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ABSTRACT

This paper presents findings of a study that examined the role of economic, social, and logistical factors on Ethiopian parents' decisions whether or not to enroll their children in public primary school. Data were obtained from a survey of four rural regions in Ethiopia--130 households per region. Findings indicate that parents made enrollment decisions based primarily on economic conditions. Because formal sector employment is difficult to obtain, many parents elected to keep their children away from school, preferring them to engage in productive household/farming activities. Although parents cited economic opportunity as the primary motivation for sending children to school, they identified economic constraints as the major obstacle for doing so. A positive relationship was found to exist between parental socioeconomic status and their children's enrollment status. A significant relationship was not found between parents' educational level and enrollment of their children. Seven tables are included. (LMI)

Household Demand for Primary Schooling in Ethiopia: Preliminary Findings[1]

by

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Abstract

Ethiopia, the second most populous Sub-Saharan African country, has only recently emerged from decades of brutal and socially taxing civil war. This paper examines the relationships between various Ethiopian community, school, and household characteristics as they relate the demand for primary education. The decision by individual parents (and children) as to whether or not to attend primary school is undoubtedly the result of a series of complex and highly interactive processes. Although it is impossible to explain all of the motivations underlying individual decision making activities, this analysis presents conclusions based on descriptive, correlational, and statistical data derived from a randomly selected sample of households. Findings indicated that parents made enrollment decisions based primarily on economic conditions. Because formal sector employment is difficult to obtain, many parents elected to keep their children away from school, preferring them to engage in productive household/farming activities.

Over the past decade, Ethiopia, Africa's second most populous country, has consistently received the dubious distinction of being classified as one of the five or ten poorest countries in the world[2]. It should not be surprising, therefor, that Ethiopia also has one of the lowest schooling participation rates worldwide - less than 25% of the population is estimated to have ever attended any type of primary school[3]. This low participation rate represents a significant national enrollment reduction, as primary enrollment rates in the 1980-85 period were as high as 36 percent. Diminished participation appears to be a phenomenon outside the specter of resources. The number of schools and teachers have held relatively constant over the past decade, resulting in the anomalous appearance of improving standards. For example, during the previous decade, student teacher ratios dropped in the primary grades from 48/1 to 30/1, and in the secondary from 43/1 to 34/1. The outcome of the present Ethiopian situation can be grossly stated as follows: "What happens when there is a school, and nobody goes? Or more specifically, what effects the household demand for education in a country like Ethiopia, where over 87 percent of the population is rural, and where GNP per capita of only $110 is low, even by Sub-Saharan standards ($520 is the mean).[4]

The "Ethiopian Educational Demand Study" was commissioned by USAID through the Academy of Educational Development, and took place between November

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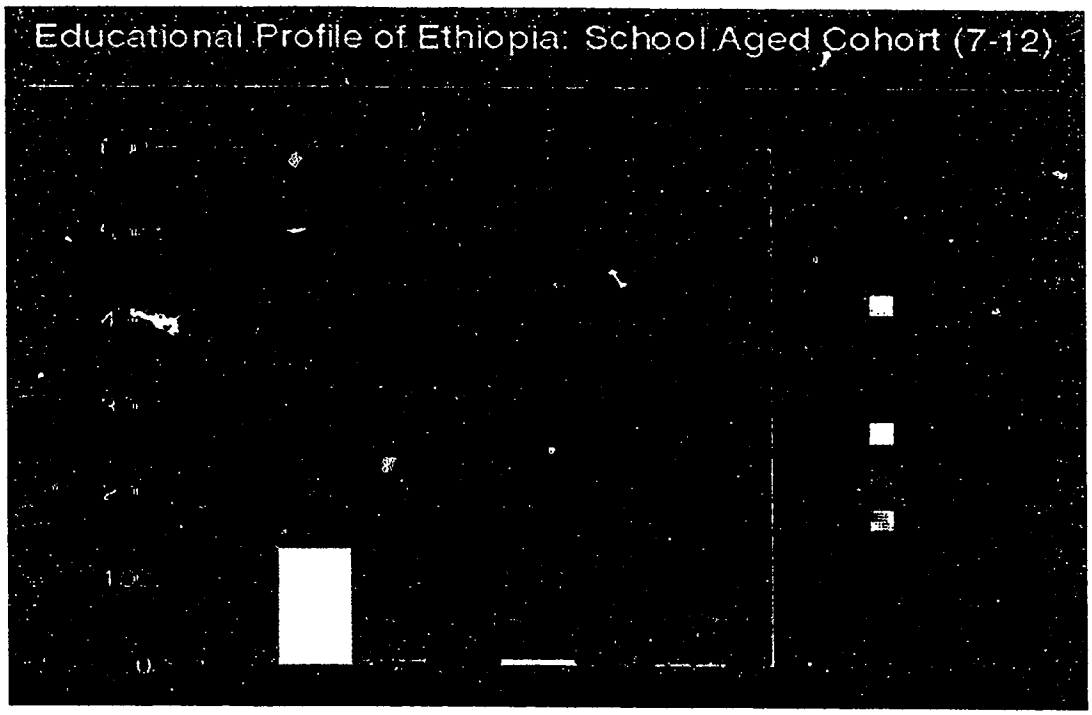
[2]World Bank Development Report, 1985-94

