

Tasks and Opportunities within Indian Families

Sripad Motiram

Corresponding Author.

Assistant Professor, Department of Economics,
Dalhousie University, Halifax, NS, B3H 3J5, Canada.

E-Mail: sripad.motiram@dal.ca,

Lars Osberg

University Research Professor, Department of Economics,
Dalhousie University, Halifax, NS, B3H 3J5, Canada.

E-Mail: lars.osberg@dal.ca,

Revision: April 15, 2008¹

¹ To be presented at the Canadian Economics Association meetings, Vancouver, June 6, 2008. This paper would not have been possible without the very generous help of Professor Indira Hirway, Director and Professor of Economics, Centre for Development Alternatives, Ahmedabad, India. Professor Hirway was instrumental in the design of the Indian Time Use Survey and her assistance in obtaining and interpreting the micro data from this survey is deeply appreciated.

Abstract

This paper uses the Indian Time Use Survey (1999) to document gender inequalities in adult and child tasks and to focus on an important determinant of the opportunities of children – the resources invested in their education. Specifically, we examine the school attendance of boys and girls and the relative probability that Indian children will receive informal parental instruction or assistance with learning at home. We document gender inequities in the allocation of household tasks among adults and children but we find little evidence of gender favouritism in human capital investment. In rural areas school attendance falls off much more rapidly with age for girls, but in urban areas in India the school attendance of boys and girls is essentially the same. In both urban and rural areas gender is statistically insignificant as a correlate of the prevalence or the allocation of parental instruction time.

Tasks and Opportunities within Indian Families

1.1 Introduction

Conventional data on the market incomes and commodity purchases of households cannot reveal much about individuals who have little or no money income or control over expenditure (e.g. children, or many women, or the very poor). In this regard, time use data has a massive advantage, because time is the ultimate “scarce resource” and everyone does *something* with his or her 24 hours every day.² Hence, time use analyses can examine the lives of previously ignored people, and the determinants of otherwise ignored processes – people and processes which are particularly important in developing countries, where the monetary/market economy is a smaller proportion of the total economic activity, where the very poor constitute significant proportions of the population and where gender inequalities are arguably especially important.

To illustrate this general idea, we use time use data from India to document gender inequalities in adult and child tasks and to focus on an important determinant of the opportunities of children – the resources invested in their education. Gender inequities start in the home, but the allocation of household tasks among children and of parental instructional time within households is usually an unobserved process. Because the linked issues of gender inequality and human capital investment are increasingly recognized as crucial for development (e.g. Dreze and Sen, 2002, Chapter 5; Morrison et al, 2007), we focus on the household tasks and parental assistance which influence the educational attainment of Indian girls – specifically, we examine the school attendance of boys and girls and the probability that Indian children will receive informal parental instruction or assistance with learning at home. Section 1.2 describes the data set we use and presents some initial results. Section 2.1 then examines the human capital investment time of Indian children while Section 2.2 looks at the time parents invest in their children’s education. Section 3 concludes.

² Juster and Stafford (1991) argue that “the fundamental scarce resource in the economy is the availability of human time”

1.2 Data Description

Between June 1998 and July 1999, the Central Statistical Organization of India conducted a pilot Time Use Survey (the ITUS). As Pandey (1999) describes, a stratified random sampling design, as followed in the National Sample Surveys (NSS), was used to select 1066 rural and 488 urban strata of small, medium and large rural villages and urban towns within 52 (out of 147) separate districts in 6 states. In each First Stage Unit, 12 randomly selected households were interviewed, producing a sample of 18,591 households (12,750 rural and 5,841 urban) with 77,593 persons (53,981 rural and 23,612 urban). The survey was conducted in four rounds during the year to capture seasonal variations in the time use patterns of the population. Two person teams of male and female interviewers stayed in each village or urban block for nine days to compile time diaries for normal, abnormal and weekly variant days. Respondent households were first visited to assess their weekly pattern of time use and then revisited to complete a full diary of activities concerning the previous day for all household members aged six years or older³. Although the sample design was explicitly constructed to capture differences in time use between normal and weekly variant or abnormal days, in practice Hirway (2000:24) noted that “On an average, of the total 7 days, 6.51 were normal, 0.44 weekly variant day and 0.05 was abnormal day... in rural areas people continue their normal activities on holidays also.” This paper therefore focuses on time use on “normal” days.

As Pandey (1999:1) notes, “India has lot of socio-economic, demographic, geographic and cultural diversities. To ensure that all aspects of diversities are captured, Haryana, Madhya Pradesh, Gujarat, Orissa, Tamil Nadu and Meghalaya were chosen to represent northern, central, western, eastern, southern and north-eastern regions respectively.” Although one might wonder whether six states’ data could fully capture the diversity of India, Hirway (2000:11) has argued that “cross-checking of the results has confirmed that the sample is fairly representative of the country.” In any event, this data

³ The personal interview methodology was very labour intensive, but was considered necessary to collect reliable diary data from respondents who are, in some cases, illiterate. Gersuny (1998) discusses the advantages of the diary methodology, which walks the respondent sequentially through the previous day’s activities, in improving recall and imposing aggregate consistency of responses. An “abnormal” day is defined in the “Instruction Manual for Field Staff” (1998: 23) as “that day of the week when guest arrives, any member of the household suddenly falls sick, any festival occurs, etc.” The “weekly variant” is “determined according to the pattern of the major earners holiday. If the major earner does not holiday, then school children’s holiday will be taken. If even this is not applicable, then day of weekly hat (bazaar) may be taken”.

would be interesting even if this were not the case, i.e. even if the data were only seen as a sample of the approximately 233 million people inhabiting these states. Tables 1R and 1U summarize “the average day” for rural and urban Indians, by age and gender^{4,5}.

<< Table 1R and 1U about here >>

Both tables 1R and 1U illustrate how gender specializations in tasks emerge with age in India – in both urban and rural areas, boys and girls aged 6 to 10 differ much less in their time use than 11 to 14 year old boys and girls, or 15 to 18 year olds or male and female adults. But gender differences in tasks after the age of 15 are quite pronounced – Indian men spend, on an average, only somewhere between 15 to 25 minutes daily in Home Production (Activity Group 4 - Household Maintenance, Management and Shopping for Own Household). Task specialization in home production is most extreme in the cohort aged 19 to 44, when urban men spend, on average, about 5% (for rural men, it is 6%) of the time which comparably aged women use for home management.

Among urban adults, work outside the home in Trade, Business and Services is dominated by men. In rural areas, women do on an average about 3 ½ hours a day of agricultural labour (compared to about 6 hours for men), in addition to doing almost all the housework. Arguably, if a family is to obtain commodities from outside the household for consumption, it is the sum of time spent in Activity Groups 1, 2 and 3 [Primary Production (Farm, Fish, Collection, Mining) + Secondary (Construction, Manufacturing) + (Trade, Business and Services)] which produces those commodities. This work may be waged or unwaged, but adding together these three activity types (and including associated travel time), Indian men aged 19 to 44 report an average of 8.3 hours per day in rural areas and 8.5 hours per day in urban areas. Men 45 to 64 years old do about a half hour less, on average.⁶

To get the total work day of men and women, one certainly must add home production time (Activity Group 4 - Household Maintenance, Management and Shopping for

⁴ Baskaran (1999) (and some other papers presented at the same conference) presents the weekly average times for various activities using the ITUS, but without the age and gender break up of activities, as we do.

