

Education Participation in Sri Lanka -- Why All are Not in School

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Abstract

Despite committing to provide ten to eleven years of education to all since 1990, only 93 per cent of children in the 5 – 14 year old age group were in school in Sri Lanka in the year 2000. Moreover, when decomposed into different socio-economic groups the education participation rates are not equitable across the country. This is despite a network of around 10,000 schools, supplying education free of charge throughout the country. This paper examines the determinants of school non-participation of 5-14 year olds in Sri Lanka using household, community and school level information obtained from an island-wide survey. The study finds that demand side problems such as poverty, direct and indirect costs of schooling, and cultural factors as well as supply side shortcomings such as quality of education seem to affect schooling behavior of children. Policies facilitating compulsory education in the country at present gives prominence to awareness building, monitoring and improvements in education delivery. The results show that these efforts need to be complemented by other supply side improvements and income transfer measures, especially for the poorest, to achieve universal school attendance.

Key Words

Education, School quality, Sri Lanka.

1.0 Introduction

Despite being a signatory to the “World Declaration on Education for All” in 1990, that emphasizes the need for functional literacy requiring ten to eleven years of general education, by year 2000, only 93 per cent of children in the 5-14 age group are in school in the country.² Furthermore, a closer look at these education participation rates shows that, when decomposed into different socio-economic groups the education participation rates are not equitable across the country. For example, while 96 per cent of children in this age group in the richest expenditure quintile attend school, only 90 per cent of children in the poorest expenditure quintile are in school; 94 per cent of children in the urban sector are in school, while in the estate sector only 90 per cent are in school. Furthermore, these differences are statistically significant. Although these statistics seem equitable, from a developing country standpoint, they highlight the areas needing policy attention in the quest for achieving “education for all” objectives detailed above.

In January 1998, Sri Lanka legislated compulsory education for 5-14 year old children, with the hope of improving education participation. The implementation of this policy was carried out through the appointment of two local level committees for the purpose of enforcing compulsory school attendance. These committees were given the authority to confront parents of non-schooling children, to ensure regular attendance. However, by 2000 many of these committees were dysfunctional, due to various reasons, and the improvements made in school attendance was limited. Since then a three-year national action plan has been formulated for implementing education for all (EFA) goals. This plan envisages implementing EFA goals through

² Statistics calculated using SLIS 1999/2000 data.

a series of committees appointed at various levels of education administration ranging from the national level to the school level. The primary functions of these committees, among others, include improving awareness on school attendance, information collection and maintenance, and planning and distribution of resources for EFA programmes. The primary objective of this study is to explore the factors affecting school non-participation behaviour. The findings of the study are used as a basis for recommending policy that improves school participation through facilitation. (NEC, 2003).

Table 1: Percent children in School in the 5 to 14 year old age group, by key characteristic

Sri Lanka		93
Gender	Male	93
	Female	94
Sector	Urban	94
	Rural	93
	Estate	90 **
Province	Western	93
	Central	94
	Southern	94
	Northern/Eastern	96 ***
	North Western	94 **
	North Central	90 **
	Uva	92
	Sabaragamuwa	91
Ethnicity	Sinhala	94
	Sri Lankan Tamil	90 ***
	Indian Tamil	94
	Sri Lankan Moor	93
	Other	96
Religion	Buddhist	94
	Hindu	91 ***
	Muslim	93
	Christian	93
	Other	93
Expenditure Quintiles	1 - poorest	90 ***
	2	94
	3	94
	4	95 **
	5	96 ***

Source: Author's calculations using SLIS 1999/2000 data.

Note: Statistical significance at 1, 5 and 10 per cent levels are indicated by '***', '**' and '*', respectively for comparisons with the participation rate for Sri Lanka.

This paper evaluates the determinants of school non-participation using household, community and school level information obtained from the Sri Lanka Integrated

Survey (SLIS 1999/2000). Section 2 of the paper gives an overview of school education structure in Sri Lanka. Section 3 of the paper discusses the underlying theoretical considerations used in the empirical analysis. Section 4 of the paper describes data used for the analysis and the choice of variables. Section 5 describes the main findings of the empirical analysis, and lastly section 6 discusses conclusions and policy implications arising from the study.

