

Socio-economic Correlates of Exclusions from Compulsory Schooling in Sri Lanka

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Abstract

Despite free education, compulsory schooling regulations and subsidies supporting schooling, why some 5-14 year old children are not in school is an important concern for social policy and programming. The study addressed demand side factors affecting compulsory schooling through an examination of prevalence, nature and the socio-economic correlates of school exclusions. The study is primarily based on quantitative data collected through the Household Income and Expenditure Survey 2012/13, and the analysis is supplemented with qualitative information from the literature. The study finds that despite a large share of poor children continuing schooling, the large out of pocket expenditure on education, low education of household adults, perceptions of relevance of schooling for employment, and opportunity for employment of children despite labor laws are likely to be factors affecting schooling, especially schooling of poor children. Richer households spending more than thrice the amount a poor household would spend on extra tuition and reading material places poor children at a disadvantageous position in progressing through school, possibly forcing children to dropout being unable to compete with the extra learning acquired by the children from richer homes. Transport costs are high and unaffordable especially to the poor children living in remote areas with little access to subsidized transport. Low education of adults, linked to poor quality employment, possibly restricts parent's engagement with children's education, affecting school participation.

Key words: compulsory schooling; exclusions; non-enrollments; dropouts; poverty

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Introduction

With over seven decades of free primary and secondary education provided by the government,¹ statutory requirement of compulsory schooling for all children 5-14 year supported by an array of education subsidies (NEC, 2003), Sri Lanka attained remarkable progress in school enrolments and completion of 9 years of compulsory schooling, with school participation increasing from 87% in 1991 (MOE, 2004) to 98.2% by 2009/10 (UNICEF, 2013). However, despite these achievements, since of late there is an emerging concern whether school exclusions and vulnerability to school exclusions are on the increase. Although dropout rates for children 5-14 years have declined to 0.8% in 2009/10 (UNICEF, 2013) from around 3.3% in 2000 (Arunatilake, 2006), media reports (e.g. IRIN (2014), Sunday Observer (2013)) suggests increasing school dropouts and vulnerability to termination of schooling. IRIN (2014) notes that poverty, children having to work to support families, financial un-affordability of schooling or hopelessness of securing employment to match education, are likely reasons for termination of schooling among the war affected Northern children. The Department of the Commissioner of Probation and Child Care Services, through a survey conducted island wide, identified around 40,000 students who were at risk of dropping out from school education (Sunday Observer, 2013); poverty, un-affordability of education and parents disengagement with children's education, have been noted as reasons.

Literature discussing school exclusions among Sri Lankan children (e.g. World Bank (2005), Arunatilake (2006), UNICEF (2013), Aturupane (1998, 2009), Little et.al. (2011)) suggests poverty, which makes schooling unaffordable to the poor, and requiring children to work to support family incomes, as the most common explanation for school exclusions. Given that Sri Lanka has policies and an education subsidy structure to ensure that low incomes does not affect a child's education, why children from some of the low income households are not in school calls revisiting latest data to identify any emerging patterns and correlates of school exclusions. This knowledge is important for both policy and programmatic interventions to further reduce non enrollments and dropouts. Therefore the main objective of

1. By 1948 Free education was made available to all primary and secondary school children and for tertiary level (Source: National Education Commission 2003, *Envisioning education for human development : Proposal for a National Framework on General Education.*)

the study is to examine the prevalence of exclusions from compulsory schooling, concentration of exclusions in particular demographic and socio-economic strata and the socio-economic correlates of exclusions, to understand which factors, other than poor incomes per se, are likely to be affecting schooling of children from low income households.

The study finds that, despite free education and education subsidies, high out-of-pocket expenditure on education is likely to be a critical factor affecting schooling of poor children. With a child in the richest quintile spending more than thrice the amount a child in the poorest quintile would spend on tuition and extra reading material and stationary, places poor children at a very disadvantageous position in progressing through school, possibly forcing children to dropout being unable to compete with the extra learning acquired by the children coming from the richer households. The findings also raises concerns about poor people's perceptions of returns to investment in education especially the perceived irrelevance of education as a means of raising employability. Poor children face resource constraints limiting reaching higher levels in education at which investments yield higher returns, and hence succumb to low perceptions on returns to investment in education and irrelevance of schooling. Poverty though a significant factor affecting education, a very large share of poor children continuing schooling, indicates the play of factors beyond poverty affecting schooling. Education of the adults in the household show up as an important factor effecting education, with children in households with better educated adults are more likely to be in school. On the one hand poor education of adults result in poor quality employment restricting free time be involved with children's education, and on the other hand limiting the ability to appreciate the importance of education.

