had benefited from higher education and from such activities as work appear to transmit to her children higher educational aspirations, thus providing one mechanism by which gender inequality and status of women are transmitted between family generation. This is consistent with findings from Porio et al. (1975) that, generally, the wealthier and more highly educated urban dweller has a greater tendency than others to report joint husband-wife decision in various areas of influence including family investments and children's schooling. Further, in certain occasions where the wife is the main source of economic support, she exerts more authority in the family (Mendez and Jocano, 1974). Some observers also claim that the Philippines has a matriarchal society, emphasizing the degree of influence mothers have in the household; however, it is an "underworld matriarchy," that is, ostensibly, it is a man's world but the women rule without anybody but themselves knowing it (Nakpil, 1963).

FAMILY SIZE AND BIRTH ORDER

How are one's sibsize and educational attainment related? The positive effect of sibsize on the educational attainment of the children confirms the claim that the family is an important network of support in which members who have gainful employment and are able to supplement the family resource do so, directly or indirectly, for such expenditures as education for their siblings. This study differs from many earlier studies of the quantity-quality relationship in that we mostly observe completed schooling levels of adult children is observed. The results depend less on differences in the timing of schooling of children within the family. If older siblings provide support for younger siblings, then the timing of schooling and education levels may be affected by the availability of this assistance.

The estimated sibsize coefficients are significant in only a few equations, but where significant, their main effects are positive.[14] This is contrary to the hypothesis from the quantity-quality interaction discussed above. However, if we control for parity, the expected negative relationship between family size and education levels is obtained. Among

first-borns, those who belong to a larger sibset tend to have lower education attainment.[15] Or, alternatively though first-borns tend to have higher schooling levels than laterborns, this effect is diminished somewhat if they come from a large family. This first-born-sib-size interaction variable is statistically significant for middle-urban males only.

SIBLING CORRELATION

The degree of intrafamily correlation in schooling levels (Table 5) is computed. This index varies widely across the samples and there is a tendency for education levels of siblings of the same sex to differ. In particular, the low correlation among daughters in low-urban families and in rural families suggests that other factors besides family-specific unobservable variables, such as different attitudes towards the education of boys and girls in the education outcomes of females, explain individual education levels among daughters. Further, the results are consistent with the view that poorer parents may be choosing a strategy investment in child schooling that uses their information on which child is more enthusiastic about completing higher education and on which child is more able to do so. The relatively higher sibling correlation in the middle-urban families may be reflective of the ability of parents to afford more equal education among their children and also of a greater felt need to provide higher education for both sons and daughters.

Table 5. Correlation Coefficients of Schooling Levels of Siblings

Middle-Urban Males	.41
Middle-Urban Females	.50
Low-Urban Males	.42
Low-Urban Females	.29
Rural Males	.31
Rural Females	.29

The results show that those belonging to larger families tend to marry earlier. One explanation for the negative relationship between sibsize and age at marriage is that family resources may be spread too thinly among family members in larger families, thus making living at home longer relatively less attractive than in smaller families. Hence, early marriage is a way of seeking economic relief, given the constraints on family resources. However, in low-urban families, first-born daughters are likely to delay marriage if they belong to larger families.

EFFECTS OF EDUCATION

How does a woman's education level influence her nuptiality and labor market attachment? A major question that past studies have addressed is the direction of the

causation between educational attainment, on the one hand, and timing of marriage and age of entry into the labor force, on the other (for example, Marini, 1978, and Waite and Spitze, 1981, for the U.S.). The estimates in this study imply that educational attainment does not significantly affect the timing of marriage, except in the case of low-urban males where higher education appears to delay it. This result is surprising since it is expected that the pursuit of higher education generally necessitates delay of marriage.