2.0 School Education in Sri Lanka

Formal education in Sri Lanka is provided through an extensive network of schools -- numbering around 10,000 -- spread throughout the country.³ Since the Free Education Act of 1949, education has been free, to a large extent, up to the first-degree university level. The government, at its various levels, primarily finances publicly provided education in the country. These publicly funded educational inputs comprise both investment inputs – such as expenditure on buildings, furniture, and equipment, etc. --, recurrent inputs – such as expenditure on teachers and other staff, consumable supplies, provision of school uniforms, meals and text books, as well as administrative and development related expenditure.

The present management structure of education in the country has prevailed, since the enactment of the 13th amendment to the constitution in 1987, which established the provincial council system. With this change, more powers were given to the provinces in administration and management of education services. However, despite decentralization, all policies relating to education are formulated and implemented at the centre. The provincial level educational authorities are mainly

³ Less than 1 per cent of the schools in the country are private schools.

concerned with administrative functions and some aspects of development, such as physical infrastructure and on-going training of teachers.

Table 2: Availability of resources in government schools, by province and sector

	Selected Provinces						Sector		
	Sri Lanka	Western	Northern/Eastern	North Central	Uva	Sabaragamuwa	Urban	Rural	Estate
Good roof ¹	92%	98%	96%	85%	94%	82%	95%	93%	73%
Good floor ²	99%	99%	99%	100%	95%	100%	98%	99%	100%
Divided classes in class rooms	44%	72%	27%	15%	37%	47%	71%	39%	60%
Separate furniture for all students	60%	62%	28%	66%	58%	74%	53%	61%	71%
Usable blackboards and adequate supply of chalk	72%	75%	70%	75%	69%	65%	75%	71%	82%
Current teachers as a ratio of teacher entitlement	92%	97%	82%	89%	84%	93%	96%	93%	77%
Student teacher ratio	22	20	31	18	21	22	24	21	29
Sample size	429	77	99	30	30	42	85	329	15

Source: Calculated using SLIS 1999/2000 data, weighted.

Note: 1. Roofs made of tiles or Asbestos sheet were considered as good. 2. Floors made of wood, cement, stones or tiles were considered to be good.

Anecdotal evidence and descriptive analysis on school quality shows several problems in deployment of resources in the current system. Many schools, especially in rural areas have difficulty retaining teachers. As shown in Table 2, available teachers as a percentage of teacher entitlements vary widely across provinces and sectors. These percentages are particularly low for the Northern/Eastern provinces due to the ongoing ethnic conflict in that area and for Uva province, which has historically being the most underdeveloped province in the

country. They are also low for schools in the estate sector.⁴ The problem is more severe for retaining subject teachers teaching English language, Science, and Mathematics. Teacher shortages are also high for Tamil medium teachers. Teachers, who pass out from teacher training schools are deployed to schools throughout the country based on their revealed preferences and the needs of the schools.⁵ Since better-known schools in urban areas are favoured by most, they attract the best graduates.

Financial resources for recurrent expenditure in schools are allocated more or less, according to the size of student populations, with favourable treatment to less advantaged schools in underprivileged regions. Despite this, there is disparity in the availability of resources at the school level (see Table 2). Financial resources for capital expenditure, on the other hand are allocated according to need. However, as the sector suffers from severe funding limitations, the administrators are unable to meet all capital requirements.⁶ As a result, funding for capital requirements are allocated on a priority basis. These funding decisions made in the complex five-tier administrative structure in the country often do not result in efficient outcomes. Political interference in allocation of funds for capital projects also further lessens the equity outcomes.

Despite large-scale government spending on education, out of pocket expenditure on education is also quite high. Estimates show that as much as 27 per cent of total spending on education comes from private sources. On average, a child in the

⁴ Estate sector consists of resident populations in plantations.

⁵ The Ministry at the centre is responsible for the deployment of teachers to different schools in the country.