The reminder of the paper is organized as follows: Section 2 presents a review of the literature both local and global to draw out the conceptual framework to situate the analysis, explain the scope of the study and the methods used in the analysis and the data. The analysis and the findings are presented in section 3. The final section (4) gives a summary of findings and the conclusions.

Methodology

Literature review and conceptual framework

Literature examining factors affecting school exclusions in Sri Lanka suggest poverty as a key factor affecting exclusions. Examining correlates of school non-participation of 5-14 year olds, Arunatilake (2006) concludes gender, ethnicity, poverty, school access problems, expenditure on schooling, opportunity cost of schooling, shortages of teaching staff are likely be affecting school attendance. World Bank (2005) notes that 18% of the children who fail to complete grade 9, come from poor homes, economically disadvantaged geographic regions or are children with disabilities. UNICEF (2013) finds that poverty, illiteracy of parents, distance to school as the reasons for school non participation, and find little difference across quintiles in the rate of primary school participation but a clear trend of decreasing rates from poorest to richest quintiles in secondary, and particularly in senior secondary education. UNICEF (2014) comparing across South Asian countries find that low economic status is negatively correlated with school exclusion in Bangladesh, India and Pakistan, but in Sri Lanka exclusions are more correlated to plantation sector having a higher level.

School enrollments and dropouts are determined by household's demand for education and the supply of education services (Connelly and Zheng, 2003). A most consistent finding on demand side factors related to school enrollment and dropouts is the effect of family resources (Brown and Park, 2002). Literature addressing the theory of resource allocation on schooling (e.g. Behman, Polack & Taubman, 1982) suggest that at some critical resource level, investment in educating a child reaches zero because investment in human capital under resource constraints, necessitate forgoing current consumption of the household. Where returns to investment in education is low compared to returns on alternative investment, resource constrained households may divert children to acquire skills that have immediate market value, such as that which can be acquired with on the job training or make them work in family enterprises (e.g. Boyl et. al., 2002). Additionally labor market failures and resulting adult unemployment will force parents to bridge the gap in earnings by putting their children to work at low wages to supplement family incomes (Basu, 2000).

Theory posits that family size and investment in education are inversely related, making resource constrained large families unable to invest even in their most endowed child. However empirical results of different studies indicate that a negative impact of large family size is not universal, but depends on community and cultural factors (Sudha, 1997). Colclough et. al. (2000), discussing gender differentials in school exclusions notes disproportionate allocation of resources between girls and boys, where resources are low, due to adverse cultural practices or because the girl child is required to take care of younger siblings and household work, while parents are involved in income generation.

The children of poorly educated parents are more likely to be excluded from schooling (Chowdhury et al., 2002). Educated parents are likely to have higher expected future incomes and are more likely to spend on children's education because of the reduced need to avert the risk of poverty, and also because they require less support from children to contribute to family income. On the other hand educated parents may better appreciate the value of education and keep children in school even forgoing other consumption. Studies (e.g. Liu, (2004)), Sabates et. al (2010) finds parents' poor engagement with children's education as a crucial factor affecting both school enrollments and dropouts.

Hypotheses

Given that our main objective is to shed light on policy interventions that can help improve school participation, based on the literature review and conceptual framework we examine a set of hypotheses on the role of different types of incomes to the household, expenditure on education, competition for education investment within the household, unemployment at both household and location level and education level of the family adults. Therefore the specific hypotheses tested are whether (1) the different types of incomes to the household affect schooling outcomes, (2) out of pocket expenditure required for education and the number of children in the household competing for resources affect schooling outcomes, (3) parents or family adult's level of education affect schooling outcomes, (4) employment availability affect schooling outcomes.