⁵ There are also significant differences among gender/age groups for paid and unpaid work. These results are available upon request from the authors.

⁶ The primary activities, especially agriculture, display some seasonality, with the average times varying across months.

Own Household). Although, it undoubtedly involves effort and time, whether or not one should also add Activity Group 5 (Care for Children, The Sick, Elderly and Disabled) is unclear and somewhat of a contested terrain⁷. Furthermore, in this paper, we want to examine particularly the educative component of “caring labour”, Activity 521 (Teaching, Training and Instruction of own Children), so whether or not this time use activity is “work”, we want to examine it distinct from commodity production and housework.

For present purposes, we do not need to be definitive about what should count as the total work load of men and women – all we need to assert is that commodity production and home production (Activity Groups 1+2+3+4) together constitute a large part of total work, for both men and women. Adding these activities together, in rural areas, men and women aged 45 to 64 are nearly exactly matched in total time, with men working a total of 495 minutes per day and women working 494 minutes. At all younger ages, rural men do appreciably less on average than rural women – particularly among teenagers aged 15 to 18, when girls work almost two hours more per day, partly because on average rural boys spend 1.2 hours more per day in school.

However, urbanization makes a huge difference to the relative load of men and women. Urban men do work slightly more per day, on average, than rural men (+10 minutes for ages 19-44) but the really big difference is in the commodity production of urban and rural Indian women. Work in primary or secondary production or in trading adds up to about 6 hours a day for rural women on average but well under 2 hours daily for urban women. Hence, adding together commodity production and housework (i.e. Activity Groups 1+2+3+4), Table 1U indicates that the life cycle of urban women includes a childhood in which they do the same amount of work as boys (i.e. very little) between ages 6 and 10 followed by teen years when on average they do about a half hour more work per day than boys as they assume some household chores while aged 11 to 14 and 15 to 18. As adults, urban women do substantially less total commodity production and housework than adult

⁷ In one line of argument, “work” is an instrumental activity – one “works” in order to produce the goods and services that are the inputs into utility, while care for others is meaningful in itself. But, others see this distinction as negating the meaning and other “process” benefits that most people find in paid employment. On examining time use surveys across the world (Hirway, 1999), we discovered that sometimes care activities are grouped with “voluntary” work. In the context of ITUS, care activities have been classified under “extended work” (Hirway, 1999) or “non-market household production” (Kulshreshta and Singh, 1999). On the issues involved in classifying various kinds of work in the ITUS, see Hirway (1999) and Hirway (2000).

urban men (74 minutes per day less on average for ages 19 to 44, and 99 minutes less ages 45 to 64), because their working time is largely restricted to the home.

Another way of seeing the same thing is to look at the general headings “8 - Social and Cultural Activities, Mass Media, etc.” and “9 - Personal Care and Self-Maintenance”, which include the specific activities (and inactivity)⁸ that most people would classify as “enjoyable leisure time” – it is noteworthy that rural Indian women aged 19 to 44 get substantially less of it, on average, than similarly aged men. In urban areas, the gender difference reverses – in all age groups, urban women have somewhat more time available for these activities than urban men (perhaps because unwaged agricultural work is not a possibility for urban women and opportunities for their paid employment are socially constrained).

2.1 Investing Time – Family Decisions and the Human Capital of Children

Each day, families must allocate the scarce resource of household time to the competing alternatives of direct production of goods and services, market work to produce cash income, investment in future productive capacity and “leisure”. Because the importance of investment in the human capital of children has increasingly been recognized as a major determinant of economic development, and since inequality in access to such investment is central to the core ethical issue of equality of opportunity, time use data offers a unique window on both the efficiency and equity of an important part of the development process.⁹

In the ITUS, every individual’s principal status (e.g. working in the household, working as a casual labourer, student, etc.) is given – but we also have direct information on whether an individual actually attends an educational institution. Table 2 therefore distinguishes between school enrolment and actual school attendance. In both urban and rural areas, the fraction of children aged 6 to 18 who actually attended school on a normal day is about one fifth lower than the proportion identified as “student” – even if the higher

⁸ e.g. 814. Socializing at Home and Outside the Home. 851. Reading, Other Than Newspaper and Magazines. 951. Talking, Gossiping and Quarreling, 961. Doing Nothing, Rest and Relaxation.

⁹ There is a large literature on education of children in India. In the interest of space, we do not survey this literature here, but see Motiram and Osberg (2007), Dreze and Sen (2002), PROBE (1999).

enrolment of urban areas (about 75%) implies a somewhat larger absolute differential (15 percentage points).

<< Table 2 about here >>

As the top two rows of Table 2 illustrate, in both rural and urban areas, roughly seventy percent of Indian children aged 6 to 10 attend school. In urban areas, the same proportion of both boys and girls remain in school for ages 11 to 14, and there is little gender differential in the drop to roughly forty percent remaining in school when aged 15 to 18. In the rural areas, however, gender differences in school attendance increase from five percentage points for 6 to 10 year olds to twelve percentage points among older age groups. In combination with a strong tendency for rural teens to leave school, this implies that by the age of 15 to 18 only about a fifth of rural girls are in school.

The prevalence of intergenerational influences shows up clearly in Table 2. The 15 to 18 year old children of casual labourers in urban areas have a thirty five percentage point lower chance of school attendance, compared to wage workers. And the school attendance rate of rural girls aged 11 to 14 nearly doubles (increasing from 32% to 61%) if there is a literate adult female in the household. By itself, however, this just indicates a correlation in outcomes, and the disadvantages faced by some children. If social policy is to improve the educational opportunities of children – and especially the opportunities of the girl children of illiterate mothers – we need to know more. What are the mechanisms that encourage some children from illiterate families to remain in school? What is the opportunity cost of school attendance, in terms of foregone tasks? How do parents assist their children's success in school and which children get assistance?

In deciding to send their children to school, Indian families invest substantial amounts of their children's time. We cannot assess in this paper the eventual *productivity* in higher future wages or other returns of the time invested in children's human capital, and we have no information on any school fees or tuition paid by parents. Our ITUS data only capture the *quantity* of time allocated to investment in education¹⁰. Nevertheless, Table 3 illustrates how,

¹⁰ Although Duraisamy (2002) provides estimates of the rate of return to education in India between 1983 and 1994, and argues that the returns to female schooling in India typically exceed the rate of return for males,

although school attendance is the largest single part of the total time devoted to learning of each respondent child, attendance is only part of the picture. Children also must do homework, and travel to school – activities which the ITUS directly measures, in addition to time spent in class. Table 3 can therefore present a more complete picture, for each child, of the total investment of time than is available in other types of data – although median class time is consistently about 5 ½ hours on a “normal” day, the median child aged 6 to 10 spends about 7 ½ hours on schooling, which rises to about 9 hours for those who remain in school when aged 15 to 18, when one counts homework and travel time.