⁶ Expenditure on education over the past decade has fluctuated around 8 per cent of the government budget. These statistics are low compared to other Asian countries.

richest expenditure quintile spends Rs. 518 (US \$ 6.8) monthly on education, while a child in the poorest expenditure quintile spends Rs. 121 (US\$ 1.6) monthly on education.⁷ Given that Sri Lanka's official poverty line is Rs. 1,423⁸ (US\$ 18.7), this shows that on average, the monthly expenditure on education of a child in the poorest expenditure quintile is equivalent to roughly 8.5 per cent of monthly per capita consumption expenditure. According to SLIS (1999/2000) data a significant portion of private spending on education is on clothing, stationery, private coaching,⁹ and books. There seems to be an over-dependence on private coaching to supplement publicly provided education in the country. This trend is disadvantageous especially to poorer children, who are less able to afford this cost. In terms of affordability and geographic location education is accessible to most; however, there are wide discrepancies in the quality of education available for different socio-economic groups due to various administrative and financial shortcomings in the system (MOE, 2002).

3.0 Underlying Theoretical Considerations

School participation is influenced by several factors affecting the costs and benefits of school attendance. The costs of school participation include, direct costs of schooling – such as expenditure on books and uniforms, and transport to schools -- as well as opportunity cost of the child's time. Opportunity costs of schooling are in turn influenced by earning opportunities and probability of market work as well as

⁷ Estimates are the author's calculations using SLIS data.

⁸ That is, a person whose real per capita monthly total consumption is below Rs. 1,423 in 2002 in Sri Lanka is considered to be poor (Department of Census and Statistics).

⁹ Many children in Sri Lanka pay and attend privately conducted classes teaching curriculum covered in schools. These classes are often run by school-teachers, after school hours. They are commonly referred to as private tuition classes.

demand for home production needs such as care of younger children and work in family farms and businesses. Benefits of schooling include, better earning potential, social advancement and other indirect benefits such as better health. These are dependent on individual ability, and achievement as well as quality of education received. In addition, culture, parental influence and community level characteristics are seen to affect school participation in the literature (Hanushek and Lavy, 1994; Dreze and Kingdon, 2001).

Lloyd, Mete and Sathar (2005) reviewing studies on the determinants of school entry in a developing country setting find that, most recent studies incorporate factors explaining education supply in their analysis. Typical explanatory factors include measures on school accessibility, school quality and school type (i.e., private vs public).

Common measures of school access include, presence of a primary school in the community, distance to nearest school or the number of years a school has been present in the community. Measures on school quality include broad proxies such as student-teacher-ratios or expenditure per student, as well as more targeted measures capturing the quality and the availability of physical and human resources (Lloyd, Mete and Sathar (2005); Glick and Sahn (2006)).

4.0 Data and Estimation

4.1 The Dataset

This study uses information collected by the Sri Lanka Integrated Survey, which was carried out across all provinces of the country between October 1999 and the third

quarter of 2000. A total of 7,500 households were surveyed in 500 urban, rural and estate communities.¹⁰ The survey includes information on socio-demographic variables of individuals, information on schooling and educational attainment, economic activities of individuals, access to social and physical infrastructure, and expenditure data. In addition to the household survey, a community survey was conducted which collected community level information on access to education and health facilities and main livelihoods of individuals. The present study uses information from both the household and community level surveys for the analysis.

4.2 Sample and Estimation Method

The sample is restricted to those between the ages of 5 to 14 years, as the study examines reasons for school non-participation of children in this age group despite legislation compelling attendance. The results are estimated using a binary probit procedure.

4.3 Explanatory Variables

School quality indicators

Past literature on similar themes, use teacher salaries and expenditure per pupil as measures of school quality. However, for several reasons these variables do not explain school quality well in Sri Lanka. The Ministry of Education at the center decides teacher salaries and expenditure per pupil in Sri Lanka. As such, these do not vary much across different schools. Also, equal allocation of funds often does not result in equal availability of resources due to various reasons. The present

¹⁰ Community level variables used in the study refer to these 500 communities.

study uses availability of educational resources – both human and physical -- at the school level as a measure for school quality.

Teacher experience and training is a factor that affects teaching quality. As described earlier, “educationally deprived” localities have a problem of retaining qualified teachers. Unfortunately, the available data does not allow controlling for teacher experience and training. Instead a variable to capture teacher shortages is used as a proxy for availability of teachers.

Further to the above-mentioned variables on teacher quality, two variables on availability of school facilities and educational inputs were used to proxy for availability of educational inputs at the community level. The variable on educational inputs is one if the community level informant answered yes, when asked whether schools had “inadequate teaching material”, or “inadequate learning resources”. The variable on school facilities is one if the respondent answered yes, when asked whether the schools in the community had “insufficient furniture”, “poor physical infrastructure”, “no drinking water”, or “inadequate toilet facilities for students”.