Higher educational attainment is expected to be positively associated positively with having a white-collar job, and less with having a blue-collar job or being a farmer. In fact, it is expected education to be negatively associated with being a farmer in the rural samples. Because of the low incomes of farmers in general, relatively more educated women residing in rural areas who have no employment opportunities in white-collar jobs may, in fact, choose not to work outside the home. The decision to work outside the home of more educated women depends less on the family's economic need than on their relative valuation of leisure and the non-pecuniary benefits of having an occupation.

Education has the expected effect of increasing the likelihood that individuals will have a non-farm occupation, particularly white-collar jobs, rather than farming. For example, at the mean sample probabilities, a 1 per cent increase in education levels increases the probability of being in a white-collar job or blue-collar job for rural women

Table 6. Effect of Education on Type of Occupation: First Derivatives from Logit Estimates (in per cent)

Variables	Middle-Urban		Low-Urban		Rural	
	Males	Females	Males	Females	Males	Females
White-collar	5.13**	1.01**	-0.88	4.94**	16.19**	3.97**
Blue-collar	6.66**	1.56**	-0.80	-0.30	7.71**	4.86**
Farming	4.68**	0.36	0.36	1.27	14.43**	0.59

Notes: * Significant at the 10% level; two-tailed test.
        ** Significant at the 5% level; two-tailed test.

by 4 and 5 per cent, respectively, and farming, by 0.6 per cent. For rural men, the corresponding probabilities are 16, 8, and 14 per cent. Hence, it appears that in rural areas relatively higher education is more likely associated with non-farm occupations among women and with white-collar jobs and farming and less so with blue-collar jobs among men. In low-urban areas, the impact of education on type of occupation is not clear for men, but it most definitely increases the probability that women will have white-collar jobs (Table 6).

The positive linkage between education and occupation defines an effective means for upward mobility for these daughters which would be beneficial not only for themselves but also for their families. As acquired training and skill are translated into activities that provide not only financial rewards but also some sense of fulfillment, they become acceptable alternatives to another means of status achievement which is early marriage. With reference to the role of the parents in children's educational outcomes, the investments of the parents on education are far reaching as they are filtered down through the various life stages and decision points of the children.

MARITAL STATUS

The influence of marital status on labor force participation and type of occupation runs in opposite directions for males and females. While being married greatly increases the likelihood that men will participate in the market, being married actually diminishes the labor force participation of women (Table 7). The findings of this study contribute to the evidence in the literature about the primacy of being a wife and mother for women in most developing countries and in the literature about the incompatibility between market work and this role.

Table 7. Effect of Marital Status on Type of Occupation:
First Derivatives from Logit Estimates
(in per cent)

Variables	Middle-Urban		Low-Urban		Rural	
	Males	Females	Males	Females	Males	Females
White-collar	36.24**	-9.15**	15.56**	-10.72	31.83**	-20.22**
Blue-collar	32.37**	-7.70**	35.35**	-12.10	25.81**	-15.92**
Farming	17.28**	0.54	17.44**	-0.04	26.23**	-0.37

Notes: * Significant at the 10% level; two-tailed test.
     ** Significant at the 5% level; two-tailed test.

SUMMARY AND POLICY IMPLICATIONS

In this study, changes in the status of women in the Philippines were presented, and the factors that shape status achievement within the family were explored. An improvement in status, is meant a broadening of the set of adult outcomes and economic resources available to women in the family and society.

The effect of parent's education on the educational outcomes of their children suggests that gender inequality and status of women are transmitted across family generations. The mother's characteristics are passed on to her daughters and the extent to which she influences family choices appears to determine the relative outcomes of sons and daughters. Mothers emerged as the key influence to status attainment through education. Mothers who are more highly educated, who married later, and who worked in the labor market are more likely to share in decision-making in the household. Conversely, children whose parents are themselves of low status -- with low education and very limited capacity to invest in education for the children -- are at a great disadvantage. Given the costs involved in education, the government policy of mass education should be strongly supported and supplemented with programs that could help ease the constraints faced by families in allocating resources for their children's education.