<<

Table 3 about here

>>

Although the ITUS data contain no direct indicator of educational quality, many authors (e.g. Motiram and Osberg 2007, Dreze and Sen, 2002; Filmer and Pritchett, 1998) have emphasized the very uneven nature of schooling in India. An indirect indicator of such inequality may be the substantial variation in homework time – for example, among 15 to 18 year old boys in urban areas only about a third (33.9%) of all children (even fewer in rural areas) did any homework at all, but the median time of the 80% (= 33.9/42.4) of students aged 15 to 18 years old who did do homework was over 2 ½ hours! As well, when schools differ substantially in quality or availability, one can expect that student travelling time will be highly unequal, as some children will be able to attend the local school, while others must travel long distances in search of higher quality, or any available, schools. In the 15 to 18 age group, the median travel time (i.e. over positive travel times) was an hour a day.

Where does all this time come from? By walking each respondent sequentially through a day’s activities, the time diary methodology has a built-in consistency check – each day’s activities must sum to 24 hours. Clearly, more time spent in school means less time spent in some other activities. As Tables 4R and 4U document, 6 to 10 year old children who attend school spend on average about 400 minutes more each day in learning than non-attendees. In rural areas more child labour in agriculture can account for 114

Heckman et al. (2006) emphasize the complexities involved in providing an unambiguous estimate of “the” rate of return to years of education. Furthermore, Dreze and Sen (2002, especially Chapter 5) are representative of a large literature which emphasizes the huge variance in quality of schooling in India, and the low quality of much of the public school system.

minutes of that differential, but most of that time comes out of “Social and Cultural Activities” and “Personal Care and Self-Maintenance”. In urban areas, the fraction of school time explained by foregone leisure is even larger since young children spend very little time in productive labour whether they are in or out of school.

<<

Tables 4R and 4U about here

>>

As children age, the opportunity cost of their school time increases – but in a highly gendered fashion. Boys who do not attend school do about the same amount of housework as adult men (see Table 1) – 18 to 20 minutes a day in urban areas and 25 to 27 minutes in rural areas – but boys who stay in school are evidently almost entirely protected from the burdens of housework at all ages. In both urban and rural areas, schoolboys do on average only 4 to 8 minutes of daily housework. However, the same is not true for girls who attend school, who average 40 to 60 minutes housework daily, on top of roughly the same amount of school work as boys. And in both rural and urban India, girls aged 15 to 18 who do not attend school do almost as much work around the home as adult women. Clearly, as girls age they face more pressures to work around the home, whether in school or not, than boys, in both urban and rural areas.

However, Section 1 noted that urban women in India are almost completely responsible for family housework, but – because they work relatively little outside the home – spend substantially less time in commodity production than urban Indian men. Is it possible that the greater time available to urban women (perhaps because their income earning options are constrained) enables them to invest more in the informal education of their children? When they are quite young (6 to 10), urban school girls report spending more time in learning activities than urban schoolboys, a difference that is not apparent in rural areas. Could it be that urban women try to give their daughters what they did not get themselves? Or do they favour their schoolboy sons in extra informal instruction, in addition to shielding them from the daily duties of housework?

2.2 Informal Instruction in the Home

The ITUS records directly, for each child aged 6 or over, both time spent in informal learning in the home and in school attendance. To our knowledge, the ITUS offers the only available evidence in developing countries on the role which informal parental instruction may play in human capital acquisition. Historically, education outside school has sometimes been crucially important. In Scandinavia in the seventeenth century, for example, nearly universal literacy was achieved, as Johansson (1988: 137) notes, “almost completely without the aid of a proper school system in the countryside. The responsibility for teaching children to read was ultimately placed on parents and godfathers”. (Swedish parents and godparents took this responsibility seriously, given that as Lutherans they perceived the possibility/certainty (?) of eternal damnation of the souls of the children who did not learn their catechism before confirmation, typically at age 13 or 14.)

The ITUS data record both the time each adult spent on “Teaching, Training and Instruction of Own Children” and the time at which children within the household report receiving informal adult instruction. Hence, we can match records by time of day within household, and discern both which child got informal instruction and which parent provided it. We use this to examine both the role which informal parental instruction may play in human capital acquisition and to examine the determinants and the extent of intra-family inequality in parental time invested in children’s human capital. Overwhelmingly, only one adult at a time is involved – i.e. there is strong within-family specialization. As Table 5 indicates, informal parental instruction is much more common in urban areas – about 6% of rural, and 18% of urban, households report this activity on a randomly selected normal day. Perhaps because adult female time is less often directly productive in urban areas, or perhaps because adult urban males work slightly longer hours, there is an interesting gender reversal in informal instruction between rural (58% male instructors) and urban (58% female instructors) areas.

<<

Table 5 about here

>>

One indication that some parents may be quite conscious of the advantages of something that they do not themselves have is the percentage (14.1% in rural areas) of

informal instruction done by adults who are not themselves literate – although it is clear from Table 2 that the literacy of adults strongly predicts school attendance. When informal instruction happens, families evidently take it seriously, with median time invested being a full hour. Unfortunately, because the time use diary methodology samples an individual day, it is not possible to distinguish the periodicity of episodes with ITUS data (e.g. we cannot distinguish between the hypotheses that (a) 42% of rural households help with homework, but only for one day each week or that (b) 6% of rural households help with homework every day of the week.) Nevertheless, the difference between urban and rural families in relative frequency is apparent. About 90% of the time, it is the head of household, or spouse thereof, who instructs children – but in the remaining 10% of cases, it is married children within the household or older siblings.

A decision to spend time in informal instruction of a child may be influenced both by a parent’s general motivation to invest in the human capital of their children (which we can call the “altruism” motive) and by a specific preference for the well-being of a particular child (which we will call “favouritism”)¹¹ We are interested in the particular issue of gender favouritism – specifically, the influence of gender on the investment Indian families make in the human capital of girls, relative to boys.

<<

Table 6 about here

>>

In tables 7 and 8 we present results of a probit analysis of the probability that some one in a household provides informal instruction and the probability that a particular child will receive it, respectively, while Table 6 presents descriptive statistics. In the first regression, we control for household income (proxied by monthly per-capita expenditure), household wealth (home ownership, landless status), employment type of the household, caste status of the household, gender and educational status of the household head, and age composition of the children in the household. It is possible that if favouritism is not possible, altruism is diminished – i.e. if a family has no sons, conceivably there may be less

¹¹ e.g. The Public Report on Basic Education in India (PROBE 1999) finds that a majority of parents even in underdeveloped states in India show a keen interest in educating their children. However, this has to be looked at in the context of inadequate parental attention to the education of specific kinds of children (e.g. girls). See Dreze and Sen (2002: pp. 154-155) on both these issues.

investment in children's education. Hence, we include dummy variables indicating the gender composition of the children in the family (all boys, all girls or girls and boys). Because the development literature highlights the importance of female literacy, especially maternal literacy, for the literacy of children, we also include a dummy variable for whether the household has any literate female adult (apart from the household head, in case the household head is female)¹².