Most studies for developed countries on school achievement and drop-out behavior use pupil-teacher-ratios, teacher salaries, and expenditure per pupil and teacher experience and training to measure school quality. Several studies show that, teacher-pupil-ratios may be endogenous to school enrolment as, attendance affects pupil-teacher ratios (Urquiola, 2000; Dreze and Kingdon, 2001). Although, a lower pupil-teacher-ratio is assumed to indicate better quality, in the case of Sri Lanka the opposite may be the case. Parents prefer to send their children to bigger more

prestigious schools with better facilities usually in urban centers, by-passing smaller schools. This has resulted in congestion in better schools, increasing their pupil-teacher-ratios, at the same time further shrinking smaller schools, reducing their pupil-teacher-ratios.¹¹ Given this phenomenon, pupil-teacher ratios are not a good indicator of quality for Sri Lanka. As a result, this variable was not used as an indicator of quality in the analysis (NEC, 2003, World Bank, 2005, MOE 2002).

The sample means of the school quality indicators show that poor individuals live in communities where school quality, measured by these variables, is poorer. The data shows at statistically significant levels that the poorest individuals are in communities where teacher shortages are highest, school physical facilities are poorest and educational resources are least available (see Table 3).

Location and community level characteristics

A set of community level variables was used to capture community level influences on such opportunity costs of schooling. These variables are dichotomous variables that indicate whether the main source of livelihood in the community is a) farm or fishing related casual or long-term employment; b) salaried employment in the public or private sector; and, c) other types of employment. These variables capture the opportunity costs of attending school. It is more likely, in a developing country setting, that young school leavers can find casual employment in communities where primary livelihood is agriculture and fishing related, than salaried employment.

¹¹ Close to 50 per cent of schools in the country are small schools with less than 200 students. Since year 2000, the country has launched a "school rationalization programme" that aims to absorb smaller schools in to near by bigger schools there by reducing overheads and improving resource utilization on the one hand, and reducing disparities between resource availability in schools. (NEC, 2003, World Bank, 2005, MOE, 2002)

Table 3. Access to schools and educational resources, by expenditure quintile¹

	Expenditure Quintile					
	Sri Lanka	1 poorest	2	3	4	5
Per cent of children in communities with poor school resources						
Poor teaching	5%	4%*	5%	7%**	6%	4%*
Poor educational resources ²	56%	66%***	56%	57%	54%*	40%***
Teacher vacancies	47%	56%***	48%	46%	42%**	33%***
Poor physical facilities ³	71%	77%***	71%	75%***	69%*	57%***
Teacher absenteeism ⁴	6%	5%*	7%	7%	6%	5%
Average distance to school (minutes)						
Distance to primary school	7	10***	6***	6*	5***	6***
Distance to secondary school	13	16***	14**	14	10***	9***
Sample size	6302	1485	1366	1248	1110	943

Source: Calculated using SLIS 1999/2000 data, weighted.

Note: 1. Statistically significant differences from the average for Sri Lanka at 1,5 and 10 percent levels are indicated by '***', '**' and '*'. 2. Inadequate teaching and learning resources in schools in the community. 3. Inadequate physical infrastructure, furniture, drinking water or toilet facilities in schools in the community. 4. Teachers normally do not attend school full time.

Two other variables included in the analysis also capture opportunity costs of attending school as opposed to home production. These are the number of children less than six years of age in the household, and, whether the head of the household has his own farm, or business. The variables on number of young children captures the demand for household work such as child care needs in the family, while the variables on whether the household head owns a farm or business, captures the demand for labor in household enterprises. The variable on own farm or business also could potentially be a measure of wealth, depending on the size of the farm or business.

School accessibility also affects school participation, as when schools are not available in close vicinity, reaching them may impose time and financial costs. To take this into account two variables were included which indicate the time (in hundreds of minutes) taken to reach the nearest primary school, and the nearest

secondary school from the household. As seen in Table 3, children in poorer expenditure quintiles, on average, had to travel longer to reach a school. Primary schools were more easily accessible than secondary schools, for children in all expenditure quintiles. However, even for children in the poorest expenditure quintile, on average, the time to a school was not very long – just 7 minutes to a primary school and 13 minutes to a secondary school.