Scope of the study

The study focus on the age group 6-14 years, with both 6 and 14 included. The study chose 6 years instead of 5 years as the lower age limit, to avoid extreme cases arising from school admission eligibility requirements. For instance in Sri Lanka school year starts in January and a child is eligible to join the year 1 in school only if the child has completed 5 years of age by the 31st January of the school year (MOE, 2004) and therefore the survey could encounter children who have completed 5 years of age but who have not been admitted to school due to not satisfying the admission eligibility criteria at the beginning of the year². In order to avoid these extreme cases, and because a child who has completed 6 years should compulsorily be in school, we use 6 years of age as our minimum age level for the analysis. The upper limit was taken to be 14 years and not 13 years is to avoid extreme cases resulting from delayed school admissions discussed above³.

Measuring exclusion rates and concentrations

The study addresses exclusion rates arising from never being enrolled and exclusion rates arising from dropping out from school education. Within a given group exclusion rate is defined as those children who are excluded (either never enrolled or dropped out), to the children who should be in school. Given that our focus is on examining the social and economic correlates of inequalities in participation in education, we focus on the children who are not affected by disability or illness preventing formal schooling.

We measure concentration of exclusion rates in particular strata of different demographic and socio-economic variables using concentration indices, discussed in Kakwani et. al. (1997). The concentration index (C) is defined as, the area between the concentration curve⁴ and the diagonal, expressed as a proportion of the area under the diagonal and thus the concentration index lies

2. For example a child who was born on the 10th of February would have completed five years on the survey date in August that year but won't be in school. Also a child who had not completed five years on the survey date on end January because the child was born on 2nd of January will be in school.

3. The age group focused in the study could be different from others e.g. UNICEF (2013) which focuses on 5-13 year age group with both 5 and 13 years included.

4. The concentration index is based on the concentration curve which plots the cumulative distribution of a variable measured on a ratio scale against a variable representing a socio-economic characteristic positioned in ascending order.

between -1 and +1, with the absolute value of 1 indicating perfect concentration, and a value close to zero indicating low concentration. The magnitude of the concentration index will indicate the degree of concentration of a variable measured on a ratio scale and placed in a descending order with respect to the stratification variable, and the sign of the concentration index will indicate the direction of concentration⁵. For example when examining school exclusion rates across income strata placed in an ascending order, a negative sign indicates higher concentration of exclusion in the poorer strata and the magnitude of the index indicates the strength of concentration. We compute concentration indices in exclusion rates in relation to demographic (e.g. age, ethnicity) and socio-economic (e.g. income groups, provinces, sectors) variables using the concentration index (C) formula for grouped data and the standard error of C, using the formula given in Kakwani et al. (1997).

Identifying socio-economic determinants of exclusion

Given that a child could be out of school either because the child was never enrolled in school or because the child discontinued schooling midway, a child's schooling status is a categorical variable with three outcomes: in school, never enrolled in school and enrolled but left school midway. Therefore the dependent variable is the schooling status of the child which is a three outcome categorical variable, and hence we use the following a multinomial logistic regression model⁶ to infer the significance of the different socio-economic determinants on school exclusion:

$$Y_{ij} = \beta_0 + \beta_1 x_{1i} + \dots + \beta_k x_{ki} + e_{ij} \quad (1)$$

The dependent variable Y_{ij} denotes the schooling status j of the i th child. The x_{ki} represent the selected socio-economic factors that could affect the child's education status, β are the regression coefficients and e_{ij} are the error terms. In a multinomial logistic regression model the β coefficients denote the change in the relative log odds of a change in the Y variable in response to a unit change in the X variable if it is a scale variable, or relative log odds of a change

5. The concentration index (CI) measures the income related inequality in exclusion, absolute value of CI=1 perfect inequality and CI=0 perfect equality.

6. The outcome variable is not binary, it has three outcomes: child never enrolled in school, child enrolled in school but dropped out, child enrolled in school and continuing education. Because there are three outcomes a multinomial logistic regression model was used.

in the category level if X is a categorical variable. The statistical significance of the X variable will indicate the relative significance of the variable in explaining outcomes and the sign of the coefficient will indicate the direction of change in the outcomes (Greene, 1993).