<<

Table 7 about here

>>

The results in table 7 conform to our expectations¹³ – richer households (in terms of income and/or home ownership), households whose heads have secondary or higher education, households with adult female literates and households with younger children are more likely to have informal instruction. On the other hand, households belonging to historically disadvantaged groups (Scheduled Caste, Tribe) and households with older children are less likely to have informal instruction. There are some differences between rural and urban areas, e.g. while income is statistically significant in urban areas it is not so in rural areas, while belonging to scheduled caste or tribe is statistically significant in rural areas, this result does not hold in urban areas. The results underscore the importance of literacy within the household and female literacy in particular. The sizes of many important coefficients also seem to be significant (i.e. “large”), e.g. taking a typical¹⁴ rural household and giving the head secondary or higher education, increases the probability of informal instruction by thirteen percentage points; making at least one female adult literate for this typical household, increases the above probability by eleven percentage points.

¹² In the ITUS we are not given who the mother of a particular child is – instead what we have is every household member's relationship to the household head. We therefore cannot use the maternal education level as a variable in the regression.

¹³ In Table 7, attention is restricted to households where at least one child is attending school. It is possible that in some households, although there is no child attending school, informal instruction occurs, either because parents teach young children (less than 6 years, whose daily activities are not included in the ITUS) or children who are not attending school. Expanding the sample to include these households does not change the results in a major way. Using logit, instead of a probit analysis also yields similar results.

¹⁴ This is a self-employed, homestead owning, landed, non-scheduled caste or tribe, male headed, boy/girl household with at least one child aged 6-10, at least one child aged 11-14 and no children aged 15-18. It has a head who is literate but with less than secondary education, no literate adult female and has the average monthly expenditure in the sample (which is used in the regression).

However, the variables which might have indicated an influence of gender are not statistically significant. In other work (Motiram and Osberg, 2007), we have noted that carrying water is a highly gendered task whose daily drudgery detracts from the time available for other activities - but the time that the household spends on fetching water¹⁵ is not a statistically significant correlate of parental/adult instruction. The gender composition of children in the household (boy/girl, all boy, all girl) likewise does not seem to be a statistically significant correlate of the prevalence of parental instruction. We take this lack of statistically significant correlation as consistent with the hypothesis that parental altruism in time investment in children can be analytically distinguished from gender preference in the allocation of such time.

In examining gender favouritism, it clear that – whatever the underlying preferences of the parents might be – we cannot observe gender favouritism in families that have only one child, or in all boy or in all girl households. In a cross-sectional data set of households at a point in time, such as the ITUS, the number and gender of children have been pre-determined at some point in the past. Hence, to examine whether there is gender preference within the family, the most interesting sample to look at is families with both boy and girl children. We would like to know if boys are more likely to get help with their homework (gender favouritism), conditional on some help being given (altruism).

<< Table 8 About Here >>

Table 8 presents the results from a probit analysis of the probability that a child attending school and living in a mixed (boy/girl) household obtains informal instruction at home.¹⁶ Apart from household level variables, we also include controls for age and gender of the child.¹⁷ Most of the results are unsurprising and their interpretation is similar to what we have in the case of the earlier regression (on the probability that some one in the household provides informal instruction). For present purposes, our most important result is

¹⁵ Fetching of water is usually done by women and girls. We included this variable to examine whether if a household spends time fetching water, this will prevent either adults from providing instruction or children from receiving instruction. In previous work (Motiram and Osberg, 2007) we have shown that fetching water has implications for time spent by children on human capital accumulation by children.

¹⁶ It is worth repeating that we infer whether a particular child is receiving parental/adult attention or not by matching the times when the child is learning at home with the times when an adult is providing informal instruction. As mentioned earlier, a child who is not attending school might also receive instruction at home. Expanding the sample to include these children does not change the results in a major way.

¹⁷ We tried other specifications, including age of the child as a continuous variable, a non-linear term for age and an interaction term for age and gender. The results with these specifications were not different.

the statistical insignificance of the coefficient on the dummy for gender (i.e. boy), which we take as evidence consistent with the hypothesis that families do not discriminate against girls in providing informal instruction.¹⁸

3. Conclusion

This paper has documented the substantial gender differences in daily tasks between men and women in India, and has particularly noted the difference that urbanization makes to total time spent in commodity production and housework. In both urban and rural India gender specialization in housework is strong and starts early, as teenage girls are introduced to household chores while teenage boys – particularly those still in school – are largely exempt. However, Indian women in rural areas also spend substantial time in primary production, in addition to doing essentially all the housework. In urban areas, the option of employment or self-employment for women in primary, secondary or trade activities is much less open.

Perhaps as a consequence, there is substantially more informal instruction of children in the home in urban areas, and the majority of it is done by women. As Table 2 indicated, the school attendance of Indian children declines as they age, and in rural areas the decline is steeper and significantly more biased against girls. However, aside from this we find little evidence of gender favouritism in human capital investment. In urban areas in India the school attendance of boys and girls is essentially the same and in both urban and rural areas gender is statistically insignificant as a correlate of the prevalence or the allocation of parental instruction time – which is a bit remarkable, given the evidence we also present for the gender differentiation of productive roles in commodity production and housework.

¹⁸ Given the possibility of “sample selection bias,” we also experimented with a two-staged analysis, wherein in the first stage we estimated a probit model of the probability that a household provides instruction and then used the inverse mills ratio from this stage as one of the explanatory variables in a second stage probit on the probability that a particular child receives informal instruction (given that he/she is the member of a household where informal instruction by adults is provided). The inverse mills ratio was not statistically significant and the inferences from this analysis were very similar.