Further to the above-mentioned community level variables, a set of province and sector indicators were included to capture the province and sector specific characteristics of school attendance. Since devolution of education in 1987, the majority of government schools in the country come under the direct purview of provincial level authorities.¹² Although all provincial level educational departments have to conform to the national education policy, they are responsible for administration of education in their respective localities. These province dummies will thus, capture any changes in education administration as well as province specific differences in other macro variables such as infrastructure, geography, and other socio-economic factors. Sector dummies capture the effect of access to infrastructure on school attendance by indicating whether the household is located in the urban, rural or the estate sector.

Household characteristics

Five types of household characteristics were included in the analysis. These capture the household's ethnicity, education level of its household head and spouse, the

¹² In Sri Lanka, most schools – usually referred to as “provincial schools” come under the purview of the provincial authorities. However, a handful of schools denoted as “national schools” are directly managed by the Ministry of Education (MOE, 2004).

employment of the household head, and lastly the income level of the household proxied by the expenditure quintile of the household.

In addition, the employment of the head of the household indicates the social standing of the household that also affects school attendance. Also, as discussed earlier, when the head of the household is self-employed, the demand for intra household labor increases, thereby increasing the opportunity costs of attending school.

Lastly, household income – proxied by consumption expenditure – gives an indication of the household's ability to withstand direct costs of education, as well as their ability to invest in education.

Individual level characteristics

Gender and age group variables are included in the analysis to capture individual level characteristics. In theory, ability and educational attainment also affect school participation. Unfortunately, available data does not allow control of these effects on school participation. The estimated model assumes that ability is randomly determined. As Henushek and Lavy (1994) show, achievement is a cumulative variable, which again is determined by ability, school, quality, and other household and individual characteristics, which are already included in the analysis.

Direct costs of education

Other than for the variables discussed above, direct costs of education are also found to affect education participation. Since public education in Sri Lanka is

provided free of charge and most school supplies, such as text books and uniforms are also provided to all students, direct out of pocket costs of education are limited to expenditure on transport, other schooling material such as exercise books, and stationery and facility fees. In addition, to supplement school education, most students get privately coached out-side of school for a fee. Since the data does not include expenditure on transport, the study is unable to control for this. However, the two variables on time to the nearest Primary/Secondary School capture some of the financial and time costs of accessing schools. In order to control for the other direct expenses of school attendance two variables were included in the analysis. The first, captures expenditures on essential school inputs -- such as exercise books, stationery and facility fees. The other gives the expenditure on private coaching obtained outside of the school. Since out of school children do not incur these costs, community level average expenditure levels were used in the analysis as a proxy for out of pocket expenditure levels faced by households. Both types of reported expenditure are annual expenditure levels in thousands of rupees.¹³

5.0 Main Findings

Table 4 describes the variables used in the analysis, and Table 5 presents the results of the regression analysis. Four panels of results are presented. The first and second panels present data for the overall sample, and the sample of children in the poorest expenditure quintile. The third and fourth panels differentiates the sample according to age: children nine years or younger, and children older than nine years. These regressions attempt to distinguish the factors affecting children attending primary and secondary level schooling.

¹³ Alderman et al (2001) details the rationale for the use of local averages rather than individual prices to avoid endogeneity problems.