That there is no significant difference in the level of education achieved by sons and daughters partly implies that, on average, parents expect the net return to schooling of daughters to be comparable with that of sons. Higher education may be viewed as a way of improving the chances of women in the highly competitive job market. This attitude appears to be more predominant in the middle-urban areas where job requirements hinge more on education and specific skills rather than on gender. The slightly perceptible advantage of sons over daughters in the low-urban areas, which is greater than that observed for the rural areas, may reflect the lower expectation of parents of the type of occupations that the daughters could have in the city. Sales and the service sectors absorb a large proportion of females in the labor force and it is conceivable that parents expect their daughters to end up with these types of jobs which do not require higher education.

Examining the other adult outcomes of the children shows that education of the children does not significantly affect the timing of marriage. In part, this result is due to the later ages of marriage of Filipinos. However, education improves the chances of obtaining non-agricultural jobs. In the estimation of the marriage timing, no information on occupation prior to marriage was available. This is a limitation in the analysis, given past studies which have shown that labor force experience prior to marriage has a delaying effect on entry to marriage (Domingo, 1982; de Guzman, 1984).

With education, women are able to make choices and to take advantage of opportunities for improved status. These choices and opportunities may be broadened with

economic development. If families maintain the apparent lack of sex discrimination in the household; if the favorable attitude of parents and of other members of the family about education is sustained by programs that make higher education more affordable, or by the daughters' own productive endeavors; if a larger segment of the female population would be encouraged to actively participate in the work force and feel a part of the whole process of development; if more would believe that they can achieve higher status through their own efforts; and if these attitudes and values are continued to be transmitted to succeeding generations; then, further improvements in the status of Filipinas would be assured.

ACKNOWLEDGEMENTS

NOTES

[1] Increased education and labor force participation among women have also delayed their entry into marriage (de Guzman, 1984; Domingo 1982; Smith, 1978). This later age of marriage is potentially an effective means of reducing fertility rates, as in the period of initial decline in fertility during the 1960s. Recent trends, however, suggest that this negative effect on fertility has been offset by the counter effects of the age structure -- there has been substantial increase in the proportion of women in their early reproductive years and peak childbearing ages of 15-29 (DRDF, 1985).

[2] Other critical components of status of women include their legal status, rights to property, and political participation.

[3] Dr. Mercedes B. Concepcion of the University of the Philippines Population Institute directed the survey, in coordination with Dr. Peter C. Xenos of the East-West Population Institute, who served as overall coordinator for the four-country project which included Pakistan, Indonesia, and Thailand.

[4] Since the sibling sets in the analysis were surveyed because they contain at least one ever-married female aged 15-45 years, male-only sibling sets and sibling sets with no ever- married females in the populations were systematically excluded, resulting in sampling bias. This will be kept in mind in the interpretations of the findings.

[5] Since an early check on dead siblings showed that most died at preschool or early school-age, only living siblings are included in the analysis of educational attainment and timing of marriage. However, the sibsize variable will refer to all live births of mothers.

[6] The AMS did not collect a measure of labor force participation rate of siblings that is comparable with the standard labor force surveys. This is not necessarily a drawback since it is not the goal of this study to measure unemployment or employment rates. Instead reported current occupation which does not reflect short-term unemployment or spells outside the labor force, but which may be a sufficient indicator of longer-term attachment to the labor force (except for students) is analyzed.

[7] A larger proportion of sons than fathers are not employed; this partly reflects the fact that younger males some are attending school longer. The proportion of professionals among the younger generation is more similar with the fathers in the urban areas. One notable difference between the two male generations is the lower proportion of agricultural workers in the younger generation. This is partly due to higher education increasing job opportunities in sectors other than agriculture, and to greater crowding and lower real wages in the agricultural labor market.

[8] In societies where the social norm is very low schooling levels for girls (and girls drop out before the age of menarche), the tendency will be for girls to marry early. There one might observe greater independence between the age of school-leaving and the specific age at marriage, as compared to societies where girls stay longer in school. Since schooling up to completion of the intermediate grades is compulsory in the Philippines and evidence suggests higher schooling levels for girls, greater interdependence between the school-leaving decision and timing of marriage is expected.