Table 1R
Average Time Allocation of Rural Indians

	Activity										
	1	2	3	1+2+3	4	1+2+3+4	5	6	7	8	9
Boys 6-10	35.3	1.2	3.8	40.3	5.6	45.9	6.0	0.6	333.2	204.2	850.0
Girls 6-10	34.3	0.9	2.8	38.0	28.2	66.2	17.3	1.1	306.2	190.5	858.7
Difference	1.0	0.2	1.0	2.3	-22.5	-20.3	-11.3	-0.5	27.0	13.7	-8.7
Boys 11-14	72.0	9.1	8.9	90.0	14.3	104.3	5.6	0.4	344.8	161.7	823.2
Girls 11-14	69.5	11.2	5.6	86.3	99.3	185.6	13.1	1.5	278.0	116.2	845.6
Difference	2.5	-2.1	3.3	3.7	-85.0	-81.2	-7.5	-1.1	66.8	45.4	-22.4
Boys 15-18	206.3	41.3	35.1	282.7	18.6	301.3	2.5	0.5	181.3	97.0	857.3
Girls 15-18	152.1	25.3	8.9	186.3	225.0	411.3	16.2	2.3	109.0	67.6	833.7
Difference	54.2	16.0	26.2	96.4	-206.3	-109.9	-13.7	-1.8	72.3	29.4	23.6
				0.0		0.0					
Men 19-44	350.4	62.6	87.0	500.0	20.0	520.0	9.7	1.4	11.2	50.6	847.1
Women 19-44	205.2	18.8	13.6	237.6	331.0	568.5	53.1	0.6	3.3	31.9	782.5
Difference	145.2	43.8	73.4	262.4	-311.0	-48.6	-43.4	0.7	7.9	18.7	64.6
Men 45-64	363.5	43.2	67.3	474.0	21.4	495.4	6.0	1.4	0.8	43.4	893.0
Women 45-64	221.9	13.8	15.0	250.7	243.6	494.2	31.1	1.0	0.6	30.2	882.8
Difference	141.6	29.4	52.3	223.3	-222.1	1.2	-25.1	0.4	0.2	13.2	10.1
Men 65+	210.8	19.9	28.5	259.3	20.8	280.1	9.8	1.1	0.1	47.9	1101.1
Women 65+	93.9	3.7	4.4	102.0	136.7	238.7	34.5	2.5	0.1	28.4	1135.9
Difference	117.0	16.2	24.1	157.3	-115.9	41.4	-24.7	-1.4	0.0	19.5	-34.8

Note: All times in minutes/normal day

1 – Primary Production Activities (Farm, Fish, Collect, Dig); 2 – Secondary Activities (Construction, Manufacturing); 3 – Trade, Business and Services; 4 - Household Maintenance, Management and Shopping for Own Household; 5 - Care For Children, the Sick, Elderly and Disabled for Own Household; 6 - Community Services and Help to Other Households; 7 – Learning; 8 - Social and Cultural Activities, Mass Media, etc.; 9 - Personal Care and Self-Maintenance

Table 1U
Average Time Allocation of Urban Indians

						Activity					
	1	2	3	1+2+3	4	1+2+3+4	5	6	7	8	9
Boys 6-10	2.5	1.8	18.9	23.3	6.1	29.4	5.1	0.2	347.3	253.6	804.5
Girls 6-10	1.9	1.1	9.7	12.7	13.4	26.1	8.9	1.5	358.3	232.9	812.3
<i>Difference</i>	0.6	0.8	9.2	10.6	-7.3	3.3	-3.8	-1.3	-11.0	20.7	-7.8
Boys 11-14	4.5	22.8	19.5	46.8	7.9	54.7	2.1	0.1	381.6	226.1	775.4
Girls 11-14	5.7	9.3	12.5	27.4	60.0	87.4	6.7	0.4	375.1	196.7	773.7
<i>Difference</i>	-1.1	13.5	7.0	19.4	-52.1	-32.7	-4.7	-0.3	6.5	29.5	1.7
Boys 15-18	17.3	80.3	98.8	196.4	14.6	211.0	2.2	0.2	253.3	176.1	797.2
Girls 15-18	13.7	22.4	53.4	89.5	152.1	241.6	9.1	1.4	239.4	153.7	794.7
<i>Difference</i>	3.6	57.9	45.4	106.9	-137.5	-30.6	-6.9	-1.3	13.9	22.4	2.5
				0.0		0.0					
Men 19-44	39.4	125.5	347.4	512.3	18.1	530.4	10.0	0.4	27.4	99.7	772.1
Women 19-44	24.5	23.5	47.2	95.1	361.2	456.3	65.2	0.7	17.9	109.5	790.4
<i>Difference</i>	14.9	102.0	300.3	417.2	-343.1	74.1	-55.3	-0.3	9.5	-9.9	-18.3
Men 45-64	45.3	105.4	333.2	483.9	25.1	509.1	7.0	1.1	0.5	103.1	818.2
Women 45-64	36.1	19.3	59.5	114.9	295.2	410.1	30.1	0.6	1.4	115.5	882.3
<i>Difference</i>	9.2	86.1	273.7	369.0	-270.1	99.0	-23.1	0.5	-1.0	-12.4	-64.0
Men 65+	33.4	30.7	98.5	162.6	24.2	186.8	17.9	1.7	0.1	157.1	1076.4
Women 65+	9.1	7.3	15.4	31.7	121.5	153.2	27.1	0.5	0.4	100.9	1161.2
<i>Difference</i>	24.3	23.5	83.2	130.9	-97.3	33.6	-9.2	1.2	-0.3	56.2	-84.7

Note: All times in minutes/normal day

1 – Primary Production Activities (Farm, Fish, Collect, Dig); 2 – Secondary Activities (Construction, Manufacturing); 3 – Trade, Business and Services; 4 - Household Maintenance, Management and Shopping for Own Household; 5 - Care For Children, the Sick, Elderly and Disabled for Own Household; 6 - Community Services and Help to Other Households; 7 – Learning; 8 - Social and Cultural Activities, Mass Media, etc.; 9 - Personal Care and Self-Maintenance

Table 2
School Attendance & Enrolment

	Attendance								Enrolment	
	Ages 6-10		Ages 11-14		Ages 15-18		Ages 6-18		Ages 6-18	
	Boys %	Girls %	Boys %	Girls %	Boys %	Girls %	Boys %	Girls %	Boys %	Girls %
Total Urban	69.8	68.1	72.5	70.5	42.4	40.3	60.3	58.7	75.5	74.3
Total Rural	71.1	66.2	66.5	54.0	30.5	19.2	56.7	47.9	67.9	56.2
Household Type										
<u>Urban</u>										
1 Self Emp Prof	67.4	74.7	71.5	67.2	48.1	44.3	62.2	62.3	81.0	81.4
2 Self Non Prof	82.5	57.9	82.9	80.3	34.5	46.2	61.5	58.9	67.9	69.0
3 Wage Worker	75.7	75.0	81.2	75.2	53.3	47.9	69.1	65.2	84.3	83.2
4 Casual Labour	56.2	58.9	48.1	56.8	17.6	12.8	39.6	42.4	56.8	56.6
9 Other	66.5	87.1	79.3	72.2	63.2	51.2	70.1	63.6	87.5	74.6
<u>Rural</u>										
1 Self Emp Prof	68.3	74.0	73.6	62.0	33.5	18.9	60.5	55.0	77.6	64.7
2 Self Non Prof	74.7	67.2	51.9	66.5	38.5	26.2	59.2	56.4	76.0	69.8
3 Wage Worker	67.9	59.1	63.8	43.7	20.4	14.1	51.8	41.3	61.4	48.0
4 Casual Labour	74.2	69.6	61.7	56.9	34.5	17.9	57.8	48.5	67.4	55.6
5 Self Emp Agric	70.6	64.8	65.2	52.5	29.7	19.2	55.3	46.2	66.4	54.8
9 Other	79.6	83.2	84.4	71.8	52.3	31.8	72.1	64.6	83.8	73.8
<u>Urban</u>										
SC	66.7	53.5	65.5	48.2	25.7	31.5	51.5	44.2	65.9	68.1
Other Castes	71.3	70.5	73.6	73.0	44.9	40.6	62.0	60.1	77.5	75.0
<u>Rural</u>										
SC	73.3	69.8	69.7	57.4	33.3	19.6	59.8	51.7	69.2	60.2
Other Castes	74.5	70.9	68.3	58.3	33.1	21.5	58.9	50.6	71.4	59.8
Literate Adults (Age>15)										
<u>Urban</u>										
0	44.8	37.5	57.6	18.1						
>0	72.1	71.1	73.6	74.1						
<u>Rural</u>										
0	57.7	48.9	50.5	25.2						
>0	77.6	74.8	71.9	61.1						
Literate Adult Females										
<u>Urban</u>										
0										
>0	56.2	56.0	57.7	44.3						
<u>Rural</u>										
0	74.4	71.8	76.6	76.9						
>0	66.4	55.6	59.1	37.6						
Literate Adult Males										
<u>Urban</u>										
0	55.2	48.3	57.1	45.5						
>0	72.0	71.2	75.1	74.0						
<u>Rural</u>										
0	60.3	51.9	54.7	32.3						
>0	77.6	75.0	71.9	61.6						

