

The ‘Nowhere’ Children: Patriarchy and the Role of Girls in India’s Rural Economy¹

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Abstract

The paper is motivated by an apparent paradox – boys seem to participate more both in the labour market and in school than girls. This pattern breaks down once we take the household work done by girls into account. In this paper, we find that there is symmetry between the factors that make women’s contribution to the household economy less ‘visible’ than men’s and the factors that reduce girl’s involvement in outside work. Both are related to the kind of socio-cultural environment in which households operate in India. Analysing the School, Work and household chores options for girls, we find that the kinship system prevalent in different regions as well as amongst different religions and castes is a significant determinant of these choices. In addition, we find that increases in household income do not decrease the probability of girls doing household chores, reinforcing our conclusion that non-economic factors are important. Our results confirm, once again, that while daughter’s labour complements mother’s work within family enterprises, it substitutes for mothers in household chores when the mother works outside the home.

Keywords: Child work, Girl child, kinship systems, patriarchy, household chores, India

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I. INTRODUCTION

Much of the literature concerning the time allocation of girls between school and work concludes that ‘girls are less likely to work than boys and also less likely to go to school’ (Deb and Rosati, 2002), giving rise to the term ‘the nowhere children’. However, this clearly contradicts sociological and anthropological studies which chart, in detail, the work done by girls within households in the developing world. Nieuwenhuys (1996), for instance, estimated that in India alone more than 100 million children (both boys and girls) were engaged in unpaid domestic labour. In general, while girls were expected to help their mothers in maintaining family well-being, boys were expected to help in income generating activities. Nieuwenhuys (1996) calculates that boys spent approximately 5 hours in domestic and non-waged labour and girls spent 6.5 hours a day in such work.

This apparent contradiction arises, partly at least, because of the different definitions of work used in the literature. While the Economics literature concentrates on paid work for which data is more easily available, the sociological and anthropological literature considers all work (both paid and unpaid) done by children. Within the Economics literature, therefore, two main options – work and school – are considered, though from time to time, there are references to a third (neither work nor school) category. Very few papers, however, have explicitly modelled this residual category (Duraismamy, 2000) though many writers recognise that this ‘no activity’ category may ‘correspond to heavy engagement in domestic chores’ (Bhalotra, 2000). Bhalotra (2000) therefore argues that the ‘existence of the no-activity category underlines the fact that one needs to be careful about assuming that actions which release children from work will also put them in school’. Some researchers (Assaad et al, 2002) aggregate household work with market work. However, given the different factors determining these two types of work as well as the gender of those undertaking each type of activity, the results obtained are likely to be very hard to interpret.

In this paper, therefore, we take a step away from the existing literature and explicitly model the contribution that girls make to the rural economy in India through their involvement in household chores. We model this in the context of the very different institutional and familial arrangements for girl children prevalent in different parts of India. We find that it is not that girls do much less than boys but that they do very different types of activities than boys. Thus, girls in rural India are more likely to be involved in household chores than in work outside the home. Analysing the reasons for this within a multivariate probit model, we find that the patriarchal kinship system is a significant factor as are household income levels and mother's employment and wages, for example.

The paper makes three main contributions to the literature. The first contribution, as detailed above, is in the approach adopted. We estimate household chores as an explicit, alternate choice to school and paid work for girls. As far as we are aware, this is the first explicit analysis of the determinants of the work done by girls. Given that girls are more involved in unpaid work within the household than in paid work outside the home, our approach avoids the bias that could arise from subsuming chores into the work category. The approach allows for the possibility that the same factors may have quite different effects on the probability of work and chores. Thus, a socio-cultural environment, which decreases female independence outside the home, could reinforce the probability of girls doing household chores but would certainly not increase their probability of working outside the home. We test this separation between paid and unpaid work using a likelihood ratio test in this paper.

Second, this is the first paper, to our knowledge that brings together the literature on kinship systems with that on child work. Given that our primary concern in the paper is the role of the girl child and given very different attitudes and norms towards the freedom of, and expectations from, girl children in India, it is very likely that attendance in school as well as involvement of girl children in work inside and outside the home will vary across India. In this paper, we make use of Dyson and Moore's (1983) categorisation of Indian states based on their kinship systems to consider whether the role played by girl children in rural India is influenced by patriarchy.

Third, most literature to date (Duraismamy, 2000; Cigno and Rosati, 2000) has used the multinomial logit (MNL) model in estimating the various choice alternatives for children. However this model, though computationally straightforward, assumes that the alternatives (SCHOOL, WORK, CHORES)² are independent of each other so that the relative probabilities are also independent of each other. This is a very restrictive assumption and has not, to our knowledge, been explicitly tested. In this paper we estimate both the multinomial logit (MNL) and the multivariate probit (MVP) models and test the appropriateness of the former using the Hausman test. This test rejects the MNL methodology, as we will see. We therefore concentrate on the MVP model which does not make very restrictive assumptions but is computationally more complicated.

II. Background

Our analysis is grounded in Becker's framework of household utility maximisation, which is often used to analyse the work-schooling decisions of children. Individuals within this framework maximise utility over a lifetime and the household is seen as a single decision making unit within which parents are altruistic and therefore will consider the best interests of their children when making decisions. The framework also assumes perfect credit and insurance markets that enable families to borrow against the future and thus smooth consumption over their lifetimes and maximise utility.

Within Becker's framework, parents will invest in each child in such a way as to maximise the expected wealth of the entire family and this may mean greater investment in some children (older children/boys), while providing compensatory transfers to others (eg. younger children or girls³) to equalise welfare across children. An analysis of the existing literature reveals that two broad factors can be identified as determining which children are invested in – the comparative advantage of each child in different jobs and sibling rivalry.

² Most papers to date have estimated it with four alternatives (SCHOOL; WORK; SCHOOL AND WORK; NEITHER SCHOOL NOR WORK).

³ Dowries are often seen in terms of such compensatory transfers in a context where returns to education are different between girls and boys.

Edmonds (2002) argues that if the returns to education for each child are the same and if child *i*'s marginal product in household production is higher than child *j*'s marginal product, then child *i* will devote more time to household production. Relaxing the assumption of equal returns to education for all children will reinforce this result, so that when the returns to education for boys are greater (see Kingdon and Unni, 2001; Duraiswamy, 2000) than the returns for girls, then the comparative advantage of boys in education is further reinforced.

The comparative advantage of children in various activities need not be determined by purely monetary factors. It is likely, for instance, that the socio-cultural environment in which a child lives will determine its relative advantage in different activities. Many writers argue that the fact that girls get married and leave their natal home in India implies that the returns to parents from girl's education will be lower. This is reflected in a common saying in India, 'educating daughters is like planting seeds in a neighbour's field'. Dyson and Moore (1983, p.44), in their study of kinship patterns in India suggest that, 'because women are out-marriers, parents can expect little help from their daughters after marriage, whereas sons will remain at home'. Any investment in boys therefore helps maximise household lifetime utility whereas investment in girls leaks out to another household.