[3] Social Indicators of Development, World Bank, 1994

[4]World Tables, World Bank, 1994.

1994 and May, 1995. The objective of the study was to examine the role of economic, social, and logistical factors on parental decisions to enroll, or not enroll, their children in public primary school. The research sought to identify obstacles and characteristics regarding participation in order to inform policy and assistance to the educational sector.

Figure 1 provides a graphical representation of the current state of educational completion:



Research Methodology

Decisions regarding education do not occur in a vacuum- they exist within a wide range of community, social, economic, and cultural experiences unique to each decision maker. Although sometimes overzealous analysts would have us conjuring up rural households computing individual rates of return, many of the determinants of the decision making processes as they exist in Ethiopia today can nonetheless be explored. To do this, a random sample of households was obtained, interviewing both mothers and fathers, exploring a wide range of attitudes, preferences, and characteristics of household educational decision making. Enumerators were carefully chosen to reflect the cultural and linguistic norms of the areas researched, resulting in as representative and complete a set of responses as current survey methodology allows.

The study was a random stratified sample of four different rural geographical regions in Ethiopia. Survey instruments were designed, translated into local languages, and administered by teams composed of high school graduates from the regions of study. This was done to maximize opportunities for frank and willing participation on the part of the respondents. Communities were selected in four different regions to evaluate conditions that varied with respect to the effects of protracted warfare, as well as linguistic, religious, ethnic, and economic variations. Selected areas included villages in theTigray, Gondar, Welaita, and Bale regions. Within each region, ten separate villages within "walkable" proximately to a government school were sampled. Thirteen households were randomly chosen from each village, and a questionnaire was

administered to either the female or male head of household.[5]

Findings: *FACTORS INFLUENCING DEMAND FOR EDUCATION*

There exists a myriad of reasons as to why parents do or do not send their children to school. Measuring individual perspective remains an inexact science, the relationships between attitudinal characteristics and behaviors are frequently less than direct. This study provided a match of behaviors , specifically, school enrollment histories of each family member, with a series of parent attitudinal questions designed to explore possible correlations and relationships.

The household primary participation ratio serves as the dependent variable for school decision making in much of this analysis. To capture the overall trends regarding household participation at the macro level, the total household primary participation ratio was compared for all members, and for those of school age only. The measure is calculated by dividing the actual years of primary schooling completed by each child in the family, by the potential for each child as calculated by their school age. For example, a child of 7 would have one potential year of primary schooling, a child of 26 would have a maximum of six. The ratio was calculated for the entire family, providing a historical record of the total education consumed by each household. A

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[5] Further analysis consisted of an extensive evaluation of the local primary school, in terms of finance, enrollments, and general characteristics. Focused interviews were also conducted with the parents of children who went to school, and with those who chose not the sent their children to school. The latter two components of the study are not included in this paper, and were analyzed by the two other principal investigators.

ratio was also calculated for those children in all households of school age (7-12), which provides a comparison between "present" and "historical" patterns (the total household ratio includes, and thus averages in, present participation rates).

Because of the comparatively low levels of school participation in the study, there was an expectation of finding considerable variation regarding the "whys" and "why nots" of sending children to school. The original hypothesis was that because so few rural parents elected to send their children to school, they would be unique along a number of critical dimensions. Surprisingly, there was considerable consistency - indeed, parents seemed to demonstrate many of the same fundamental beliefs vis-a-vis schooling whether or not they elected to send their children. Figures 2 and 3. demonstrate this consistency by illustrating the comparative strength of the most frequently cited motivations for sending, or not sending, boys or girls to school. The questions were asked of both fathers and mothers, worded as follows:

"For the girls (boys) you send to school: Why do you send your girls (boys) to school?