Table 3
Time (minutes) spent on schooling by children (711,721 and 791)*

	Ages 6-10		Ages 11-14		Ages 15-18	
	Boys %	Girls %	Boys %	Girls %	Boys %	Girls %
Urban						
% class time (711) >0**	69.8%	68.1%	72.5%	70.5%	42.4%	41.5%
Median over positive class times	300	320	315	330	315	325
Median over all homework (721) times	60	60	75	75	0	0
% of all children homework >0	58.7%	59.0%	62.5%	61.4%	33.9%	32.2%
Median over positive homework times	120	120	130	135	160	180
Median over all travel (791) times	30	30	30	30	0	0
% of all children travel >0	63.1%	62.2%	65.7%	64.1%	40.6%	37.1%
Median over positive travel times	40	40	45	45	60	50
Median Total (711+721+791) Time	450	480	480	510	525	510
Rural						
% class time (711) >0	70.1%	66.2%	66.5%	54.0%	30.5%	19.2%
Median over positive class times	330	330	330	330	330	330
Median over all homework (721) times	40	0	60	0	0	0
% of all children homework >0	55.4%	49.9%	56.5%	45.1%	26.5%	15.7%
Median over positive homework times	110	110	120	120	165	150
Median over all travel (791) times	20	15	20	0	0	0
% of all children travel >0	60.1%	54.1%	56.5%	45.4%	26.6%	16.9%
Median over positive travel times	30	30	40	40	60	60
Median Total (711+721+791) Time	450	450	495	495	540	540

* If a child does not attend school (i.e. if 711=0), his/her homework and travel times are set to zero.

** Calculated by dividing the number of children who have positive 711 time by the total number of children of that gender and in that age group (sample weights are used). All the percentages below are calculated in the same manner.

711. General Education: School/University/Other Educational Institutions Attendance

721. Studies, Homework And Course Review Related To General Education

791. Travel Related To Learning

Table 4R
Average Time Spent by Rural Children (Aged 6-18) in Activities:

	Activity								
	1 Primary	2 Second	3 Trade	4 Home	5 Care	6 Comm	7 Learn	8 Soc/Cul	9 Person
Boys 6-10									
Not Attending	116.6	3.1	8.7	12.9	11.3	1.5	47.5	279.1	959.2
Attending	2.5	0.4	1.8	2.7	3.9	0.2	448.3	174.1	806.0
<i>Difference</i>	<i>114.1</i>	<i>2.7</i>	<i>6.9</i>	<i>10.2</i>	<i>7.4</i>	<i>1.4</i>	<i>-400.8</i>	<i>105.0</i>	<i>153.2</i>
Girls 6-10									
Not Attending	94.3	2.1	6.5	58.2	30.2	2.4	32.9	242.4	970.9
Attending	3.7	0.3	0.9	12.9	10.8	0.4	445.5	164.1	801.5
<i>Difference</i>	<i>90.6</i>	<i>1.8</i>	<i>5.6</i>	<i>45.4</i>	<i>19.4</i>	<i>1.9</i>	<i>-412.6</i>	<i>78.4</i>	<i>169.4</i>
Boys 11-14									
Not Attending	203.7	25.9	21.5	27.2	10.4	0.2	38.0	186.2	926.8
Attending	6.2	0.7	2.6	7.9	3.2	0.5	498.0	149.4	771.5
<i>Difference</i>	<i>197.5</i>	<i>25.3</i>	<i>19.0</i>	<i>19.2</i>	<i>7.2</i>	<i>-0.3</i>	<i>-460.0</i>	<i>36.7</i>	<i>155.4</i>
Girls 11-14									
Not Attending	141.9	23.9	7.7	171.9	22.4	2.4	22.8	119.8	927.4
Attending	8.6	0.5	3.8	38.3	5.3	0.8	492.8	113.2	776.7
<i>Difference</i>	<i>133.3</i>	<i>23.4</i>	<i>3.8</i>	<i>133.6</i>	<i>17.1</i>	<i>1.5</i>	<i>-470.0</i>	<i>6.6</i>	<i>150.7</i>
Boys 15-18									
Not Attending	291.8	59.1	48.7	24.5	3.4	0.5	21.1	91.7	899.2
Attending	11.7	0.9	4.2	5.3	0.5	0.5	545.5	109.1	762.1
<i>Difference</i>	<i>280.1</i>	<i>58.1</i>	<i>44.5</i>	<i>19.1</i>	<i>2.9</i>	<i>-0.1</i>	<i>-524.4</i>	<i>-17.4</i>	<i>137.1</i>
Girls 15-18									
Not Attending	185.0	31.1	10.4	265.8	19.2	2.4	10.2	64.5	851.4
Attending	13.4	0.6	2.6	52.9	3.3	1.7	525.4	80.9	759.4
<i>Difference</i>	<i>171.6</i>	<i>30.6</i>	<i>7.9</i>	<i>212.9</i>	<i>15.9</i>	<i>0.7</i>	<i>-515.1</i>	<i>-16.4</i>	<i>91.9</i>

Note: All times in minutes/normal day

1 – Primary Production Activities (Farm, Fish, Collect, Dig); 2 – Secondary Activities (Construction, Manufacturing); 3 – Trade, Business and Services; 4 - Household Maintenance, Management and Shopping for Own Household; 5 - Care For Children, the Sick, Elderly and Disabled for Own Household; 6 - Community Services and Help to Other Households; 7 – Learning; 8 - Social and Cultural Activities, Mass Media, etc.; 9 - Personal Care and Self-Maintenance