Followed to its logical conclusion, such a pattern of costs and benefits should lead parents to invest in a boy's education and to send girls out into the labour market (a practice that is common in many parts of East and South East Asia (Parrish and Willis, 1993)). In South Asia, however, this does not happen because the patriarchal kinship system also dictates that family honour may depend on the priority of patriarchal descent, which is ensured by secluding women, curtailing their activities outside the house and marrying them off at very young ages (Kishor, 1993, p.248). Such a kinship system makes parents fearful of exposing girls to outside influences and therefore reduces the returns to both education and employment, while increasing the returns to proficiency in household chores (including an increase in the probability of marriage). Bennett (1992), for instance, argues that there is a clear 'inside-outside' demarcation with respect to activities undertaken by household members in India. 'The marketplace, 'outside', where livelihoods are earned and economic and political power transacted, is perceived to be a predominantly male domain,' (p.1). This affects the kinds of jobs women seek

and for which they are considered suitable. It will also influence whether families consider it appropriate to send girls *out* to school or work. In this context, an important discriminating factor is also whether the work being done is *for the family* or for the market⁴.

This, however, would not be true throughout India, given the different kinship systems prevalent in different regions of the country (see Section III.3) and amongst different castes and religions. Kabeer (2003) argues that the ideal-typical household based on patriarchy-patriliny-patrilocality occurs most frequently in the Northern plains of India, among Muslim groups, Caste Hindus and landowning classes (p.116). With the South Indian system being so different, Dyson and Moore (1983) suggest that India is the meeting point between two socio-economic world formations – a ‘West Asian’ kinship system characterising the Northern plains and the more egalitarian South East Asian kinship system in the South (Kabeer, 2003). This could be why the participation of girls both in schooling and in the labour market (Kambhampati and Rajan, 2004b) is higher in South India than in North India. An interesting aspect of such a time allocation is that it would not be particularly related to household income because however well off the family, they would be unlikely to send girls out of their homes.

Another argument has been put forward to explain why even amongst children of the same gender and family, some are more disadvantaged than others. In our present context, this argument can explain both why girls are at a disadvantage and also why amongst girl children, certain children (eg. the eldest) are at a further disadvantage. The argument articulated by Garg and Morduch (1998) states that a combination of time and budget constraints together with the household composition set up patterns of underinvestment in human capital. In the standard household model, parents invest in each child until marginal revenue from such investment is equal to marginal costs. In the presence of budget constraints, however, marginal revenue to such investment is usually greater than the marginal costs of such investment and therefore rivalry will develop between children for resources ‘even in the absence of strategic behaviour by any family members’ (p.3). Garg and Morduch (1998) therefore conclude that since boys

⁴ We distinguish between inside and outside work for women by including 2 separate variables for mother’s employment – MOTHER_SELFEMP (which indicates mothers who are employed in family enterprises and on family farms) and MOTHER_EMPLOY (which indicates mothers employed outside the home). This distinction between work done inside and outside the home is also reflected in the visibility of female work relative to male. Sen (1980) argues that this, in turn, decreases female bargaining power within households.

have higher returns to education they get more resources. They also find, for instance, that a child who only has sisters is 50% more likely to be in secondary school than a similar child with brothers. This is also true for standard health measures. While brothers may provide some benefit by increasing the pool of resources to be allocated, this is only likely to occur in the future.

The comparative advantage and sibling rivalry explanations result in gender differences if one assumes that girls are better at household production, for example, and boys at outside work, and in birth order effects if one assumes that children get better at such work as they grow older. Thus, though many studies find that parents invest more (both in terms of time and money) in older children, these children will also usually be the first to move into paid labour (boys) and household production (girls), when the family is faced with budget and credit constraints (because of their relative comparative advantage in such activities). In this context, one may expect the oldest girl child to be doubly disadvantaged – both by her gender and by her birth order.

III. Data and Methodology

III.1. Data

The data are from the 50th round of the household socio-economic survey, conducted by the National Sample Survey Organisation in India. The dataset is large and complex and includes socio-economic information for 356,352 individuals belonging to 69,231 rural households across all the states and Union Territories in India. Since this round of the survey was focussed on consumer expenditure and employment and Schedule No.10 itself concentrates on education and employment issues, we have detailed information on the educational status and economic activity of members of each of the households in the survey. The dataset thus provides us with exhaustive information on the work and schooling status of children in these households, and the educational and employment status of their parents thereof. Our sample in this paper is restricted to 21130 girls between 10-15 years of age.

INSERT TABLE 1

Table 1 considers the school and work experience of the oldest boy and girl children in each household. It indicates that while 74% of the oldest boys in our sample go to school, only about 59% of oldest girls in a family go to school. Thus, significantly more boys (15% more) than girls go to school. While 8% of oldest girls work outside the home, 10% of oldest boys do and finally, and most tellingly, while 15% of oldest girls are engaged in household chores to the exclusion of school and paid work, only about 1% of oldest boys spend their entire time doing household chores.

INSERT TABLE 2

Table 2 considers the level of educational achievement of children by birth order. We note that while 69% of first born girls have below primary level education (36% illiterate and 33% below primary), 81% of second borns and 89% of third borns have below primary education. Similarly, the figures are 60% for first borns, 79% for second- and 88% for third born boys. Thus, older children (both boys and girls) are more likely to attend school than children higher up the birth order. While 81% of second-born girls have below primary education, 79% of second-born boys have the same level of education. Thus, while a first-born girl has almost 10% chance of being in middle school, a second born girl has only 3% chance of this. The proportions are 13% and 3% for first and second born boys. The table also clearly reflects the *gender* bias in such educational participation. For all birth orders, a smaller proportion of girls is educated than of boys. Thus, while 69% of first-born girls has below primary level education, 60% of first-born boys has the same level of education.

INSERT TABLE 3

Table 3 analyses the type of household production activities that children are engaged in. It is clear that overwhelmingly more girls than boys are engaged in such work. In our sample, 4716 girls said they were involved in household chores, while only 261 boys were involved in such work. Of the 261 boys who said they were engaged in household activities, 22% did kitchen garden duties, 40% collected fish, 56% collected firewood and 61% collected water. Contrast this with the 4716 girls who said they did household chores. The highest proportions were

involved in the collection of firewood (46%), preparation of dung cakes (53%) and carrying water (65%). Even in activities where boys proportionately did more work, like kitchen garden maintenance, there were more girls than boys involved.

These statistics clearly indicate that while girls go less to school and work less outside the home than boys, they are far from idle. Their allocation between jobs inside and outside the home is however very different from that of boys.

III.2. Methodology

The school-work decision of children has traditionally been considered using two approaches. The first, and now rather dated, approach was to aggregate work and the 'neither' category and to consider only two options - school and work (Rosenzweig, 1982; Rosenzweig and Wolpers, 1982; Duraiswamy, 1988, 1992). Discussing this, Duraiswamy (2000) argues that if the decision to send children to work is the same as the decision to keep them at home doing household chores, then the two categories can be aggregated and the determinants of work and schooling can be considered within a dichotomous framework. The second approach, and a more popular one, has been to consider the school and work decisions explicitly within a multinomial logit (MNL) framework. Cigno and Rosati (2000), for instance, estimated 4 mutually exclusive categories (school, work, both and neither) within a multinomial logit framework and found that the 'probability of falling in this 'neither' category is affected by the same explanatory variables as those that affect 'work only'. They therefore draw the conclusion that the two must be the same.