"For the girls (boys) you do not send to school: Name 2-3 reasons why you don't send your girls (boys) to school" ?[see figures 2 and 3]

Responses were coded and analyzed for both mothers and fathers, regarding opinions expressed for sons and daughters. The three most frequently cited views are presented in figures 2 and 3. Although there was some specific gender variation, particularly regarding fathers and their attitudes about their daughters, the most consistent theme is that of economic issues. Briefly stated, parents say they send their children to school

so that they can get good jobs, and claim to be unable to send them due to household financial constraints. Both mothers and fathers agree that obtaining employment is the single most important reason to send children to school. A more general (and less informative) response was cited secondly: the importance of "learning about the world". Parents also concurred on the third most frequent response for boys - "to learn how to read and write letters". The importance of general literacy was not extended by fathers to their daughters: whereas mothers felt it was important for girls to learn to read and write letters, fathers cited "being a better wife/mother". We can only speculate that this reflects normative gender roles -perhaps fathers view male letter writing as an avenue of political or social integration and status, particular to their sons.

When parents were asked why they did not send their children to school, economic issues were once again in the forefront (figure 3). Both mothers and fathers agreed that opportunity costs ("needed to work at home") were the biggest impediments to sending their sons and daughters to school. The economic constraints were also reinforced in the third most frequent response - there was not enough money to purchase books and supplies. It is worth noting that the range of household costs on such matters was reported to be quite narrow and comparatively small - book costs, when reported, averaged 10 birr per year ($1.75) , while average school supply costs were reported to be 15 birr per year ($2.60). The second most frequent response to the question was differentiated by gender. Regarding their sons, the second most frequent response was somewhat perplexing: both mothers and fathers agreed they did not send them because "they are not smart enough". What "smart enough" means concerning a basic primary school curricula is not immediately apparent, although it is

more likely to reflect issues concerning motivation rather than that of ability. Regarding their daughters, fathers also cited poor security due to effects from the war. Other security concerns, such as "on the way to school", or "security in school is bad" were only infrequently cited - which makes the particular emphasis on war security more pointed. Presumably, the decision not to send daughters to school was framed a number of years ago during the period of heavy warfare (Ethiopia is now entering a third year of post-war transitional government). This would imply that the war placed additional constraints on female enrollment, with subsequent inequities for the "war period" cohort.

FIGURE 2 Three most frequent responses:Why parents send children to school:

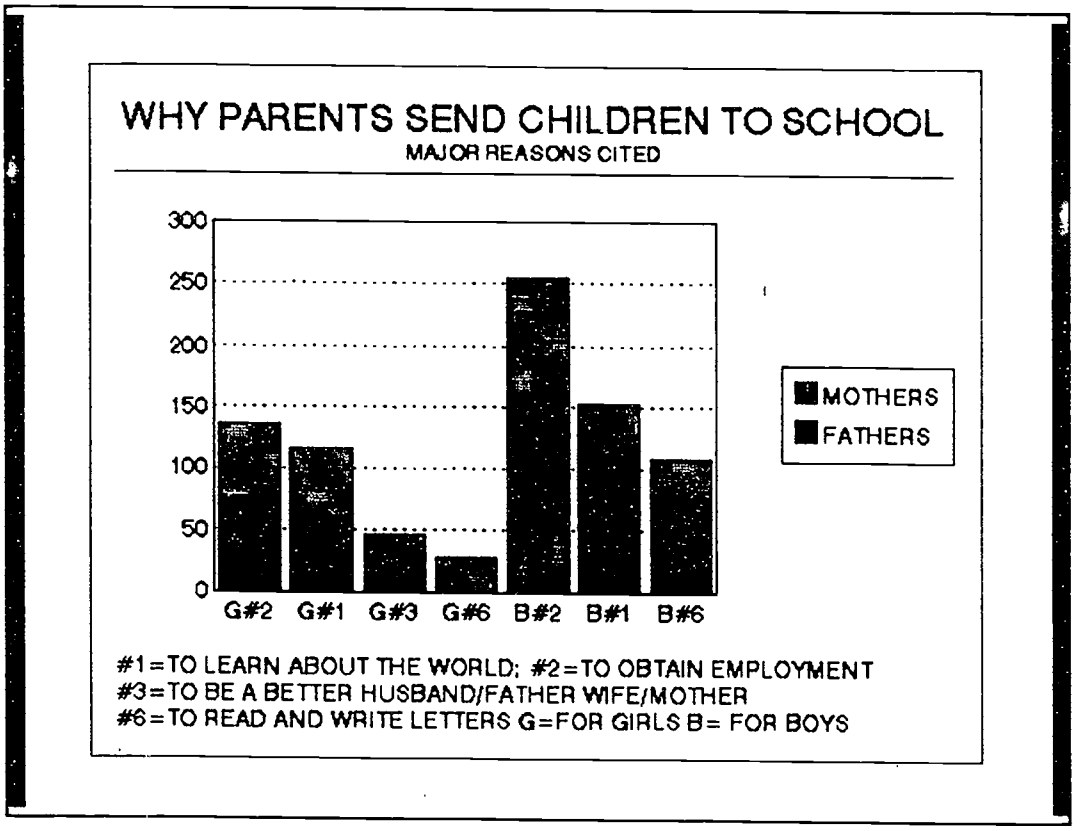
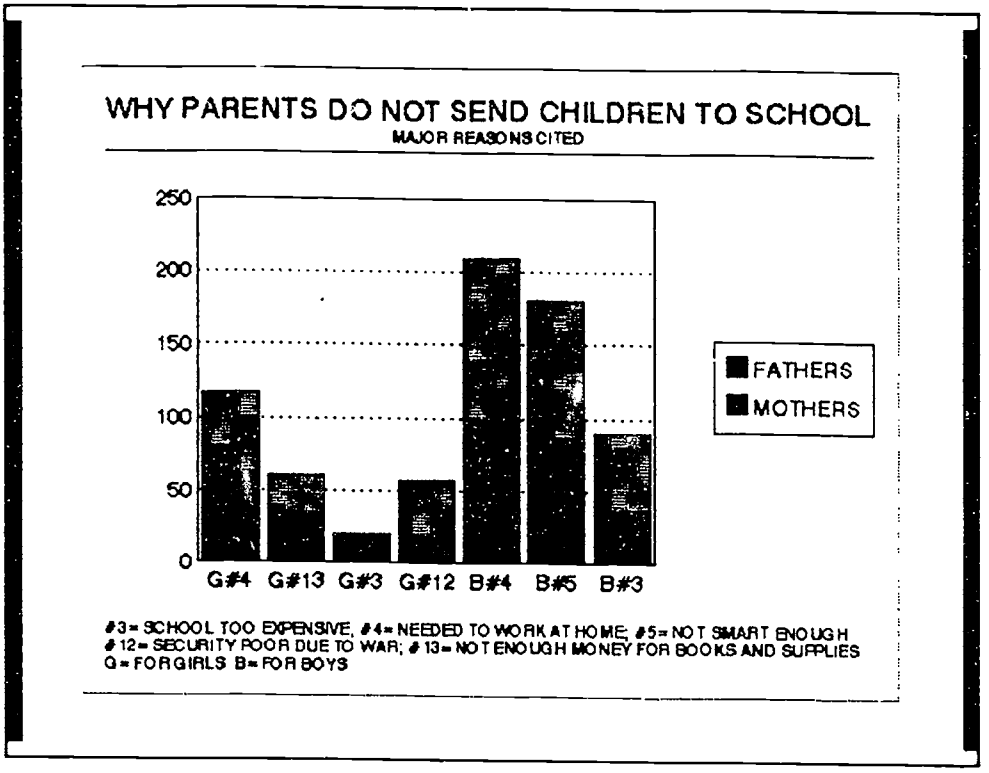


FIGURE 3. Three most frequent responses: Why parents do not send children to school:



Parental attitudes toward schooling

The relationship between attitudes about schooling and household participation were explored with a number of questions that sought to evaluate parental confidence and expectations. Do parents think schooling is useful for rural life, or do they consider it an urban good - something alien to their lifestyle, or otherwise imposed? Rural parents were found to be nearly unanimous in their more obvious appreciation of the merits of schooling. They were asked the following question: "some people say school is bad, others say it is good, what do you think ?" The responses were universally

consistent: virtually every parent stated that school was "good", irrespective of whether or not they chose to send their children.