[9] Unfortunately, since the survey did not ask parents' year of birth, mother's age during the survey based on her reported age at marriage, the age of her first-born, and mean duration of the marriage-to-first-birth interval computed from World Fertility Survey (WFS) data on the Philippines (Hobcraft and McDonald, 1984) was computed. If the age of the mother's first- born child is not known, the age of the second-born is considered and adjusted further using WFS-based mean duration of the second birth interval. These WFS-based lengths of the first and second birth intervals were compared with durations derived from the present data, and were found to be approximately equal. The age- specific durations used in the imputation of mother's current age are found in King et al. (1986). For this imputation, it assumed that births occur only within marriage. No attempt to impute the current age of the respondent's father was made because doing so would require rather strong assumptions about nuptiality patters.

[10] Da Vanzo and Lee (1983) found that about one-third of Malaysian women engaged in sales and cottage industry occupations, such as weaving and dressmaking, bring their young children to work, suggesting that these occupations are more compatible with child

care. On the other hand, in farm jobs, even when children can accompany their mothers, women with infants generally work fewer hours than other women. Hill (1983), examining work choices by Japanese women, found them also to be less likely (by 16 per cent) to choose employment outside the home if they have preschool children.

[11] Since a large majority of the sample used in the empirical analysis are adults who have finished schooling, the statistical issue of right-censoring bias is not addressed due to observing children still enrolled in school.

[12] The Haggstrom linear approximation of the logistic regression is an easier computational alternative to conditional maximum likelihood estimation when analyzing more than a three- way choice.

[13] In evaluating the importance of parents' occupation as a determinant, its effect is likely to be diffused by the fact that individuals change occupations throughout their worklife. Parents' occupation is defined here as occupation currently held.

[14] Since it is expected that parent's fertility affect the level of investments that they make in their children, number of children enters as a regressor in the schooling equations of their sons and daughters. An instrumental variables estimation method is used to deal with the jointness and simultaneity of the quantity and quality of children decisions. In the parent's fertility equation, the relationship between indicators of mother's status, such as educational attainment and labor force participation, and total number of children is explored. We do not estimate a fertility equation for the second family generation because, whereas sibling data on the other outcomes are available, fertility behavior is known only for one female per sibship, namely, the survey respondent.

[15] These results appear to contradict well-documented birth order effects that show firstborns to have higher IQ and greater status achievement than laterborns (e.g., Lindert, 1977 and Blake, 1981 on the U.S.).

Appendix Table 1

VARIABLE DEFINITIONS

B30LESS   Birth cohort spline, if born in 1930 or before.

B3140   Birth cohort spline, if born in 1931-1940.

B4150   Birth cohort spline, if born in 1941-1950.

B5160   Birth cohort spline, if born in 1951-1960.

B6165   Birth cohort spline, if born in 1961-1965.

B66UP   Birth cohort spline, if born in 1966 and after.

AGEMISS   Equals 1 if age is missing, equals 0 otherwise.

FSTBORN   Equals 1 if first born in the family; equals
            0 otherwise.

SIBSIZE   Number of full siblings plus the female respondent.

CEBHAT   Estimated sibsize based on coefficients from fertility
            equation in Table 8.

FST_NUM   Equals FSTBORN*SIBSIZE; in the age at marriage and
            occupation equations, equals FSTBORN*CEBHAT.

ED   Highest grade completed at the survey date.

EDHAT   Estimate of years of education based on coefficients in
            estimates in Appendix Tables 4-6 for each country and
            each study area.

FFARMB   Equals 1 if the father was a farmer at birth; equals 0
            otherwise.

MFARMB   Equals 1 if the mother was a farmer at respondent's
            birth; equals 0 otherwise.

FWHITEB   Equals 1 if the father had a white-collar position at
            respondent's birth; equals 0 otherwise.