Table 4: Descriptive statistics of variables

		Mean	Minimum	Maximum
Individual Characteristics				
	male	0.51	0	1
	age	9.9	5	14
	age 5, 6,7,8	0.35	0	1
	age 9, 10 or 11	0.31	0	1
	age 12, 13, or 14	0.34	0	1
Household Characteristics				
	Sinhalese	0.75	0	1
	Sri Lankan Tamil	0.15	0	1
Ethnicity	Other	0.1	0	1
Number of children between ages 0 and 6		0.6	0	5
	more than secondary	0.2	0	1
Education of HH head	less than secondary	0.36	0	1
	less than primary	0.44	0	1
	more than secondary	0.24	0	1
Education of Spouse	less than secondary	0.37	0	1
	less than primary	0.38	0	1
	public salaried	0.11	0	1
	private salaried	0.08	0	1
	Business	0.12	0	1
	own farm	0.22	0	1
Employment of HH head	other employment	0.41	0	1
	not working	0.13	0	1
	1 (poorest)	0.27	0	1
	2	0.23	0	1
	3	0.19	0	1
	4	0.16	0	1
Expenditure Quintile	5	0.14	0	1
Location				
	Urban	0.13	0	1
	Rural	0.8	0	1
Sector	Estate ¹	0.07	0	1
Community Level Characteristics				
	Employment	0.16	0	1
	Agriculture	0.77	0	1
Livelihood	Other	0.07	0	1
Community level school characteristics				
	Poor learning and teaching resources	0.56	0	1
	Teacher vacancies	0.38	0	1
	Poor school physical facilities	0.71	0	1
Financial and physical access to schools				
Time to school	Primary School	0.07	0	1.5
(hundreds of minutes)	Secondary School	0.13	0	6
Essential school expenditure (annual, in Rs. '000)		1.16	0.19	6.41
Tuition expenditure (annual, in Rs. '000)		0.63	0	9.03
Sample Size			6302	

Source: Author's calculations based on SLIS 1999/2000 data. Note: 1. The estate sector consists of plantation worker populations who are ethnic Indian Tamils.

Table 5: School Participation of 5 to 14 year old children (marginal effects from probit regressions) ¹

		Overall	Poorest quintile	age <= 9	age > 9
	Sample size	6302	1519	2833	3469
Individual Characteristics					
	male	-0.01 ***	-0.03 **	-0.01 *	0.00
	age	-	-	0.05 ***	-0.01 ***
	age 5, 6,7,8	-0.05 ***	-0.05 ***	-	-
	age 9, 10 or 11	0.03 ***	0.06 ***	-	-
Household Characteristics					
Ethnicity (base Sinhalese)	Sri Lankan Tamil	-0.07 ***	-0.08 ***	-0.07 ***	-0.05 ***
	Other	-0.03 **	-0.04	-0.02	-0.04 ***
	Number of children between ages 0 and 6	-0.03 ***	-0.04 ***	0.00	0.00
Education of HH head (base more than secondary)	less than secondary	0.00	0.04	0.00	0.00
	less than primary	0.00	0.02	0.01	-0.01
Education of Spouse (base more than secondary)	less than secondary	0.00	0.01	0.00	-0.01
	less than primary	-0.01	0.01	0.00	-0.02 **
	private salaried	-0.01	-0.06	-0.02	-0.01
	business	0.00	0.03	0.00	-0.02
Employment of HH head (base public salaried)	own farm	-0.03 ***	-0.06 **	-0.03 ***	0.00
	other employment	-0.01	0.00	-0.01 *	0.00
	not working	-0.04 ***	-0.04	-0.04 **	-0.02 **
	1 (poorest)	-0.03 ***	-	-0.03 ***	-0.02 *
Expenditure Quintile (base 5)	2	0.00	-	0.00	0.00
	3	-0.01	-	-0.01	0.00
	4	0.00	-	-0.01	0.02 **
Location					
Sector (base Urban)	Rural	0.00	0.00	0.01	-0.01 *
	Estate	-0.01	-0.03	0.00	-0.01
Community Level Characteristics					
Livelihood (base employment)	agriculture	-0.02 ***	-0.04 *	-0.03 ***	0.00
	Other	0.00	-0.03	-0.01	0.01
Community level school characteristics					
	Poor learning and teaching resources	0.01	0.01	0.00	0.01
	Teacher vacancies in English Mathematics and Science subjects	-0.02 ***	-0.03 *	-0.02 **	-0.01
	Poor school physical facilities	0.01	0.02	0.02 **	0.00
Financial and physical access to schools					
Time to nearest school	Primary School	-0.01	-0.01	-0.04 **	0.02
	Secondary School	-0.02	0.00	-0.02	-0.02
	Essential school expenditure	-0.01	-0.02	0.00	-0.01 **
	Tuition expenditure	-0.01 **	-0.02 *	-0.01 *	-0.01 *
psedo r2		0.16	0.16	0.39	0.13

Source: Author's calculations based on SLIS 1999/2000 data

Note: Note: 1. Statistical significance at 1, 5 and 10 per cent levels are indicated by '***', '**' and '*', respectively. Analysis also included province dummies, results of which are not reported.

Individual Level Characteristics

Males were less likely to be in school, especially poorer and younger male children.