Parents were asked a question that sought to establish how relevant they thought schooling was for rural life. In this matter, there was considerably more variation. The results of the question "Do you need to go to school to become a good farmer, [or we inserted the respondents occupation if other than farmer]?, are presented in table 1. Although the majority of parents stated that school was important for their occupation (in most cases, farmers), a significant minority did not view schooling as particularly utilitarian to their own lifestyles. Significantly, parents who send their children to school are more likely to indicate that there is no relationship between attending school and becoming a better farmer (or other parent occupation) than are parents who do not send their children to school. Thus, ***although obtaining employment is the foremost motivation for sending children to school, parents who are less likely to believe in the role of schooling and rural occupational relevance are more likely to send their children to school.*** Either these parents believe that school will be helpful in some other occupation at which they expect their children to engage in, (an unlikely scenario, at best) or else there are other benefits which they consider to accrue to their children as a result of the schooling process.

Parent expectations regarding the economic pay-offs to schooling can hardly be over emphasized in this study. Although there was considerable skepticism regarding employment possibilities for school leavers, the study cannot discount the "lottery effect" vis- a- vis hopes and aspirations. In this view, parents might decide to send a child to

school , much as they might purchase a lottery ticket, in anticipation of the remote but vast potential returns to their investment. " Perhaps," a parent might think," one child will be lucky, and get a well paid government job, helping the family financially in the future.... for this they will need an education." Both mothers and fathers were asked how the family would benefit by sending their children to school. The results were nearly unanimous: regarding their sons, 87 percent of the parents felt the family would benefit if "he will get a good job and help with the family finances". Regarding their daughters, parents provided this response 75 percent of the time.

TABLE 1 Attitudes regarding the importance of school for occupational development.

	do not need school for occupation	need school for occupation	row totals
parents who do not send children	75 (31%)	167 (69%)	242 100%)
parents who send children	167 (43%)	219 (57%)	386(100%)
Pearson's R[6]	-.122**		

[6]The correlation coefficient, R, indicates the direction of the relationship between two variables, as well as its statistical significance. Two asterisks [typically] represent significance at the .05 level or greater, meaning that such a relationship is unlikely to be spurious or the result of a random event. The relationship depicted in this table, .12, is a relatively modest correlation, statistically significant.

Parent assessment of school costs

This study already established how important economic criteria weigh on the decisions parents make regarding school choice. Parents hope their schooled children will obtain profitable employment that will assist the family. We have also seen that parents cite the costs of education, in terms of opportunity costs as well as school materials, as being among the biggest reasons for not sending children to school Rural parents appear to be carefully weighing the possible benefits of future employment against the hard realities of both direct and indirect costs. Parents were asked to specify which school expenses they found the most difficult, for both boys and girls (table 2). They indicated that the expenses for which they had the greatest difficulty were the same for both boys and girls. Clothing costs were the most frequently cited, by 36.5 percent of the respondents. Although virtually every child has clothes, some parents indicated that the social expectation for children who attend school was to have better, higher quality, clothing, including shoes. The indications were that the tattered clothing children in rural areas typically wear would be seen as inappropriate for school use. School books were cited as the second most difficult expense. Book rentals are nominally 3 birr per academic year ($.50), and it was apparent that many children attended school without the benefit of a book, pen, or even an exercise book. School fees, nominally the same per child as book rental, were also cited as a source of difficulty by over 20 percent of the sample. A number of headmasters informed us that although these fees appeared relatively modest, they had to waive all or part of the registration fees or risk withdrawal of the proportionately small student population they had. Perhaps the sensitivity of school fees reflects expectations on the part of parents

that school costs, as with teacher salaries, should be borne by government rather than at the household level.

TABLE 2 The greatest difficulty regarding school expenses for boys/girls

	number	percentage of total
Clothing	518	36.5%
School Books	415	29.2%
School Fees	298	21%
Other	187	13.1%

Parent educational background

It has been repeatedly demonstrated that one of the best predictors of child educational achievement is that of parental achievement. Educational achievement for parents in this study was found to be unusually low (Table 3). Less than 7.5 % of the parents surveyed had themselves experienced one or more years of formal education. The Pearson's R correlation between parents combined level of education and household enrollment ratio was found to be positive, at .11, and significant at .01[7] Many studies have reported far higher correlations: .3 or higher would not be unusual for this relationship (1 would be a perfect correlation, 0 two unrelated variables).