MNOOCCB   Equals 1 if the mother had no occupation at
respondent's birth; equals 0 otherwise.

FFARMM   Equals 1 if the father was a farmer at age of marriage;
equals 0 otherwise.

MFARMM   Equals 1 if the mother was a farmer at age of marriage;
equals 0 otherwise.

FWHITEM   Equals 1 if the father had a white-collar position at
age at marriage; equals 0 otherwise.

MNOOCCM   Equals 1 if the mother had no occupation at age at
marriage; equals 0 otherwise.

FFARMN   Equals 1 if the father was a farmer at the survey date;
equals 0 otherwise.

MFARMN   Equals 1 if the mother was a farmer at the survey date;
equals 0 otherwise.

FWHITEN   Equals 1 if the father had a white-collar position at
the survey date; equals 0 otherwise.

MNOOCCN   Equals 1 if the mother had no occupation at the
survey date; equals 0 otherwise.

FAEDUE   Continuous values for years of father's education.

MOEDUC   Continuous values for years of mother's education.

FALIVE   Equals 1 if father living during the survey.

MOLIVE   Equals 1 if mother living during the survey.

LAND   Equals 1 if the respondent owns land; equals 0
otherwise.

MARRIED   Equals 1 if married; equals 0 if not married.

WHITE   Equals 1 if have a white-collar occupation; equals 0
         otherwise.
         White collar includes the following categories:
             Professionals, Administrative positions, Clerical
             positions, Sales.

BLUE   Equals 1 if have a blue-collar occupation; equals 0
         otherwise.
         Blue collar includes the following categories:
             Service, Production, Transport Equipment,
             Operators, and Laborers.

FARM   Equals 1 if work is agriculture; and 0 otherwise.

NOOCC   Equals 1 if have no occupation; equals 0 otherwise.
         Includes the following categories:
             Housewife (for females), No Job/Unemployed,
             Students, Missing Values.

Appendix Table 2

EDUCATION REGRESSIONS

Variable	MIDDLE-URBAN				LOW-URBAN				RURAL			
	Male		Females		Males		Females		Males		Females	
	Coeff	t	Coeff	t	Coeff	t	Coeff	t	Coeff	t	Coeff	t
Intercept	2.092	0.83	8.922	3.36	9.054	2.39	9.404	2.35	7.274	2.32	6.983	2.42
B30LESS	-.233	-2.45	.181	1.88	.363	2.73	.321	1.75	.144	1.53	.258	2.26
B3140	-.007	-0.18	.051	1.26	-.052	-0.76	-.004	-0.08	.018	0.51	.064	1.50
B4150	-.043	-1.03	.023	0.60	.104	2.25	.074	2.00	.122	3.47	.051	1.39
B5160	-.110	-2.34	.016	0.43	-.029	-0.70	.015	0.39	.050	1.27	.099	2.65
B6165	-.067	-1.77	-.139	-5.20	-.028	-1.25	-.021	-0.97	-.075	-2.82	-.033	-1.40
B66UP	-.256	-10.02	-.204	-10.25	-.218	-10.71	-.237	-12.53	-.155	-9.83	-.203	-13.08
AGEMISS	9.538	10.28	8.585	9.70	5.553	5.44	5.408	6.71	a	a	a	a
FSTBORN	3.409	2.17**	-1.109	-0.97	-1.848	-1.28	-.535	-0.53	1.099	0.61	.911	0.78
FST_NUM	-.547	-2.54**	.153	0.88	.250	1.18	.143	0.89	-.205	-0.81	-.203	-1.16
CEBHAT	.066	0.37	.282	1.79*	.195	0.81	.124	0.77	.096	0.40	.171	0.77
FFARMB	-1.303	-3.37	-1.599	-4.40	-.078	-0.21	-.503	-1.97	-.562	-2.00	-.650	-2.37
MFARMB	-3.388	-5.23	-2.209	-2.06	-1.145	-1.82	-1.217	-3.29	-1.535	-3.79	-1.581	-3.72
FAEDUC	.089	1.90	.081	1.50	.813	1.51	.237	0.60	.944	1.59	.159	0.17