The result on poorer male children, although unusual for most developing countries,

is not so unusual for Sri Lanka. As children – especially male children – age, the opportunity costs of schooling increases, particularly for low-income families, who need them for their labor. Moreover, given the high youth unemployment rate in the country – particularly educated youth – the benefits of schooling are also limited (World Bank, 2005). However, unexpectedly, boys were less likely to be in school at statistically significant levels for the sample with children nine years or less, and not for the sample with older children. This could be possibly due to boys starting school later than girls. Further studies would be needed to see why this could be the case.

The results show that the age group indicators do affect schooling behavior. Five to eight year olds are less likely to be in school and nine to eleven year olds are more likely to be in school relative to 12 to 14 year olds. In the sample with children nine years or younger, age positively affected school attendance, while in the sample with older children age negatively affected school attendance. These results collectively indicate that although children are required to be in school at age 5, they start school late. Also, they drop out of school as they age.

Household characteristics

According to the results, ethnicity plays a large role in explaining school attendance. Relative to children in the main ethnic group (Sinhalese), children in other ethnic groups were less likely to be in school. This result is significant and negative for all the samples considered despite controlling for community level teacher shortages and province indicators.¹⁴ This result may still be capturing some of the effects of teacher shortages in Tamil medium schools. Even in communities that do not have

¹⁴ Since minority groups in the population are gathered in pockets, including province dummies, controls for some socio-demographic differences across provinces.

a severe teacher shortage problem in Sinhala medium schools, teacher shortages may be present in Tamil medium schools. It is not clear from the data, on what basis, the community level respondent considered a community to have teacher shortage. Sri Lankan Tamils – the second largest ethnic group in the country -- usually attend Tamil language schools. A large number of people in other ethnic groups -- Muslims and Indian Tamils in particular – also speak the Tamil language and attend schools in this medium. Cultural factors also may play a role in the lower school attendance of children in minority ethnic groups.

Children from households with a large number of young children – 0 to 6 year olds – were less likely to be in school. This is possibly due the dependency burden of the household associated with schooling.

The employment of the head of the household is also statistically significant in explaining schooling behavior of children. Across the samples considered, household head owning a farm, household head employed in informal work, or household head not working, negatively affected the schooling of children in most of the samples considered. These possibly relate to the opportunity costs for the household of sending children to school.

In addition to the above variables, household income falling within the poorest expenditure quintile negatively affected schooling of children, relative to being in the richest expenditure quintile. Somewhat unexpectedly, children falling into the fourth expenditure quintile were more likely to attend school than children in the richest expenditure quintile, for older children. This is possibly due to attitudes of parents on

schooling of children, as well as high opportunity costs of schooling, especially for children coming from families engaged in business.

Location and Community level characteristics

Being in a rural area decreased school attendance of older children at a statistically significant level, relative to being in an urban area. This is not unexpected as, benefits for schooling are lesser in rural areas. Moreover, schools in rural areas tend to be smaller and resource starved (World Bank, 2005).

Of the community level factors considered in the study, living in a community where main livelihood is agriculture or fishing decreases the likelihood of children being in school, relative to children in communities where the main livelihood is employment. This result was significant and negative for all samples except for older children. This is expected as agricultural communities provide more employment opportunities thereby increasing the opportunity costs of staying in school. It is however, unexpected that living in an agricultural community affected the schooling of younger children, when it did not affect the schooling of older children. This is possibly due to the fact that sending younger children to school requires time involvement on the part of the parents.

School quality indicators

Of the three variables used to measure school quality in the analysis, teacher shortages affected school attendance in almost all samples considered. In the age-wise differentiation of samples, children 9 years or younger were also affected by teacher shortages. Unexpectedly, poor physical facilities in school positively affects

school participation for children nine years or younger. This unexpected result is possibly due to the fact that the school quality variables used in the analysis were subjective evaluations of school quality in communities. It is possible, that in areas where schooling is in demand, communities have higher expectations of school quality, therefore report that school quality is poor.¹⁵

Direct costs of schooling and access to schools

Out of pocket expenditure on private coaching negatively influenced schooling decision of the children in almost all samples. This seems to reinforce the result on teacher shortages. The results suggest that most children rely on private coaching -- that is privately paid lessons -- to supplement school education and the inability to meet the costs of private coaching affects school attendance. The spending on essential school expenditure is also statistically significant and negative for the children older than nine. This result is expected, as material costs of schooling, such as stationery and books are higher for older children.