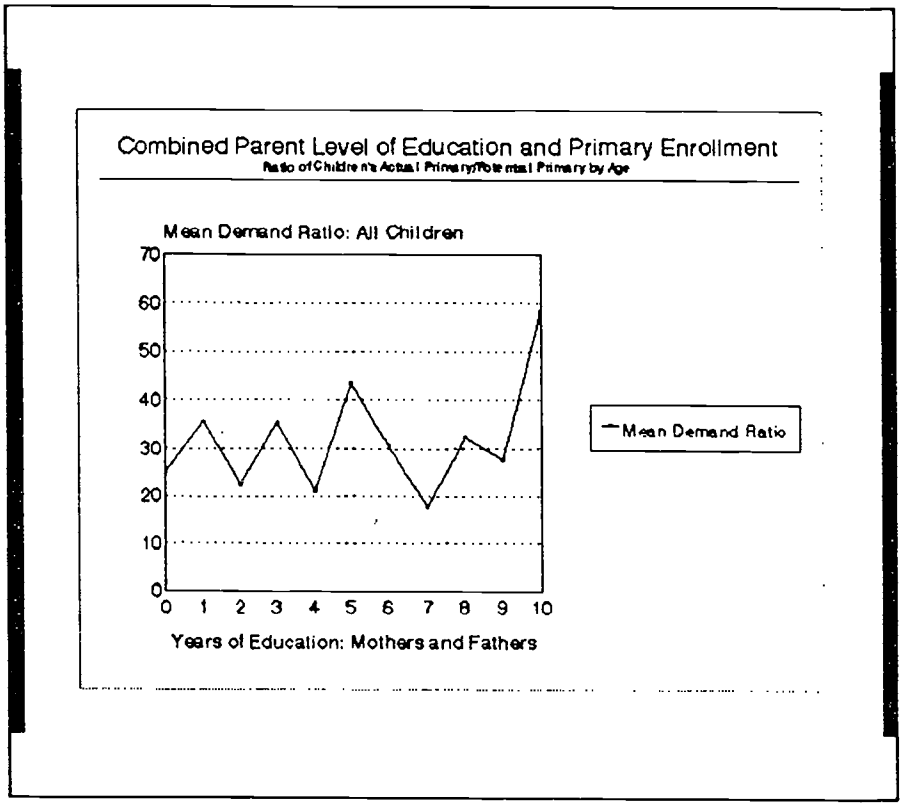
[7]Pearson's correlation coefficient, R, indicates the direction of the relationship between two variables, as well as its statistical significance. Significance at the .01 level indicates that such a relationship is unlikely to be spurious or the result of a random event. The relationship depicted in this table, .11, is a relatively modest correlation, statistically significant.

Perhaps this relatively low correlation is due to the generally limited level of parental educational achievement in the rural areas. A plot was constructed depicting the relationship between the combined level of parental education, and the mean household consumption. Figure 4 shows a saw-toothed type of relationship, with gradual ascension, between parent educational level and household consumption. A more linear relationship was initially predicted, which would have appeared as a straight, ascending diagonal line in this chart. The jagged pattern demonstrates the variability of the relationship.

TABLE 3. Years of Education, Parents

Years of Education	Number	Percentage
None	842	73.5%
one	6	.5%
two	9	.8%
three	25	2.2%
four	8	.7%
five	9	.8%
six	9	.8%
7-11	20	1.7%
Literacy	187	16.3%
Other	31	2.7%
Total	1146	100%

FIGURE 4: Plot of Parental Education and Household Enrollment



Parent SES

The household attitudinal measures indicated that both direct and indirect costs play a major role in the educational decision making process. Measuring the social and economic status (SES) of rural households in Africa continues to be a daunting task, but it is nonetheless important in accessing and determining educational policy. Rural households are only marginally incorporated into the cash economy: the majority of their economic transactions are likely to be in the form of barter. Furthermore, the lack of range and variation in terms of occupation tend to make comparisons regarding social status difficult, at best. Even so, considering the importance placed on economic issues by the respondents, a careful evaluation and analysis of relative household SES measures becomes a critical, if sometimes elusive, component of analysis.

Previous research experience highlighted the difficulty in obtaining cooperation on even the most evident measures of household wealth in Africa: individuals are very reluctant to indicate the number of animals they own, for example, due to fears of taxation, as well as cultural norms and traditions. To estimate household wealth, sixteen variables were developed with which to construct an index of proxy income. A number of variables were the result of observation, such as home construction characteristics, and household furniture. Others were constructed so as to be perceived as somewhat less obtrusive, such as the number and type of farm implements in the household, availability of a barn, and the type of domesticated animals owned (rather than the number). A few of these variables have been examined with respect to the household consumption ratio, and in some cases they have demonstrated significant

correlations. For example, owning a metal bed, a barn, a radio, and even a latrine, all demonstrated significant and positive relationships with the consumption ratio (table 4). For the full sample, we can see that these four variables all have statistical significance at the .05 level, and Pearson's correlations of approximately .1 on a scale of 0 -1 (see footnote 1 or 2). It can be seen that households who own a radio, a metal bed, latrine, or barn, are more likely to have send their children to primary school. Considering the stress placed on economic issues by parents' attitudinal characteristics, this finding is both expected and confirmatory. Those families who are better able to afford education, as evidenced by other consumption patterns, are more likely to send their children to school.