Appendix Table 2: (concluded)

| Variable | MIDDLE-URBAN | | | | LOW-URBAN | | | | RURAL | | | |
| | Male | | Females | | Males | | Females | | Males | | Females | |
	Coeff	t	Coeff	t	Coeff	t	Coeff	t	Coeff	t	Coeff	t
MOEDUC	.157	3.22	.222	3.98	.181	0.59	.060	0.27	-.709	-2.56	.098	0.34
FWHITEB	.420	1.12	.390	1.06	.140	2.55	.139	2.64	-.006	-0.10	.070	1.26
MNOOCB	-.433	-1.48	-.714	-2.47	.138	2.14	.188	3.13	.130	1.90	.196	2.96
FALIVE	.172	0.52	-.057	-0.19	-.186	-0.57	.413	1.63	1.070	3.35	.946	3.31
MOLIVE	.046	0.11	-.144	-0.34	.226	0.48	.228	0.68	.337	0.76	.623	1.46
LAND	.760	2.33	.602	1.89	-.073	-0.23	.142	0.64	.801	3.17	.472	1.95
MAGEMAR	.074	1.35	.107	2.20	.178	2.08	.120	2.21	.044	0.79	.101	2.07

Log-likelihood	-5.955		-8737		-4484		-5712		-8479		-11907	
Correlation	0.4114		0.4999		0.4253		0.2902		0.3115		0.2947	
# Families	279		315		255		306		354		393	
# Observations	784		1143		748		997		1078		1474	

Notes: a

No one with age missing.

Appendix Table 3

LOGIT ESTIMATES OF TYPE OF OCCUPATION EQUATIONS

Variables	MALES			FEMALES		
	Wh C	B1 C	F	Wh C	B1 C	F
A. Middle-Urban Sample (N=773 m, 833 f)						
Intercept	5.14**	10.96**	4.30**	-1.00	-2.00	-7.39
Born 1930 or before	0.25	0.48**	0.48**	-0.01	0.03	0.02
Born 1931-40	0.01	0.04	-0.10	0.00	-0.01	-0.09
Born 1941-50	-0.01	0.04	0.13*	0.01	-0.03	0.08
Born 1951-60	-0.31**	-0.21**	-0.22**	-0.12**	-0.07*	-0.11
Born 1961-65	-0.34**	-0.38**	-0.33**	-0.05**	-0.04	0.09
Age missing	10.50**	7.02**	11.81**	-0.36	-0.77	-0.89
Firstborn	-0.03	0.79**	1.49**	-0.28*	-0.23	-0.62
Education	0.24**	0.29**	0.49**	0.05	0.20*	0.25
Father, farmer	1.03**	0.82*	4.33**	-0.21	0.12	1.91**
Mother, farmer	-0.66	0.47	3.86	-0.01	2.24**	3.93*
Father, white-collar	0.44	0.32	0.60	0.20	-0.43**	-0.22
Mother, no occupation	-0.11	0.12	0.98**	-0.16	0.20	0.36
Father's education	0.10	0.01	-0.13**	0.03	-0.04	-0.08
Mother's education	-0.16**	-0.22**	-0.25**	0.01	-0.04	-0.02
Owns land	-0.06	-0.36	0.02	0.04	-0.17	-0.21
Whether married	1.72**	1.40**	1.81**	-0.45**	-0.97**	0.38
SSE	53.76	59.76	33.41	191.84	82.61	16.02
Sibling correlation	.102	.068	.113	.141	.048	.141
Percent of sample	0.303	0.366	0.107	0.281	0.087	0.015
B. Low-Urban Sample (N=732 m, 1011 f)						
Intercept	-7.12	2.61**	-20.83**	2.34**	7.13**	-32.10
Born 1930 or before	-0.20	0.04	-0.95**	0.28**	0.35**	-0.89**
Born 1931-40	-0.23**	-0.08	-0.08	0.10	0.05	-0.21**
Born 1941-50	-0.04	0.03	0.00	-0.14*	0.01	-0.20**
Born 1951-60	-0.22**	-0.24**	-0.22**	-0.09**	0.03	-0.02**
Born 1961-65	-0.22**	-0.38**	-0.24**	-0.06**	-0.14**	0.05**
Age missing	5.16**	7.00**	7.29**	-0.06	0.62	-0.77**
Firstborn	-0.10	0.06	0.09	0.27	0.54*	0.73**
Education	-0.07	-0.03	0.03	0.41**	-0.02	0.65
Father, farmer	-0.11	-0.28	1.86**	-0.16	-0.19	1.25**