Table 4U
Average Time Spent by Urban Children (Aged 6-18) in Activities

					Activity					
	1	2	3	4	5	6	7	8	9	
	Primary	Second	Trade	Home	Care	Comm	Learn	Soc/Cul	Person	
Boys 6-10										
Not Attending	6.2	5.5	58.6	15.7	11.0	0.3	62.5	366.9	913.3	
Attending	1.0	0.3	1.7	1.9	2.6	0.1	470.5	204.5	757.4	
<i>Difference</i>	5.2	5.2	56.9	13.8	8.4	0.2	-408.0	162.4	155.9	
Girls 6-10										
Not Attending	4.9	2.2	24.0	30.2	18.4	4.4	83.1	343.2	929.7	
Attending	0.5	0.5	3.1	5.6	4.5	0.2	487.0	181.3	757.3	
<i>Difference</i>	4.4	1.7	20.9	24.6	13.8	4.3	-403.9	161.8	172.3	
Boys 11-14										
Not Attending	14.0	80.3	64.5	18.7	5.1	0.0	56.3	313.2	887.9	
Attending	0.9	1.0	2.5	3.8	0.9	0.1	504.8	193.1	732.8	
<i>Difference</i>	13.1	79.3	62.1	14.9	4.1	-0.1	-448.5	120.1	155.1	
Girls 11-14										
Not Attending	15.6	28.5	36.1	139.3	16.8	0.6	51.7	254.9	896.4	
Attending	1.5	1.2	2.6	26.8	2.5	0.3	510.5	172.3	722.3	
<i>Difference</i>	14.1	27.3	33.5	112.5	14.3	0.3	-458.9	82.6	174.1	
Boys 15-18										
Not Attending	29.5	139.8	164.3	19.8	3.3	0.2	37.2	191.7	854.3	
Attending	0.8	0.3	10.5	7.7	0.7	0.1	544.3	155.3	720.3	
<i>Difference</i>	28.7	139.5	153.8	12.1	2.5	0.1	-507.1	36.4	134.0	
Girls 15-18										
Not Attending	21.1	36.8	87.2	217.0	14.3	1.9	40.3	172.4	848.9	
Attending	2.9	1.3	3.6	56.7	1.5	0.8	531.7	126.3	715.1	
<i>Difference</i>	18.2	35.6	83.6	160.3	12.8	1.1	-491.4	46.1	133.8	

Note: All times in minutes/normal day

1 – Primary Production Activities (Farm, Fish, Collect, Dig); 2 – Secondary Activities (Construction, Manufacturing); 3 – Trade, Business and Services; 4 - Household Maintenance, Management and Shopping for Own Household; 5 - Care For Children, the Sick, Elderly and Disabled for Own Household; 6 - Community Services and Help to Other Households; 7 – Learning; 8 - Social and Cultural Activities, Mass Media, etc.; 9 - Personal Care and Self-Maintenance

Table 5
Time spent by households and individuals on:
521. Teaching, Training and Instruction Of Own Children

	Rural	Urban
% of Households which spend any time*	5.45%	17.14%
Of Whom:		
1 Adult is involved	91.10%	82.25%
2 Adults are involved	8.64%	17.32%
>2 Adults are involved	0.26%	0.43%
Of Whom:		
Scheduled Tribes	8.14%	1.88%
Scheduled Castes	11.46%	6.20%
Others	80.40%	91.91%
Median time spent by households (mins)**	60	60
% of adult individuals who spend any 521 time***	2.41%	8.03%
Of Whom:		
Men	57.55%	41.80%
Women	42.45%	58.20%
Non-Literate	14.05%	6.09%
Literate	85.95%	93.91%
Head of Household	47.63%	40.28%
Spouse of Head of Household	32.93%	49.67%
Married Child	8.42%	2.00%
Spouse of Married Child	5.49%	5.04%
Unmarried Child	2.36%	1.55%
Others	3.16%	1.45%
Median time spent by individuals (mins)****	60	60

Table 6
Descriptive Statistics

Variable	Mean (Std. Dev.)	Min (Max)	Mean (Std. Dev.)	Min (Max)
Monthly Per-Capita Income in 100's of Rs.	0.441 (12.212)	0 (3)	0.811 (22.882)	0.075 (4)
Owens Homestead	0.696 (25.581)	0 (1)	0.474 (25.617)	0 (1)
Self-Employed	0.512 (27.789)	0 (1)	0.378 (24.879)	0 (1)
Other Employed	0.126 (18.445)	0 (1)	0.080 (13.907)	0 (1)
Landless Household	0.441 (27.604)	0 (1)		
Scheduled Tribe or Caste	0.338 (26.305)	0 (1)	0.121 (16.710)	0 (1)
Female Household Head	0.077 (14.864)	0 (1)	0.073 (13.361)	0 (1)
Household Head is Non-Literate	0.330 (26.147)	0 (1)	0.097 (15.191)	0 (1)
Household Head is Literate, but less than Secondary	0.603 (27.203)	0 (1)	0.587 (25.256)	0 (1)
No female Literates (excluding head, if head is female)	0.586 (27.380)	0 (1)	0.250 (22.221)	0 (1)
Dummy for Boy/Girl Household	0.394 (27.165)	0 (1)	0.356 (24.569)	0 (1)
Dummy for All Boy Household	0.378 (26.951)	0 (1)	0.366 (24.711)	0 (1)
Dummy for whether Household has children, aged 6-10	0.661 (26.318)	0 (1)	0.515 (25.639)	0 (1)
Dummy for whether Household has children, aged 11-14	0.542 (27.699)	0 (1)	0.526 (25.616)	0 (1)
Dummy for whether Household has children, aged 15-18	0.367 (26.798)	0 (1)	0.454 (25.543)	0 (1)
Time that the Household spends on fetching water	10.069 (1544.610)	0 (450)	5.291 (901.314)	0 (245)
Dummy for whether aged 6-10	0.465 (27.648)	0 (1)	0.321 (24.030)	0 (1)
Dummy for whether aged 11-14	0.389 (27.022)	0 (1)	0.421 (25.409)	0 (1)
Dummy for whether boy	0.558 (27.527)	0 (1)	0.511 (25.725)	0 (1)

Table 7
Probit Analysis of the Probability of Informal Instruction within Households