Neither of these approaches is acceptable. Aggregating paid and unpaid work will lead to a bias in the results especially if the factors influencing the two are very different. This is quite likely if boys dominate the paid work sample and girls dominate household chores, as most statistics indicate. On the other hand, analysing household chores (or unpaid work) as a residual (nowhere) category, as the MNL methodology has done, is also problematic because it includes those who are idle and therefore unwilling to work, disabled and therefore unable to work and finally those who are working but not counted as such. It also reinforces the negative notion that

these children are idle, rather than a more realistic and positive conception – they do household chores.

In this paper, therefore, we analyse these choices within two frameworks – the multinomial logit and the multivariate probit methodologies. We extend the traditional MNL options to include household chores as a distinct option. Thus, our model has 5 separate options – school, work, household chores, Both and Neither. We begin by testing whether any of these options, specifically WORK and CHORES can be aggregated, as some earlier studies have done. To do this, we calculated a likelihood ratio between a restricted (combining the WORK and CHORES category) and an unrestricted model (5 separate choices: SCHOOL, WORK, CHORES, BOTH and NEITHER). Our test statistic rejects such an aggregation at the 1% level (with a chi-square value of 950.02 with 54 degrees of freedom).

The MNL framework assumes that the error terms of the various choices are independent. This implies that the relative probabilities arising from the choices are independent of each other. It assumes, for instance, that the odds ratios derived from the model remain the same, irrespective of the number of choices considered (Maddala, 1983). However, this would be inappropriate when the options being considered eg. child work and domestic chores, are close substitutes. Clearly, neither the child nor its parents is likely to view the choice between work and chores as independent. Inclusion of such non-independent choices within a MNL model will result in the probabilities for those options being over-estimated.

We tested this Independence of Irrelevant Alternatives assumption on our 5-option MNL model using a Hausman test. The Hausman test hypothesises that if a subset of the choice set is truly irrelevant, omitting it from the model will not change the parameter estimates significantly. The results of this test are presented in Table 5. Three out of the 5 tests reject the null hypothesis that IIA assumption is valid. Our results therefore lead us to conclude that the MNL specification is not appropriate to analyse these choices.

Insert Table 5

We therefore concentrate on the less restrictive multivariate probit model in what follows. Since it is a computationally more complicated model and can only deal with a limited number of alternatives, we restrict ourselves to the 3 options that are of direct interest to us – school, work and chores⁵. In our case, the MVP methodology specifies a model of the following kind:

$$Y_1 = b_1X_1 + e_1; \quad y_1 = 1 \text{ if } y_1^* > 0, 0 \text{ otherwise.}$$

$$Y_2 = b_2X_2 + e_2; \quad y_2 = 1 \text{ if } y_2^* > 0, 0 \text{ otherwise.}$$

$$Y_3 = b_3X_3 + e_3; \quad y_3 = 1 \text{ if } y_3^* > 0, 0 \text{ otherwise.}$$

$$E(e_1) = E(e_2) = E(e_3) = 0; \text{ var } (e_1) = \text{var } (e_2) = \text{var } (e_3) = 1; \text{ cov } (e_1, e_2) = \text{cov } (e_2, e_3) = \text{cov } (e_1, e_3) = \rho \neq 0.$$

Here, y_1 = SCHOOL, y_2 = WORK and y_3 = Household CHORES. X_1 , X_2 and X_3 are the vectors of the determinants of SCHOOL, WORK and CHORES respectively. Our three dependent variables are binary (0,1) variables. WORK is equal to 0, if the child does not work, otherwise it is equal to 1. Similarly, SCHOOL = 0 if the child does not go to school, otherwise it is equal to 1 and CHORES = 0 if the child's main activity is not household chores, otherwise it is equal to 1.

If the error terms of the equations within a MVP model are correlated, then ρ will be significantly different from 0, necessitating estimation of the model as a simultaneous system. Alternatively, when $\rho = 0$, the three equations are not correlated with each other and can be estimated as three separate univariate probit models. However, given that all of our dependent variables (SCHOOL, CHORES and WORK) are likely to be determined by very similar factors, it is likely that a multivariate probit model would, a priori, be more appropriate than 3 separate univariate probit estimations. Thus, family income, mother's and father's employment status and education as well as the age and gender of the child are likely to affect the probability of all 3 options. In fact, in the past it was often argued that work was the inverse of schooling so that factors that increased the probability of work (WORK and CHORES), simultaneously decreased the probability of schooling (Grootaert, 1998). In this context, any variables left out of our

⁵ Note that there are very few children doing both (only 1532 in a total sample of 93825 children in the age group 5-15 yrs do school and work or school and chores).

analysis will show up in the error terms of both equations, making them correlated (i.e. rho will be significant).

Before we go any further, we need to define our dependent variables more precisely. In this paper, child work is said to occur when the principal activity of the child refers to any one of those activities, which are categorised as ‘employed’⁶. When the principal activity of the child refers to attending educational institutions the child is categorised as going to School and when her principal activity refers to attending domestic duties only, she is classified as doing domestic chores (refer to appendix for detailed description of the variables). This classification is based on self-reporting of activities. Children who work *and* study or who do household chores *and* work are classified either within work or within school, depending on which they claim as their primary activity. Such a classification is useful because it enables us to consider the child’s primary activities in binary terms. However, it does not allow us to consider children who are multi-tasking. This does not seem to be a major problem in our sample because summary statistics indicate that a majority of the children (85% of boys and 71% of girls) who did some work worked full time i.e. 7 days a week.

III.3. Empirical Methodology

In this section, we will consider the hypotheses underlying our choice of independent variables in more detail. As indicated earlier, we test for the influence of a number of personal, family and community characteristics on the probability of schooling and of work for girls.

In section III.1, we saw that household chores are significantly more important for girls than for boys. Section II related this to the possibility of lower rates of return to girls in the labour market and to their comparative advantage in homebound activities, which in turn is related to the socio-cultural environment in which the girls live. We hypothesised that in many parts of India parents are unwilling (except in extreme circumstances) to expose daughters to the ‘perils’ of the labour market because of the constraints set by the prevailing kinship system. India

⁶ Worked in household enterprises (paid and unpaid), salaried regular/wage employee, casual wage labourer in public and other works.

provides a good case in which to test this hypothesis because it has two (if not 3) clearly demarcated kinship systems with very different approaches to female independence and freedom. This was first articulated by Dyson and Moore (1983), who divided the country into 3 separate kinship patterns – the North Indian System, the South Indian system and the East Indian System. Dyson and Moore (1983) identify 3 key aspects of the North Indian system, including spouses being unrelated in terms of kinship, males co-operating with and receiving help only from other males to whom they are related by blood and women not inheriting property. These kinship characteristics result in a system wherein groups of patrilineally related males rigidly control the sexuality of females within their groups through restrictions like ‘purdah’, in order to maintain their honour, reputation and power. This has given rise to an environment in which girls have less freedom and are very carefully protected from outside influences. In this context, both school and paid work are viewed with suspicion, as being activities that take a girl *outside* the narrow confines of the home. In contrast, within the South Indian kinship system, spouses are often closely related (cross-cousins) to each other, there are close socio-economic relations between males who are related by blood and by marriage and women may inherit property. This results in a system wherein female chastity is less important and female movements are therefore less rigidly controlled. In the present context, therefore, it is likely that gender differences in school and work probabilities (even though they will continue to exist) will be less stark in South India than in North India. To proxy for such regional differences, we include two dummy variables (DMSouth and DMNorth) to distinguish the Southern states from the Northern ones on the basis of Dyson and Moore’s categorisation.