Given that our main objective is to shed light on policy interventions that can help improve school participation, we examine a selected set of factors which indicates the incomes to the household, expenditure on education, competition for education investment within the household, sectoral location of the household, unemployment at both household and location level and education of the family adults. The literature reviewed revealed that the household's resources as a most decisive factor in a child's schooling outcomes. Therefore the independent variables total income earned by the household members excluding foreign remittances, foreign remittances to the household, and transfer payments and welfare benefits to the household were included in the regression to assess the role of different types of incomes in the determination of school participation. The schooling level⁷ specific out of pocket expenditure required for education as a share of total expenditure of the household is used as an independent variable to examine the significance of expenditure on education affecting schooling outcomes. Theoretically larger the number of children in the household there will be more competition for resources; therefore the number of children in the household who are between 5-17 years has been taken as an independent variable to indicate level of competition for resources for education in the household.

Theory suggests parent's decision to educate a child especially when resources are thin will depend on the parent's ability to appreciate the value of education, and the ability to appreciate depends on the education of the parents. In Sri Lanka where a child's education is influenced by the adults in the family in addition to parents Chandrakumara (2011), the average level of education of the adults⁸ living in the household was included as an independent variable in the regression. The independent variables, the share of unemployed adults (aged 18-65 year) seeking employment and location specific unemployment rates were taken to examine the significance of adult unemployment on schooling outcomes.

7. Primary (6-9 year olds) or lower secondary (10-14 year olds)

8. An adult is taken to be an individual 18-65 years of age.

To understand which factors are more significant for schooling outcomes of children in the lower income quintiles, in addition to the regression for the entire sample of 6-14 year old children, a second regression was estimated for those children in the poorest (1st and 2nd) income quintiles where 73.3% of the excluded children are located.

Data

The study is primarily based on quantitative data collected by the Household Income and Expenditure Survey (HIES) carried out by the Department of Census & Statistics, in the years 2012/13. The analysis is supplemented with qualitative information reported in the literature including both formal research literature and recent media reports. We used 2012/13 survey data because the 2012/13 HIES is the most recent household survey, which cover households in the entire country including all north and east districts, where as surveys since 1983 lacked data for some North and East districts.

Results and Analysis

Prevalence and inequalities in school exclusions

The latest household survey data HIES 2012/13 shows that 98.9% of the children 6-14 years of age are in school, a significant improvement in school participation, from 93% in 1999/2000⁹ an estimated 11620 or 0.4% were not in school due to health disabilities, and 3956 or 0.1% were never enrolled and 18751 or 0.6% dropped out mid way, due to reasons other than disability. Given that these estimates are based on household surveys and exclude children living in the streets and institutional care¹⁰ there is the likelihood of absolute numbers being larger. Given that our focus is on socio-economic correlate of school exclusion, the following analysis focus on the children who are not affected by disability or illness preventing formal schooling.

Child's age, gender and ethnicity: Dropouts were more evident in the overall exclusions with an exclusion rate of 0.74% compared

9. Arunatilake (2006) based on Living Standards Survey 1999/2000, found that only 93% of the children in the age group 5-14 years were in school

10. Literature e.g. Sunday times 2010 suggests that a significant number of street children and children in informal institutional care are likely to be excluded from schooling.

0.22% for non enrolments. The data shows absence of statistically significant gender differentials in school participation¹¹, confirming similar observations in earlier studies (World Bank, 1998, 2005a). Dropout rates increased with age concentrating in the upper age groups¹² with a concentration index of -0.51 statistically significant at 95% level of confidence¹³. Across ethnic groups drop outs were more pronounced and concentrated in the smaller ethnic groups¹⁴ with a concentration index of -0.40 significant at 95% Level of confidence¹⁵. Dropout rates were high in the ethnic group classified as 'other', almost similar among the Moor and the Tamils, but slightly higher than that among the Sinhala.