Taken individually variables on access to school does not seem to affect schooling decisions of children in the sample, except the time to primary school for children in the younger age cohort. This shows that for younger children, time to school does seem to be a factor affecting schooling decisions. This is probably due to the fact that unlike with older children, parents also have to devote time to take younger children to school.

¹⁵ In subjective evaluations of school quality, some schools that are considered to be "good" in one area may not be considered to be good in another area. Especially schools that richer neighbourhoods consider "poor" may be considered "good" in poorer neighbourhoods.

The variables on expenditure and access to school in a sense measure costs of attending school. When these variables are considered collectively (i.e., the two variables on expenditure and the two variables on time to school), they have a significant and negative effect on schooling, except for the sample of children in the poorest expenditure quintile. The insignificant result for the sample of children in the poorest quintile may be due to the fact that in this sample, expenditure on schooling does not have much variance. This could result, if poor individuals are concentrated in pockets rather than interspersed among non-poor.

6.0 Discussion and Policy Implications

Children stay out of school for several reasons. Results indicate that poverty is a significant contributor to school non-attendance. This is indicated in several ways. For one, being in the poorest expenditure quintile decreased the likelihood of school attendance. Two, direct costs of schooling, on essential school material as well as expenditure on private coaching, negatively affected the school attendance behavior of children.

Access to primary schools seems to affect schooling behavior of younger children. The government's recent policy on school rationalization, in order to improve the efficiency of resource utilization, should take precautions when closing primary schools. Closure of primary schools should take place, in principle only when better quality alternate primary schools are within easy access to all households in an area. The government can also, take action to improve access to schools – especially primary schools--, by providing reliable transport facilities where needed.

School quality, especially teacher shortages, is a factor negatively influencing school attendance. This is indicated by two variables: variable on teacher shortages and the variable on expenditure on private coaching. Both these variables negatively affected schooling.

In addition, opportunity costs of schooling seem also to affect schooling decisions of children in the sample, particularly boys. This is indicated through several community and household level variables. Being in a community where the main livelihood is agriculture or fishing negatively affects schooling. Further, when the household head was engaged in an informal sector occupation, such as agriculture, fishing or non-salary employment, or when the number of young dependents in the household increased, the school attendance of children decreased. Also, school attendance is worse for boys than girls, possibly because the income earning opportunities are better for boys.

Results of the study seem to suggest that in addition to poverty and supply side inadequacies, limited know-how of parents also affects schooling of children. This is indicated by the fact that children seem to start school late, rather than at the correct age. Also socio-cultural factors, such as ethnicity and occupation of the father seem to affect schooling behavior.

These findings suggest several policy options the government can undertake to improve schooling behavior of 5 to 14 year olds. At present implementation of compulsory education for children in this age give emphasis to improving awareness. Some of the factors affecting school non-attendance such as delayed commencing,

lack of know-how on the benefits of schooling and cultural factors may be influenced by persuasion and advocacy, through a well thought out implementation programme.

However, advocacy alone, will not improve school attendance, as other factors such as poverty and supply side constraints also seem to play a noteworthy role in the schooling decisions of children. The government has introduced several welfare measures to provide financial assistance to children – such as provision of free textbooks, uniforms, subsidized bus fares and mid-day meals. Despite these measures, poverty is still a factor that decreases school attendance for the poor. The results seem to suggest that this is due to direct and indirect costs of schooling, as well as due to low benefits from schooling due to poor quality of education delivery. Special attention must be given to improving quality of education accessible to the poorer segments of society. In particular, attention should be given to improving teacher shortage problem in rural areas.

Children from farming communities and families owning farms seem to be affected mostly by opportunity costs of schooling. School calendars in these communities should take into account the high demand periods for labor, so that children need not drop out of school to help in family farms.

Policies adopted by successive governments have made impressive progress in improving school participation in the country. However, Sri Lanka has not yet been able to achieve the ultimate goal of ensuring that all children stay in school for ten to eleven years. Achieving this goal will require giving specialized attention to pockets of population groups who have either being bypassed by current education policies,

or who are less able to make use of education services due to their socio-economic conditions.

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