Bennett (1992) argues that this is also true for castes in India. Thus, ‘lower caste and especially tribal groups place less emphasis on maintaining female sexual purity by restricting female contact with the public sphere’ (p.8). The inside-outside dichotomy is therefore weaker for females from these groups. We therefore include a caste (CASTE) variable that identifies scheduled caste and scheduled tribes in India from others⁷. In addition to varying across regions and castes, kinship systems will also vary according to religion. Thus, Kabeer (2003) argues that the patriarchal North Indian system is identified more closely with Caste Hindus and Muslims.

⁷ Note that no other caste distinctions can be addressed because the NSS data does not provide a finer caste breakdown.

We include two variables - HINDU and MUSLIM – to identify Hindu households relative to all others and Muslim households relative to all others.

In addition to factors that place households within a particular socio-cultural context, the position of the girl child must also depend upon the characteristics of her family – her parent’s education and employment characteristics, for example. To take this into account, we include the mother’s employment status into our model. We also test for whether a girl’s activities differ based on her mother’s employment status. It has often been argued, for instance, that working mothers are likely to be more broad-minded regarding their daughter’s activities. It could be the case that, having already broken the bounds of patriarchy, working mothers are likely to be less sympathetic about rigidly enforced exclusion for their daughters. This, of course, will only be the case if mothers are working in the kind of ‘outside’ activities that Bennett (1992) spoke about. It is clearly the case that when mothers work on the family farm or within the family enterprise, they have neither broken the bounds of patriarchy nor is their employment particularly ‘visible’ nor are they likely to be exposed to more broadminded and flexible worldviews. Many studies therefore draw a distinction between the impact that mothers who work *within* the household have relative to those who work *outside* the home even when both are contributing to family income. To allow for this distinction, we include two variables to distinguish between mothers who are employed within a family enterprise or on a family farm (MOTHER_HOMEMP) and those who are employed outside (MOTHER_EMPLOY). If employment increases a mother’s bargaining power and decreases the influence of patriarchy, we would expect such employment to increase girl’s schooling and decrease her employment. However, it may be the case that with the mother working outside the household, the daughter may have to substitute for her mother within the home. This may increase her involvement in household chores. The net effect is not clear, a priori.

It is clearly not just the employment status of mothers and fathers (FATHER_EMPLOY) that has an impact on what girls do. The wages that they earn must also be an important factor in this choice. We therefore include mother’s (MOTHER_WAGE) and father’s (FATHER_WAGE) wage earnings and a composite household income (OTHER INCOME) variable (that excludes

father, mother and child wages) separately in our equations⁸. We hypothesise that if the main motivation for child work and for non-attendance at school is survival, then an increase in such wage and income variables should lead to an increase in school attendance and a decrease in child work (both inside and outside the home). However, if such non-attendance is caused by the patriarchal instincts of protection, then easing budget constraints through increased incomes will not result in an increase in school attendance. It may, in fact, help to draw girls out of the labour market but may only shift them into doing household chores instead. If this occurs, then an increase in incomes will actually increase girl's involvement in household chores rather than decrease it. These wage and income variables are included as four categorical variables, each associated with a quartile of the relevant wage distribution. Such a specification helps us to allow for discontinuity and non-monotonicity in the relationship between child work and income and we find that our results justify this specification. We also include a variable that identifies households above and below the poverty line (POVERTY) and it is expected that if the luxury axiom (Basu, 1998) holds, then the probability of children going to work will be lower in households above the poverty line.

In addition to the impact of parent's employment and wages, their education must also influence their attitude to their children's schooling. Rosenzweig and Wolpers, 1982 argue that there is a strong inter-generational transfer of educational achievement between parents and children. To test for this we include both father's and mother's education into our model. We include them as 3 separate binary categorical variables (EDU_PRIM, EDU_SEC and EDU_TER) that identify primary education, secondary education and tertiary education respectively⁹. In general, it is expected that better educated parents have greater ability and incentive to improve their children's education. They are also more likely to value education and therefore are less likely to constrain girls at home instead of sending them to school. It is also expected that education helps modernise individuals and cultures and decreases the role of patriarchy, for instance. Of course, while the father's and mother's education are paramount, the general attitude to

⁸ A number of parents in our sample work but do not show a wage because they work on family farms or within other family enterprises. The other income (OTHER INCOME) variable controls for such income.

⁹ There are very few parents with tertiary education, especially amongst mothers in this sample (only .7% of the mothers and 3% of the fathers in the entire sample have tertiary education)

education within the household, as evidenced by the overall levels of illiteracy (male and female) is also important (HMALEILIT and HFEMILIT).

Household debt (DEBT) is included to control for indebted households, which may be more likely to send girls out to work, given all else constant. It has long been agreed that land ownership (LAND) can have conflicting effects on child work – increasing the probability of work by increasing the opportunities for, and incentives to, child employment. Insofar as land ownership reflects the income levels or the asset wealth of households (Bhalotra and Heady, 2003), however, it may also decrease the probability of girls working. In the context of the girl child, however, it is likely to reflect a relatively conservative feudal environment in which girls are more likely to be retained at home rather than sent out either to work or to study. Landowning households are likely to be more patriarchal than others.

We include age (AGE) and square of age (AGE²) of the child in all three equations. Our estimation also includes two variables – BORDER and ELDGSIB - to take account of family and sibling composition. BORDER is included to indicate the birth order of the girls in the family (higher birth order indicating younger children). As mentioned earlier, though older children may get a larger proportion of a family's income and be more likely to attend school (see Table 2), they are also the ones who are first called upon when things get hard. We would expect older girls to work more outside the home than younger girls (if patriarchy was not significant) and to work more within the household (if patriarchy was important).

We also include a variable – ELDGSIB – that identifies the oldest girl in each family and interacts her with the number of siblings she has. It is expected that girls who have a large number of siblings and are the eldest in the family are more likely to be engaged in household work than those with fewer siblings or lower down the birth order. This would capture the 'double disadvantage' that older girls function under – being girls and being the eldest. It is, of course, not only the number of siblings that a girl has but also the number of older dependants who will determine the chores that need to be done within a household. To take this into account, we include the number of older dependants (over 60years old) in each household (DEP) into our model. While older dependants may increase the number of chores that need to

be done, especially if they are infirm or unwell, they may also be able to help out with household chores and other reproductive activities. The effect on girl's activities will depend on which of these influences predominate.

Villages that are prosperous (VILPROS) are likely to have higher school attendance by both boys and girls and lower child employment.

IV. Results

Table 6 presents our results. The highly significant estimates for rho lead us to conclude that modelling the 3 choices jointly within a MVP framework is appropriate. The 3 choices are jointly made and cannot be studied as separate decisions.