Dependent Variable =1 if someone in the household provides informal instruction

	Rural		Urban	
Intercept	-0.724*** (0.182)	-0.726*** (0.182)	-0.807*** (0.154)	-0.814*** (0.155)
Monthly Per-Capita Income in 100's of Rs.	-0.013 (0.130)	-0.014 (0.131)	0.247*** (0.088)	0.247*** (0.088)
Owens Homestead	0.232*** (0.076)	0.232*** (0.076)	0.287*** (0.070)	0.291*** (0.071)
Self-Employed	-0.010 (0.082)	-0.010 (0.082)	-0.097 (0.074)	-0.095 (0.075)
Other Employed	0.379*** (0.100)	0.379*** (0.100)	-0.282** (0.141)	-0.282** (0.141)
Landless Household	-0.012 (0.076)	-0.012 (0.076)		
Scheduled Tribe or Caste	-0.223*** (0.073)	-0.224*** (0.073)	0.071 (0.101)	0.064 (0.102)
Female Household Head	-0.167 (0.143)	-0.167 (0.143)	0.265 (0.154)	0.261 (0.154)
Household Head is Non-Literate	-0.803*** (0.126)	-0.803*** (0.126)	-0.540*** (0.164)	-0.540*** (0.164)
Household Head is Literate, but less than Secondary	-0.617*** (0.098)	-0.617*** (0.098)	-0.420*** (0.077)	-0.421*** (0.077)
No female Literates (excluding head, if head is female)	-0.553*** (0.071)	-0.552*** (0.071)	-0.583*** (0.105)	-0.581*** (0.105)
Mixed (Boy/Girl) Household	0.022 (0.088)	0.022 (0.088)	-0.058 (0.097)	-0.058 (0.097)
All Boy Household	-0.049 (0.081)	-0.049 (0.081)	-0.140 (0.084)	-0.139 (0.084)
Household has children, age 6-10	0.237*** (0.084)	0.237*** (0.084)	0.427*** (0.092)	0.428*** (0.092)
Household has children, age 11-14	-0.031 (0.072)	-0.041 (0.072)	0.063 (0.079)	0.063 (0.079)
Household has children, age 15-18	-0.239*** (0.079)	-0.240*** (0.079)	-0.367*** (0.091)	-0.366*** (0.091)
Time that the Household spends on fetching water		0.0002 (0.001)		0.0007 (0.002)
Sample Size	3873	3873	1952	1952
Log Likelihood	-996.299	-996.280	-882.082	-881.984

Note: Standard errors in parentheses. Sample restricted to households where there is at least one child who is attending school.

*** Significant at 1%, ** Significant at 5%

Table 8
Probit Analysis of the Probability that a Child in a Boy/Girl Household Receives Informal Instruction

Dependent Variable =1 if a child receives informal instruction

	Rural	Urban
Intercept	-0.571** (0.247)	-0.967*** (0.254)
In age group 6-10	-0.107 (0.129)	0.090 (0.164)
In age group 11-14	-0.109 (0.120)	-0.036 (0.140)
Boy	-0.026 (0.075)	-0.062 (0.092)
Monthly Per-Capita Income in 100's of Rs.	-0.595*** (0.184)	0.233 (0.144)
Owens Homestead	0.102 (0.094)	0.261*** (0.096)
Self-Employed	0.120 (0.107)	-0.273*** (0.100)
Other Employed	0.606*** (0.119)	-1.019*** (0.281)
Landless Household	0.090 (0.093)	
Scheduled Tribe or Caste	-0.148 (0.088)	0.268** (0.123)
Female Household Head	0.064 (0.171)	0.329 (0.229)
Household Head is Non-Literate	-0.681*** (0.161)	-0.202 (0.203)
Household Head is Literate, but less than Secondary	-0.349*** (0.115)	-0.463*** (0.105)
No female Literates (excluding head, if head is female)	-0.623*** (0.090)	-0.691*** (0.144)
Household has children, age 6-10	0.024 (0.109)	0.081 (0.131)
Household has children, age 11-14	-0.220** (0.100)	0.052 (0.125)
Household has children, age 15-18	-0.158 (0.091)	-0.212 (0.117)
Sample Size	3119	1476
Log Likelihood	-662.589	-468.731

Note: Standard errors in parentheses. Sample restricted to children who are attending school
*** Significant at 1%; ** Significant at 5%

References

- Baskaran, R. (1999)** “Time Use Survey in Tamil Nadu - 1998-99,” Paper presented at the International Seminar on Time Use studies, Ahmedabad, 7-10, December 1999.
- Deon, D. and L. Pritchett (1998)** “Determinants of Education Enrolment in India: Child, Household, Village and State Effects,” DECRG, The World Bank.
- Dreze, J., and A.K. Sen (2002)** *India: Development and Participation*, Oxford University Press, New York.
- Duraisamy, P. (2002)** “Changes in returns to education in India, 1983–94: by gender, age-cohort and location” *Economics of Education Review* 21 (2002) 609–622
- Gersuny, J. (1999)** “Informal Activity and Time Use Evidence,” pp. 13-27 in Joachim Merz and Manfred Ehling (eds) *Time Use – Research, Data, Policy*. Contributions from the International Conference on Time Use, University of Luneberg, NOMOS Verlagsgesellschaft, Baden-Baden.
- Heckman, J., L.Lochner, and P.Todd. (2006).** “Earnings functions, rates of return and treatment effects: The Mincer equation and beyond.” In *Handbook of the Economics of Education*, edited by Eric A. Hanushek and Finis Welch. Amsterdam:North Holland:307-458. – also available as NBER Working Paper 11544 <http://www.nber.org/papers/w11544>
- Hirway, I. (1999)** “Time Use Studies: Conceptual and Methodological Issues with Reference to the Indian Time Use Survey,” Paper presented at the International Seminar on Time Use studies, Ahmedabad, 7-10, December 1999.
- Hirway, I. (2000)** “Tabulation and Analysis of the Indian time use survey data for improving measurement of paid and unpaid work” Expert Group Meeting on Methods for conducting time use surveys 23- 27 October 2000, New York, United Nations Secretariat, Statistics Division ESA/STAT/AC.79/20.
- Instruction Manual for Field Staff. 1998.** Central Statistical Organisation, New Delhi, India.
- Johansson, E. (1988)** “Literacy Campaigns in Sweden” *Interchange*, Vol. 19, Nos. 3/4 (Fall/Winter 1988), 135-162
- Juster, F.T. and F. Stanford (1991)** “The Allocation of Time: Empirical Findings, Behavioral Models and Problems of Measurement,” *Journal of Economic Literature*, 29, 471-522.

Kulshreshta, A.C. and G. Singh (1999) “Valuation Of Non-Market Household Production,” Paper presented at the International Seminar on Time Use studies, Ahmedabad, 7-10, December 1999.

Morrison, A., D. Raju, and N. Sinha (2007) *Gender Equality, Poverty and Economic Growth* Policy Research Working Paper 4349 The World Bank, Gender and Development Group, Poverty Reduction and Economic Management Network, September 2007

Motiram, S. and L. Osberg (2007) “Demand or Supply for Schooling in Rural India,” Paper presented at the Annual meetings of the Canadian Economic Association, Halifax, 2007.

Pandey R. N. (1999) “Operational Issues in Conducting the Pilot Time Use Survey in India,” Central Statistical Organisation, Ministry of Statistics and Programme Implementation, New Delhi.

PROBE (1999) *Public Report on Basic Education in India*, Oxford University Press, New Delhi.