It was also found that a number of variables are region specific: for example, owning a barn is of little use in predicting the relationship between educational consumption and income in Bale and Tigray, where there is no established tradition of their employment. Owning a radio, however, demonstrated a much stronger correlation in these areas than in Welaita and Gondar (table 4). This undoubtedly reflects the regional heterogeneity present in the study, and underscores the need for careful attention in the formulation of region specific wealth indices. Each wealth proxy variable must be carefully examined in relation to the situational context in which it is employed.

TABLE 4: Correlation Coefficients, select variables with educational consumption ratio (all ages), two tailed tests.

Variable	Coefficient* full sample	Coefficient* Welaita and Gondar only	Coefficient* Bale and Tigray only
Own a radio	.119**	-.034	.214***
Own a barn	.110**	.195**	.02
metal bed	.154***	.135**	.185**
latrine	.096**	.120*	.07

*p<.1

**p<.05

***p<.001

Explanations of drop out behavior

The lack of persistence is a major component of low educational participation rates in rural Ethiopia. Not only do relatively few children enroll in school, but those that do so are more likely than not to terminate their primary school experience, after only one or two years. The impacted nature of many first grade classes, combined with the weak participation at the higher grades, makes optimum resource utilization a major problem in rural schools. Teacher-student ratios vary widely within schools, as do student-classroom ratios. To access drop out behavior, questions were designed for heads of households who had formerly sent children to school, but had withdrawn them,

to identify two or three reasons the children had stopped attending (table 5). Once again, economic constraints were cited as the overriding cause of lack of participation. Table 4 shows the three most frequent responses to the question "for the girls/boys you sent to school: name 2-3 reasons you don't send your boys/girls to school". Opportunity costs - requiring the children to work at home - were the most frequently cited causes for both girls and boys to be withdrawn. For boys, the costs of books and supplies were the second most common answer, and we have already noted the estimated average cost of 25 birr per academic year for these items ($4.50). It is interesting to note that parents of girls withdrawn from school were more likely to cite the lack of employment opportunities in their decision to drop out. This corresponds to some extent with the attitude regarding why fathers send their children to school (Figure 1). Fathers indicated that boys should learn to read and write letters, a possible status orientation, while daughters were to learn to be good housewives and mothers, a practical application not dissimilar to the occupational preference displayed for girls in this question. The overall expense of school was the third most frequent response for withdrawing both girls and boys from school.

TABLE 5: Three most frequent reasons parents stopped sending boys/girls to school

	boys	girls	both
needed to work at home	28.4% (110)	27% (31)	29.2% (141)
not enough money for books and supplies	25.8% (100)		20.7% (100)
school is too expensive	10.2% (78)	13% (15)	19.3% (93)
no jobs for school leavers		16.5% (19)	
other	25.6% (99)	43.5% (50)	30.8% (149)

The decision to drop out is not necessarily a terminal one. In the rural areas, it was not infrequent to find children of fifteen or sixteen attending grades 1-3. We were informed that for many of these older children, their schooling was interrupted for a variety of reasons - they had "stopped out" in current parlance. To access drop out decision making, parents were asked what would change their minds regarding their decision to withdraw their children from school (Table 6). On this question there was full agreement regarding both boys and girls: if the household farm/business was more profitable, the parents say they would alter their decisions. Further, over 13 percent indicated if jobs for school leavers were available, they would change their minds and

send their children to school.

Table 6 What would change your mind regarding the decision not to send your boy/girl to school

What would change parents mind	Percentage (count)
If farm/business was more profitable	29.6% (256)
if school did not interfere with farming seasons and work	20.1% (174)
if there were jobs for school leavers	13.3% (115)
other	6.9% (319)

Economic issues were not the only enticements mentioned regarding the circumstances of dropping out. School fees, book rents, and opportunity costs all have the potential to conflict with the seasonal demands placed on rural households. Will school fees be due when it is necessary to purchase seed and fertilizer? Will parents find it necessary to choose between sending their children to school, or obtaining invaluable assistance at harvest time? The findings indicated that a failure to make the necessary seasonal adjustments in the academic calendar appear to effect

educational persistence. Over twenty percent of the parents indicated they would change their minds regarding withdrawing their children from school if the academic year did not interfere with the farming seasons/cycle.