Insert Table 6

As discussed in section III.3, we proxied for the kinship system prevalent in the different states in India by including two dummy variable – DMSOUTH and DMNORTH - into our analysis. Our results indicate that within the more flexible and less protective South Indian system, girls (like boys) are more likely to go to school *and* to work inside *and* outside the home than elsewhere in India. In North India, on the other hand, while girls are certainly less likely to be working outside the home than elsewhere in India, they are not significantly more or less likely to be going to school or even working within the household.

We also find that CASTE significantly decreases the probability of schooling and of household chores but increases the probability of outside work. Thus, girls from scheduled castes and tribes are more likely to work outside the home than other girls in India and less likely to attend school and to do household chores. This seems to bear out the argument that the 'inside-outside' dichotomy is less strong amongst lower castes in India and also that these groups are less patriarchal than higher caste groups in the country. Table 6 also indicates that both Hindu (HINDU) and Muslim (MUSLIM) girls attend school less than other children. Both are also more likely to do household chores than other girls. However, the probability of working outside

the home is higher for Hindu girls than others, indicating possibly a less strict patriarchal system amongst Hindu households, relative to Muslim households.

Mother's employment has quite a complicated effect on girl's choices. When mothers are employed outside the home (MOTHER_EMPLOY = 1), then girls are less likely to go to school and significantly more likely to do household chores. Thus, girls substitute for their mothers at home. This rejects the notion at least in rural India that when mothers are employed outside the home, they are likely to be less patriarchal and more broad-minded regarding the importance of schooling. It points instead to the expedient option – girls help out when their mothers are not at home. On the other hand, when mothers are employed within the home (MOTHER_HOMEMP) (and therefore within the bounds of patriarchy) then daughters are significantly more likely to also be working with them. In this case, daughter's labour is clearly complementary to mother's labour. This seems to confirm the findings of Nieuwenhuys (1994) and Cohen (2001)¹⁰ that mothers often work with their daughters. This finding is reinforced by our results on mother's wages (MOTHER_WAGE 2-4). We find that an increase in mother's wages increases the probability of girl's working. The complementarity between mother's and daughter's employment can be seen from the fact that as mother's wage increases, so does the probability of girl's employment.

On the other hand, we find that father's employment (FATHER_EMPLOY) increases the probability of schooling and marginally decreases the probability of work. However, it does not significantly influence the probability of household chores. We also find that any increase in father's wages (FATHER_WAGE_2-4) (from quartile 2 to 3 to 4) and in OTHER INCOME 1-4 leads to an increase in the probability of schooling and a decrease in the probability of outside work undertaken by girls. Interestingly, however, we find that it is also associated with an increase in the probability of household chores being the principal activity undertaken by girls. This seems to indicate that while some families send their daughters to school when their incomes increase, others retain them at home to do household chores. This only reverts in the

¹⁰ 'My mother is a coir worker and when I am off from school we can beat together 150 or even 200 husks a day. Otherwise, I beat 50 husks before leaving and she will beat 50 more while I am away.....I have to fetch water, wash dishes and light the oven.....and also sweep the yard and look after the babies and go to school. I do all this after I come home from school at four O'clock.' (Nieuwenhuys, 1994, p.73).

top income quartile when father's wages do not significantly increase household chores. This finding seems to reinforce our earlier hypothesis that the patriarchal system will decrease the probability of outside work and increase the probability of household work for girls. In contrast to this, however, we find that while households below the poverty line (POVERTY) are significantly less likely to send their daughters to school they are significantly more likely to require them to do chores within the household.

Table 6 indicates that both the linear and quadratic terms in age (AGE and AGE2) are significant for SCHOOL and WORK in the MVP model. Thus, we can conclude that initially as age increases girls go more to school and work more both inside and outside the home. Beyond a certain point, however, the probability of schooling decreases with age and so does that of outside work. This might reflect parent's reluctance to send girls outside the home as they grow older and therefore more 'vulnerable'. The probability of household work remains the same after reaching a maximum i.e. there is no significant increase or decrease after a certain age. In line with our expectations, the estimates suggest that the birth order (BORDER) of girls is a significant factor determining the choices open to the girl child. The MVP model finds that it is a negative and significant coefficient for school implying that higher birth order girls (i.e. younger girls) are less likely to go to school. They are, however, not significantly less likely to do household chores. We also find that where the eldest girl child has a larger number of siblings, she is significantly less likely to go to school and significantly more likely to go to work or do household chores. However, this effect is largely offset by the effect of living in a household with a larger number of older dependants (DEP). Girls living in such households have a higher probability of going to school and a lower probability of work and of doing household chores. This is not surprising because in these households, older dependants like grandmothers can do a number of household chores to keep the household running when both parents are out at work.

Father's and Mother's education have a significant impact on the probability of schooling, work and chores for girls in our estimates. We find that fathers with secondary (FATHER_EDU_SEC) or tertiary (FATHER_EDU_TER) education are less likely to have their daughters doing only household chores or working than fathers with no education. They are

therefore associated with an increase in the probability of schooling for girls. However, there is a discontinuity in this relationship because father's primary education does not influence girl's schooling. In the case of mother's education, there is no such discontinuity. Both primary (MOTHER_EDU_PRIM) and secondary education (MOTHER_EDU_SEC) seem to have a significant and positive impact on girl's schooling. The secondary education of mothers also seems to have a significant negative impact on the probability of girls going out to work and doing household chores. Our results indicate that only mothers with secondary education have a significant negative impact on the probability of girls doing household chores. The tertiary education of mothers (MOTHER_EDU_TER) does not seem to influence any of the options¹¹. The levels of male and female illiteracy (HMALEILIT and HFEMILIT) within the household decrease the probability of girl's schooling significantly while increasing their probability of work and household chores. This may suggest that when the household has more illiterate members, the socio-cultural environment is likely to be more conservative and the emphasis on girl's schooling will be minimal.

The externality effect that village prosperity has on child schooling and work is captured by the village prosperity variable (VILPROS). Our results confirm that any increase in village prosperity will have a positive impact on the probability of girl's schooling and a negative impact on the probability of girls working or doing household chores.

Conclusion

What do our results tell us about the probability of girls doing household chores? What *increases* this probability? What decreases it? Are household chores determined by the same factors as paid employment? And if so, can we aggregate the two, as some studies have done?

To begin with, we tested the possibility (within the MNL methodology) that work and chores were determined by such similar factors that they could be aggregated together, as Cigno and Rosati (2000) state. A likelihood ratio test, however, rejects this hypothesis at the 1% level (with

¹¹ A possible explanation for this could be that there were very few mothers in the rural household sample who had tertiary education (.7%)

a chi-square value of 950.02 with 54 degrees of freedom) in our sample. Therefore, it is clear that we cannot estimate work and chores as being the same. This is not surprising given the fact that many factors (like father's wages and caste) may increase the probability of household chores but decrease the probability of work outside the home. In terms of our earlier discussion, patriarchy will encourage girl's participation in household chores but will discourage their involvement in work outside the home.