Appendix Table 3: (continued)

Variables	MALES			FEMALES		
	Wh C	B1 C	F	Wh C	B1 C	F
Mother, farmer	1.10*	2.12**	3.47**	-0.89**	-0.73	3.35
Father, white-collar	-0.06	0.34	-0.23	0.00	0.75*	-1.26**
Mother, no occupation	0.16	0.44	-0.04	-0.74*	-0.39	-0.90
Father's education	0.16	-0.02	-0.05	0.08	0.08*	0.13
Mother's education	-0.07	0.03	-0.04	-0.01	-0.07	-0.27**
Owns land	0.62	0.27	0.63 ^{f}	0.30	0.00	1.02**
Whether married	1.31**	1.47**	1.52**	-0.89**	-0.82**	-0.02
SSE	53.76	59.76	42.91	90.38	124.95	19.41
Sibling correlation	.090	.053	.186	.176	-.008	.136
Percent of sample	0.138	0.406	0.132	0.138	0.177	0.023

C. Rural Sample (N=1070 m, 1471 f)

Variables	MALES			FEMALES		
	Wh C	B1 C	F	Wh C	B1 C	F
Intercept	-11.38	2.14**	-4.94	0.97	6.32**	-4.84
Born 1930 or before	-0.24	0.03	-0.19**	0.06	0.28*‡	-0.06
Born 1931-40	0.01	0.03	-0.05**	0.06	0.10**	-0.12*
Born 1941-50	0.00	0.01	-0.07**	-0.00	-0.02	0.00
Born 1951-60	-0.21**	-0.11	-0.14**	-0.17**	0.07**	-0.06
Born 1961-65	-0.27**	-0.37**	-0.28**	-0.13**	-0.14**	-0.10**
Age missing	a	a	a	a	a	a
Firstborn	-0.04	0.34	0.48**	0.61**	0.34	0.11
Education	0.99**	0.48**	0.64**	0.33**	0.22**	0.08
Father, farmer	0.16	-0.82**	0.34	0.17	0.18	0.81**
Mother, farmer	1.18	1.47**	2.27**	-0.29	0.15	1.71**
Father, white-collar	3.63**	-0.17	-0.11	-0.71	-1.53**	-1.23**
Mother, no occupation	0.70*	0.62*	0.94**	-0.53**	-0.38*	-0.36
Father's education	0.06	-0.05	-0.07	-0.02	-0.01	0.09
Mother's education	-0.03	-0.02	-0.04	-0.05	-0.09	-0.06
Owns land	-0.99**	-0.56	-0.81**	-0.09	-0.34*	-0.35
Whether married	1.95**	1.61	1.16**	-1.68**	-0.72**	-0.05
SSE	44.27	66.65	77.16	139.46	250.34	91.16
Sibling correlation	.025	.073	.099	.073	.141	.134
Percent of sample	0.206	0.200	0.348	0.140	0.330	0.081

Notes: a

    No one in category

  *

    Significant at the 10% level; two-tailed test.

  **

    Significant at the 5% level; two-tailed test.