To access the impact of specific calendar periods on household demands, parents were asked if there were any particular seasons in which they kept their children home from school. It is reasonable to assume that while some parents withdraw their children temporarily due to seasonal constraints, others will do so on a more permanent basis. In our sample of rural households, over twenty percent of the respondents reported keeping their children home from school during harvest season. Additionally, eleven percent kept them home during the rainy season of June through August. The potential conflict of the school calendar with the demands of rural life is likely to vary from region to region, depending on the nature of agricultural and climactic conditions. Careful study of this relationship is likely to yield considerable benefits vis a vis participation and persistence in primary education.

TABLE 6: Seasons when parents must keep children home from school.

season at home	frequency	percentage
harvest season	88	20.3%
rainy season	49	11.3%
sowing & harvest	10	2.3%
not necessary	286	66%

In most communities, parents of school aged children have a range of options regarding their participation in various types of formal, nonformal, and informal education. There was considerable discussion, for example, in the Bale region,

regarding the impact and influence of externally subsidized Koranic schools. In our sample, we found alternatives that included both secular and parochial schools, possibly competing for the same children in specific communities. Table 7 shows the extent of participation in these various options for the households in the study. The overwhelming majority (68%)of school aged children are not attending any type of formal schooling. Of the 31 percent who do attend, all but less than two percent participate in government education. It should be noted, however, that our household survey instrument was not designed for the analysis of the history of educational enrollment. Children with a previous history of parochial school attendance, as well as those who might participate in a supplementary capacity, are not captured in this table. For this reason, students currently attending school were asked information regarding their parochial experiences.

TABLE7: Educational choice of school aged children (7-12)

School choice	number of children	percentage attending
no school	531	68.7%
government school	234	30.3%
koranic school	6	.8%
priest school (Coptic)	2	.3%
total	773	100%

Conclusion

Economic constraints clearly represent the most salient impediments to participation and persistence in primary school in the rural areas. Parents cited economic opportunity as the primary motivation for sending children to school, and blamed economic constraints on their failure to do so. Correlations between proxies for household wealth and schooling, although preliminary, indicated positive and significant relationships between income and household enrollment /consumption patterns. Indications are that there is considerable variation regionally regarding the relative importance of various proxy measures.

Schooling was closely associated with occupational development, by the majority of parents, although there appears to be a discontinuity in this view. Parents who maintained a non-occupational perspective, although in the minority, were somewhat more likely to send their children to school. Thus, a minority of parents appear to subscribe to the argument that education is "good" or "important" for all children. The majority expect household schooling investment to translate into practical economic/job related benefits.

Parents educational levels were found to be weakly correlated to household consumption practices. It is hypothesized that this is due to the relatively low participation rate of parents - less than eight percent had attended any primary school themselves. In this sense, primary education may be considered a relatively "new" or otherwise impractical activity, vis a vis rural life.

Although much of public primary education was asserted to be "free", there were

numerous costs to sending children to school that were borne by parents. Aside from the opportunity costs of productive farm labor lost, there were school expenses identified as being difficult for rural parents to manage. Clothing costs were mentioned as particularly exacting by over 36 percent of the households. School books were also cited as burdensome, by nearly 30 percent of the sample. Subsidies regarding these expenses would be required to significantly increase rural participation.

Although in many areas there were non-governmental parochial primary schools operating, they did not appear to have a significant impact on our population. Less than 2 percent of our sample children were currently enrolled full time in a parochial school. Thus, the low participation rates reflect communities served by both public and private schools.

The demands of seasonal agricultural practices appeared to play a significant role in parental decisions to withdraw children from school, on both a temporary and a permanent basis. Over 30 percent of the parents surveyed indicated that they kept their children home to accommodate these requirements. A further 20 percent of parents who had withdrawn their children from school maintained they would change their decision if the school year did not interfere with the agricultural seasons. Careful consideration should be made regarding the academic calendar in terms of the farming season. One possible solution might be to have students attend school on alternate days throughout the year - thus enabling them to continue participating (and learning) in their local communities.