Our results lead us to conclude that as incomes (father's wages and other household incomes) increase, girls will be taken out of work and sent back to school. However, they also indicate that while this is happening, there is an increase in the number of girls who stay at home to do household chores. We find that while significantly less outside work is done by girls in North India relative to girls elsewhere in India, they do not seem to attend more school or do more chores. In South India, on the other hand, the probability of doing household chores is greater than elsewhere in India. We also find that while SC/ST girls are less likely to go to school and to do household chores, they are significantly more likely to do outside work. In Muslim households, girls do more household chores than in others but do not work significantly more outside the home. Overall therefore, we cannot reject the notion that patriarchy plays a very important role in determining the activities of girls in rural India. In this context, economic solutions including an improvement in household incomes, are unlikely to improve girl's school attendance.

Table 1: School, Work and Household Chores Done by Children in Rural Households in India

(For age group 5-15 yrs)

Table 1-A

	Girls (Number)	Girls (Frequency)	Boys (number)	Boys
School	26388	60.42	37053	73.85
Work	2353	05.39	3674	07.32
Hhchores	2419	05.54	171	00.34

Table 1-B

	Oldest Girl		Oldest Boy	
	Frequency	Percent	Frequency	Percent
School	16575	58.70	23585	74.42
Work	2024	8.40	3169	10.08
Hhchores	4099	14.51	274	0.86

Table 2: Level of education of the children in rural households according to birth order

	GIRLS							BOYS						
	First	Second	Third	Fourth	Fifth	Sixth	7 and above	First	Second	Third	Fourth	Fifth	Sixth	7 and above
Missing														
Illiterate	35.58	37.08	42.90	43.60	45.41	50.91	53.85	22.53	27.94	35.83	42.16	39.13	41.77	50.00
Below primary	32.51	43.54	46.30	48.15	45.95	43.64	41.03	37.17	50.53	51.86	50.28	54.11	54.43	28.57
Primary	19.13	14.54	7.37	4.56	3.24	5.45	2.56	23.82	16.23	8.28	3.27	2.90	1.27	9.52
Middle	9.79	2.73	0.67	0.25	0.00	0.00	0.00	13.36	3.21	1.06	0.68	0.97	0.00	0.00
Secondary	1.29	0.08	0.00	0.00	0.00	0.00	0.00	1.43	0.09	0.08	0.00	0.00	0.00	0.00
Other	1.61	2.00	2.76	3.45	5.41	0.00	2.56	1.54	1.97	2.80	3.61	2.90	2.53	11.90
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	

Table 3: Pattern of Domestic Activities Undertaken by Boys and Girls in Rural India

DOMESTIC DUTIES	BOYS		GIRLS		TOTAL
	Number	% of Total	Number	% of Total	
<i>Kitchen Garden Maintenance</i>	79	10.2	694	89.8	773
<i>HH Poultry</i>	102	6.0	1594	94.0	1696
<i>Free collection of Fish</i>	143	11.3	1123	88.7	1266
<i>Firewood collection</i>	203	8.5	2190	91.5	2393
<i>Housing paddy</i>	52	7.1	677	92.9	729
<i>Grinding food grains</i>	35	4.8	699	95.2	734
<i>Preparation of gur</i>	8	5.9	127	94.1	135
<i>Meat/fish preservation</i>	21	12.5	147	87.5	168
<i>Making baskets</i>	14	6.8	191	93.2	205
<i>Preparation of dung cakes</i>	85	3.3	2483	96.7	2568
<i>Sewing/tailoring</i>	9	1.5	582	98.5	591
<i>Tutoring of own/other children</i>	1	1.0	96	99.0	97
<i>Carry water</i>	220	6.7	3065	93.3	3285
<i>Carry water from other village</i>	20	11.4	156	88.6	176

Table 4: Reasons for not currently attending school

Reasons for not currently attending school		
	Frequency	Percent
Too young to go to school	4133	4.4
Unable to cope	1221	1.3
Schooling facility not available	738	0.8
Inorder to participate in hh activity	1559	1.7
Inorder to do salaried work	391	0.4
To take care of siblings	506	0.5
To attend hh chores	397	0.4
By preference	255	0.3
cannot afford	3928	4.2
Not interested	7422	7.9
Others	5351	5.7
Missing	67924	72.4
Total	93825	100

Table 5: Independence of Irrelevant Alternatives Test :Hausman Test

Omitted Option	GIRLS		Base category
School	342.23	Prob>chi2 =0.0000	None
Work	-13.51	chi2<0	School
HHwork	68.7	Prob>chi2 =0.9912	School
Both	-11.47	chi2<0	School
None	34.72	Prob>chi2 = 1.0000	School

Table 6: Multivariate Probit Results

Variable	SCHOOL		WORK		CHORES	
	Coeff	b/St.Er.	Coeff	b/St.Er.	Coeff	b/St.Er.
Constant	-0.150	-0.247	-4.366	-5.084	-4.817	-6.639
AGE	0.327	3.375	0.402	2.957	0.297	2.623
AGE2	-0.019	-4.775	-0.010	-1.813	-0.006	-1.345
BORDER	-0.119	-3.939	-0.052	-1.045	-0.058	-1.443
ELDGSIB	-0.092	-14.771	0.030	3.118	0.041	5.373
DEP	0.276	15.138	-0.167	-6.226	-0.099	-4.512
FATHER_EDU_PRI	0.030	1.044	0.074	1.784	-0.056	-1.574
FATHER-EDU_SEC	0.284	7.987	-0.270	-4.476	-0.199	-4.401
FATHER_EDU_TER	0.373	5.488	-0.278	-2.086	-0.252	-2.645
MOTHER_EDU_PRI	0.150	3.212	-0.214	-2.558	-0.057	-0.982
MOTHER_EDU_SEC	0.361	5.530	-0.249	-2.171	-0.325	-3.716
MOTHER_EDU_TER	-0.038	-0.261	0.009	0.035	0.157	0.878
HFEMILIT	-1.434	-22.619	0.622	7.918	0.611	9.473
HMALEILI	-0.369	-18.933	0.260	11.040	0.055	2.400
HINDU	-0.348	-9.248	0.263	4.391	0.299	5.661
MUSLIM	-0.591	-12.146	0.017	0.214	0.472	7.435
CASTE	-0.196	-8.215	0.116	3.800	-0.069	-2.483
DEBT	-0.117	-3.368	0.114	2.719	-0.052	-1.371
LAND	0.069	1.148	-0.190	-2.625	-0.002	-0.024
MOTHER_EMPLOY	-0.760	-2.332	-0.054	-0.110	0.601	2.047
MOTHER_HOMEMP	0.080	1.626	0.358	5.836	0.012	0.213
MOTHER_WAGE 2	0.048	0.872	0.229	3.769	-0.119	-1.891
MOTHER-WAGE 3	0.118	1.717	0.146	2.013	0.001	0.017
MOTHER_WAGE 4	-0.116	-1.978	-0.047	-0.603	0.117	1.793
FATHER_EMPLOY	0.177	4.965	-0.084	-1.924	-0.035	-0.908
FATHER_WAGE 2	0.185	2.832	-0.674	-9.908	0.296	3.977
FATHER_WAGE 3	0.349	4.993	-0.794	-10.807	0.312	3.963
FATHER-WAGE 4	0.763	9.948	-1.086	-12.447	0.085	0.929
OTHER INCOME 1	0.166	2.457	-0.600	-8.609	0.362	4.619
OTHER INCOME 2	0.465	6.695	-0.786	-10.880	0.294	3.598
OTHER INCOME 3	0.505	6.740	-0.926	-11.533	0.236	2.602
OTHER INCOME 4	0.512	6.498	-1.053	-12.157	0.289	3.024
POVERTY	-0.177	-5.269	-0.068	-1.470	0.109	2.557
VILPROS	0.218	9.386	-0.090	-2.699	-0.095	-3.477
DMSOUTH	0.086	1.662	0.330	5.189	0.128	2.171
DMNORTH	0.001	0.015	-0.188	-2.302	0.033	0.543
R(01,02)	-0.594	-15.787				
R(01,03)	-0.731	-33.523				
R(02,03)	-0.093	-2.063				

Appendix 1: Variable Description.