Appendix Table 4

AGE AT MARRIAGE EQUATIONS PROPORTIONAL
HAZARD ESTIMATES

Variable	MIDDLE-URBAN				LOW-URBAN				RURAL			
	Male		Females		Males		Females		Males		Females	
	Coeff	s.e.	Coeff	s.e.	Coeff	s.e.	Coeff	s.e.	Coeff	s.e.	Coeff	s.e.
INTERCEPT	2.504	.532**	1.993	.453**	-5.199	3.941	1.241	.787	3.203	.553**	2.664	.461**
B30LESS	-.031	.026	-.055	.019**	-.384	.196**	-.090	.032**	-.021	.021	-.011	.019
B3140	-.009	.007	-.011	.008	-.027	.010**	-.006	.008	.001	.007	-.011	.007
B4150	.001	.006	.007	.004	-.036	.008**	-.010	.008	.011	.006*	-.001	.005
B5160	-.011	.007	-.024	.004**	.011	.008	-.025	.005**	-.001	.005	-.014	.005**
B6165	.038	.016**	.019	.008**	.038	.015**	.016	.005**	.028	.011**	.016	.005**
B66UP	.108	.018**	.133	.011**	.130	.022**	.159	.015**	.108	.012**	.159	.010**
FAEDUC	-.004	.006	.004	.005	-.021	.015	-.004	.010	.005	.008	.002	.007
MOEDUC	.0004	.008	.003	.008	-.016	.012-	.004	.010	.007	.009	-.004	.009
FWHITEN	-.093	.050*	-.035	.043	-.136	.074*	-.022	.051	.028	.082	-.048	.106
FFARMN	-.046	.062	-.023	.049	.111	.070	.198	.063**	-.038	.033	-.035	.029
MNOOCCN	.034	.040	-.016	.041	.127	.050**	.093	.048*	-.011	.038	.001	.043
MFARMN	.155	.138	-.018	.104	.452	.145**	.288	.172*	.163	.154	-.072	.070
MAGEMAR	.003	.005	.012	.005**	-.011	.010	-.006	.007	-.006	.004*	.005	.004
LAND	.033	.048	.074	.033**	-.042	.046	-.017	.032	.006	.036	.013	.026
FALIVE	.001	.053	-.056	.037	-.052	.055	-.057	.045	.050	.060	-.005	.048
MOLIVE	-.098	.059*	-.029	.049	-.144	.072**	-.052	.061	.033	.051	.039	.054
FSTBORN	.082	.141	.008	.116	.259	.168	.171	.098*	.105	.118	.099	.109
FST NUM	-.010	.021	.001	.016	-.025	.020	-.028	.015*	-.012	.014	-.013	.015

Appendix Table 4: (concluded)

| Variable | MIDDLE-URBAN | | | | LOW-URBAN | | | | RURAL | | | |
| | Male | | Females | | Males | | Females | | Males | | Females | |
	Coeff	s.e.	Coeff	s.e.	Coeff	s.e.	Coeff	s.e.	Coeff	s.e.	Coeff	s.e.
SIBSIZE	.021	.008**	.014	.006**	-.003	.008	.012	.006**	-.013	.007*	.016	.005**
EDHAT	.008	.029	-.022	.019	.124	.063**	.030	.047	-.023	.031	.001	.024
LNSIGMA	-1.331	.036**	-1.341	.035**	-1.409	.053**	-1.300	.039**	-1.410	.035**	-1.326	.036**
Log-likelihood	-309.2		-427.5		-246.9		-375.3		-275.3		-454.4	
Chi-square	58.6**		192.0**		176.7**		226.6**		94.1**		74.5**	
Correlation	.121		0.084		0.238		-0.049		-0.002		0.048	
# Families	279		322		246		324		351		395	
# Observations	734		1096		646		891		986		1387	

Notes:

    s.e. Standard errors

      * Significantly different from zero at the 10% level.

     ** Significantly different from zero at the 5% level.

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