Variable	Description
AGE	Age of the child; continuous variable
AGE2	Age*Age
SEX	Gender of the child, coded 0=Boys; 1=Girls
BORDER	Birth order of the child; ranked variable; higher ranks indicate younger children (eg.oldest child is ranked 1)
ELDGSIB	Eldest girl * the number of siblings the child has
FATHER_EDU_PRI	Father's Education; coded: 1=primary education; else=0
FATHER_EDU_SEC	Father's Education; coded: 1=secondary education, else=0
FATHER_EDU_TER	Father's Education; coded: 1=tertiary education; else=0
FATHER_EMPLOY	Father's employment; Binary variable coded 1= work, else 0
MOTHER_EDU_PRI	Mother's Education; coded: 1=primary education; else=0
MOTHER_EDU_SEC	Mother's Education; coded: 1=secondary education, else=0
MOTHER_EDU_TER	Mother's Education; coded: 1=tertiary education; else=0
MOTHER_EMPLOY	Mother's employment (only refers to mothers who are employed outside home); coded 1= work, else= 0
MOTHER_HOMEMP	This indicates mothers who are employed in family enterprises and on family farms) ; coded 1=self employed, else=o
HINDU	Dummy variable, coded Hindu=1, else= 0
MUSLIM	Dummy variable, coded Muslim=1, else= 0
OTHER INCOME 1-4	Total income-(mother wage + father wage + child wage), divided into quintiles, and each a dummy variable to represent whether the household falls into that quintile or not.
CASTE	Dummy variable, coded scheduled caste/tribe=1, else=0
DEBT	Code indicating whether the household is in debt or not; coded 0 = no debt, else =1.
FEMILIT	Household female illiteracy i.e. the number of females who are illiterate as a proportion of all females in the household.
MALEILIT	Household male illiteracy i.e. the number of males who are illiterate as a proportion of all males in the household.
LAND	Dummy variable, coded 1 if the household owns land, else=0
DEP	Number of dependants in the household.
POVERTY	Households living above the poverty, coded 0=above poverty line, else=1
FATHER_WAGE 2-4	Father's wage divided into quartiles and a dummy variable to represent whether the father of the household falls into that quartile or not.
MOTHER_WAGE 2-4	Mother's wage divided into quartiles and a dummy variable to represent whether the mother of the household falls into that quartile or not.
VILPROSP	Village wages (male & female), code 1=above average and 0=below average
DMSOUTH	This was a dummy variable which was coded 1 for all southern states that had a similar kinship system, else coded 0 (this classification was adopted from Dyson and Moore (1983)
DMNORTH	This was a dummy variable which was coded 1 for all northern states that had a similar kinship system, else coded 0 (this classification was adopted from Dyson and Moore (1983)

Appendix 2: Multinomial Logit Results- Marginal Effects

Variable	Coefficient	b/St.Er.	Elasticity
SCHOOL			
Constant	0.914337	3.953	
AGE	-0.01321	-0.359	-0.25833
AGE2	-0.00158	-1.069	-0.38851
BORDER	-0.04379	-3.676	-0.08492
ELDGSIB	-0.03754	-12.947	-0.15351
FATHER_EDU_PRI	0.019914	1.818	0.004697
FATHER_EDU_SEC	0.118646	8.891	0.023002
FATHER_EDU_TER	0.162133	5.814	0.00911
FATHER_EMPLOY	0.071244	5.126	0.10332
MOTHER_EDU_PRI	0.072193	4.061	0.0093
MOTHER_EDU_SEC	0.17461	6.817	0.016355
MOTHER_EDU_TER	0.025573	0.413	0.000304
MOTHER_EMPLOY	0.029769	1.594	0.002487
HINDU	-0.11713	-8.046	-0.14854
MUSLIM	-0.16918	-9.157	-0.02671
DEBT	0.05039	3.874	0.151352
HFEMILIT	-0.51158	-22.008	-0.25042
HMALEILI	-0.14553	-17.103	-0.15237
LAND	0.024495	1.115	0.037502
OTHER INCOME 1	0.056492	2.26	0.013643
OTHER INCOME 2	0.176513	6.854	0.045517
OTHER INCOME 3	0.200201	7.282	0.054062
OTHER INCOME 4	0.202541	7.01	0.057554
MOTHER_WAGE 2	0.029081	1.389	0.00192
MOTHER_WAGE 3	0.042379	1.728	0.001843
MOTHER_WAGE 4	-0.02932	-1.282	-0.00166
FATHER_WAGE 2	0.049969	2.058	0.008066
FATHER_WAGE 3	0.11269	4.379	0.01742
FATHER_WAGE 4	0.282574	9.977	0.054295
DEP	0.02441	6	0.032903
POVERTY	-0.06991	-5.596	-0.06314
VILPROSP	0.086372	10.042	0.04812
DMSOUTH	0.077958	3.746	0.00503
DMNORTH	0.006405	0.306	0.00034
WORK			
Constant	-0.36914	-3.635	
AGE	0.033842	2.129	6.349634
AGE2	-0.00046	-0.735	-1.08906
BORDER	0.005375	0.939	0.1
ELDGSIB	0.008129	6.73	0.318891

FATHER_EDU_PRI	0.006274	1.37	0.014194
FATHER_EDU_SEC	-0.03553	-5.035	-0.06607
FATHER_EDU_TER	-0.04102	-2.68	-0.02211
FATHER_EMPLOY	-0.01472	-2.971	-0.20471
MOTHER_EDU_PRI	-0.01387	-1.48	-0.01714
MOTHER_EDU_SEC	-0.02074	-1.537	-0.01864
MOTHER_EDU_TER	-0.00231	-0.07	-0.00026
MOTHER_EMPLOY	0.043105	6.828	0.034536
HINDU	0.03658	5.361	0.444948
MUSLIM	0.001539	0.167	0.00233
DEBT	-0.01897	-4.078	-0.54651
HFEMILIT	0.103061	11.768	0.483916
HMALEILI	0.040499	14.396	0.406741
LAND	-0.02851	-3.573	-0.41874
OTHER_INCOME_1	-0.07163	-9.064	-0.16592
OTHER_INCOME_2	-0.10124	-12.031	-0.25042
OTHER_INCOME_3	-0.11846	-12.666	-0.30683
OTHER_INCOME_4	-0.13314	-13.077	-0.36289
MOTHER_WAGE_2	0.018374	2.759	0.011637
MOTHER_WAGE_3	0.012148	1.505	0.005068
MOTHER_WAGE_4	-0.00706	-0.779	-0.00383
FATHER_WAGE_2	-0.07523	-9.847	-0.11648
FATHER_WAGE_3	-0.09367	-11.373	-0.13889
FATHER_WAGE_4	-0.13149	-12.774	-0.24235
DEP	-0.00921	-5.069	-0.11902
POVERTY	-0.00278	-0.529	-0.02409
VILPROSP	-0.01597	-4.311	-0.08532
DMSOUTH	0.032544	4.984	0.020142
DMNORTH	-0.0247	-2.615	-0.01258
HHWORK			
Constant	-0.72666	-5.598	
AGE	0.051187	2.52	6.837884
AGE2	-0.00085	-1.063	-1.43194
BORDER	-0.00962	-1.291	-0.12737
ELDGSIB	0.007273	4.973	0.203124
FATHER_EDU_PRI	-0.00829	-1.405	-0.01336
FATHER_EDU_SEC	-0.02666	-3.548	-0.03529
FATHER_EDU_TER	-0.0291	-1.925	-0.01117
FATHER_EMPLOY	-0.00821	-1.151	-0.08129
MOTHER_EDU_PRI	0.010192	1.065	0.008967
MOTHER_EDU_SEC	-0.02856	-1.958	-0.01827
MOTHER_EDU_TER	0.038197	1.301	0.003096
MOTHER_EMPLOY	0.008725	0.909	0.004977
HINDU	0.058902	6.472	0.510109
MUSLIM	0.0944	9.038	0.101792

HHINDEBT	0.000269	0.039	0.005511
HFEMILIT	0.128407	11.552	0.429275
HMALEILI	0.027286	6.965	0.195113
LAND	-0.01673	-1.475	-0.17498
OTHER INCOME 1	0.035025	2.669	0.057765
OTHER INCOME 2	0.01231	0.903	0.02168
OTHER INCOME 3	0.000334	0.023	0.000617
OTHER INCOME 4	0.011605	0.743	0.022521
MOTHER_WAGE 2	-0.01705	-1.487	-0.00769
MOTHER_WAGE 3	0.004193	0.335	0.001245
MOTHER_WAGE 4	0.012265	1.019	0.004731
FATHER_WAGE 2	0.02762	2.157	0.030449
FATHER_WAGE 3	0.018778	1.36	0.019825
FATHER_WAGE 4	-0.01914	-1.226	-0.02511
DEP	-0.00106	-0.493	-0.00979
POVERTY	0.017598	2.575	0.108546
VILPROSP	-0.01793	-3.887	-0.06822
DMSOUTH	0.026657	2.854	0.011747
DMNORTH	0.005736	0.544	0.00208
BOTH			
Constant	-0.57017	-9.691	
AGE	0.090572	9.781	57.959
AGE2	-0.00365	-9.815	-29.4003
BORDER	-0.00216	-0.743	-0.13712
ELDGSIB	-0.00086	-1.153	-0.11538
FATHER_EDU_PRI	-0.00144	-0.529	-0.01115
FATHER_EDU_SEC	-0.0024	-0.794	-0.0152
FATHER_EDU_TER	0.010542	2.388	0.019377
FATHER_EMPLOY	0.00517	1.303	0.245289
MOTHER_EDU_PRI	-0.00575	-1.545	-0.02424
MOTHER_EDU_SEC	-0.0117	-2.311	-0.03584
MOTHER_EDU_TER	0.000138	0.014	.536305D-04
MOTHER_EMPLOY	0.015183	4.968	0.041491
HINDU	-0.00976	-3.796	-0.40486
MUSLIM	-0.01998	-4.357	-0.10319
DEBT	-0.00026	-0.076	-0.02603
HFEMILIT	-0.01248	-2.133	-0.19983
HMALEILI	-0.00228	-1.012	-0.07813
LAND	0.004649	0.751	0.232849
OTHER INCOME 1	-0.01477	-2.486	-0.1167
OTHER INCOME 2	-0.01152	-1.937	-0.09717
OTHER INCOME 3	-0.01597	-2.528	-0.14112
OTHER INCOME 4	-0.01753	-2.689	-0.16293
MOTHER_WAGE 2	0.007323	1.495	0.015817
MOTHER_WAGE 3	0.002519	0.407	0.003583

MOTHER_WAGE 4	-0.02198	-2.482	-0.04063
FATHER_WAGE 2	-0.01405	-2.469	-0.07422
FATHER_WAGE 3	-0.01862	-3.039	-0.09419
FATHER_WAGE 4	-0.02725	-4.087	-0.17126
DEP	-0.00186	-1.758	-0.08223
POVERTY	-0.00854	-2.752	-0.25241
VILPROSP	0.000995	0.496	0.01813
DMSOUTH	-0.00195	-0.384	-0.00411
DMNORTH	-0.00443	-0.754	-0.0077
NONE			
Constant	0.751631	4.351	
AGE	-0.16239	-5.906	-10.3831
AGE2	0.006546	5.901	5.263979
BORDER	0.05019	5.845	0.318188
ELDGSIB	0.022998	10.634	0.307438
FEDUPRI	-0.01645	-1.933	-0.01268
FEDUSEC	-0.05406	-4.881	-0.03426
FEDUTER	-0.10256	-4.008	-0.01884
FATHER_EMPLOY	-0.05349	-5.598	-0.25357
MOTHER_EDU_PRI	-0.06276	-3.876	-0.02643
MOTHER_EDU_SEC	-0.11361	-4.575	-0.03479
MOTHER_EDU_TER	-0.0616	-0.997	-0.00239
MOTHER_EMPLOY	-0.09678	-5.981	-0.02642
HINDU	0.031411	2.697	0.130202
MUSLIM	0.09322	6.669	0.048112
DEBT	-0.03143	-3.436	-0.30853
HFEMILIT	0.29259	17.353	0.468173
HMALEILI	0.080025	14.038	0.273885
LAND	0.016105	0.95	0.080596
OTHER INCOME 1	-0.00512	-0.287	-0.00404
OTHER INCOME 2	-0.07606	-4.097	-0.06412
OTHER INCOME 3	-0.0661	-3.28	-0.05835
OTHER INCOME 4	-0.06348	-2.933	-0.05897
MOTHER_WAGE 2	-0.03773	-2.547	-0.00814
MOTHER_WAGE 3	-0.06124	-3.384	-0.00871
MOTHER_WAGE 4	0.046097	2.857	0.008511
FATHER_WAGE 2	0.011695	0.673	0.006171
FATHER_WAGE 3	-0.01918	-1.038	-0.00969
FATHER_WAGE 4	-0.1047	-4.894	-0.06576
DEP	-0.01228	-4.028	-0.05409
POVERTY	0.063635	6.484	0.18787
VILPROSP	-0.05347	-7.943	-0.09738
DMSOUTH	-0.13521	-7.353	-0.02852
DMNORTH	0.016992	1.118	0.00295

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