Children from low income families leaving school to take up unskilled low wage employment to help family incomes has been the common explanation (e.g. ILO, 2007), for higher dropouts in the older age groups, but recent literature suggests, unaffordability of schooling expenditure due to hidden private costs (e.g. World Bank, 2011), people's perception of poor employment prospects despite studying further (e.g. IRIN, 2014)) as reasons for exclusions. Given that children sit for the GCE Ordinary Level examination at year 11 in school, i.e. when they are over 14 years, children leaving school even before they sit for the first national public examination which is a basic requirement to continue education or to find a decent job, need to be taken account of in policy.

Location in the income distribution, sector and province: Across the income quintiles exclusions were high among the poor, with dropout rates being more prominent with a concentration index of -0.30 though not large in magnitude but statistically significant at 95% level of confidence¹⁶, indicating significant concentration in the poorer households¹⁷. The small magnitude of the concentration index and

11. With $P = 0.27$ for Pearson chi square test.

12. Tables with exclusion rates by age gender and ethnicity can be provided upon request.

13. With t statistic = -9.78

14. Based on population Census 2012 Ethnic shares of Sri Lanka population: 74.9.% Sinhala, 11.9.% Tamil, 9.2.% moor, 4.7.% 'other' consisting Malays, Bhurgers and other [26] DCS (2012) down loadable at <http://www.statistics.gov.lk/Pocket%20Book/chap02.pdf>

15. With $t = -3.07$

16. With $t = -3.5$

17. Tables with exclusion rates by groups, sectors and provinces can be provided upon request.

a large share (98.6%) of children in the poorest quintile being in school, suggests that poverty per se is unlikely to be the reason for exclusions, but the play of factors other than poverty.

Exclusion rates were highest in the estate sector, for both non enrollments and dropouts. Exclusion rates for dropouts increased from rural to urban to estate, though significant concentration was not evident, with a concentration index of -0.01 which was not statistically significant¹⁸. UNICEF (2013), using HIES 2009/10 made a similar observation that the highest exclusions were in the estate sector while the urban and rural sector exclusions were lower. Based on 1990/2000 data Arunatilake (2006) suggests for children 5-14 years, higher exclusion rates in the estate sector (10%) rural sector (7%) and (6%) in the urban sector, suggesting a shift in school exclusions from rural to the urban sectors. In the estate sector both non enrollments and drop outs were relatively high, but in the urban sector drop out were high while non enrolments were low. In the urban sector, employment opportunities probably act as a catalyst to leave school to work. High non enrollments as well as high dropouts in the estate sector could be linked to many factors, possibly poverty, low education of parents, un-appreciation of education by the parents or parent's disengagement with children's education.

Though exclusion rates varied across provinces, there wasn't evidence supporting a particular pattern in concentration. When the provinces were ordered by the poverty head count index (DCS, 2014) the concentration index for drop outs turned out to be only -0.06 and statistically insignificant¹⁹, indicating the absence of concentration of exclusions in high poverty districts, although exclusions were largest for the Eastern and Sabaragamuwa Provinces which are high poverty provinces²⁰. but high poverty provinces such as Uva and the Northern provinces reporting low exclusions. Further despite concerns, about high dropout rates in the war affected North based on 2012/13 HIES household survey data there is little evidence supporting the premise.

18. With $t = -0.26$

19. With $t = -1.5$

20. Poverty rates based on [29] 2012/13 HIES Report of the DCS

Education and employment of family members: For both non enrolments and dropouts exclusions concentrated in the households with a low level of adult education. For the dropouts the concentration index is -0.43 statistically significant at 95 % level of confidence²¹ Poor education is linked to low employment status and to poverty. Poor education of family's adults could result in low appreciation of education and disengagement with children's education (Liu, 2004; Sabates 2010). Even amidst poverty many children (98.6% in the poorest quintile) being in school, suggests the possible influence of the level of education of the household members, in their decisions to educate children or terminate schooling.

When households were grouped by the share of economically active adults, the concentration index turned out to be -0.04 and statistically insignificant²² and any pattern in exclusions across the groups was absent²³; exclusion rates in households with more than a half employed and exclusion rates in those with none employed were more or less the same, suggesting low association of schooling with employment of household adults, or it could be that though more are employed they are employed with low incomes, and the households are poor and hence more exclusions.

In summary in all cases, exclusion rates for the never enrolled children were slight compared to those for the school dropouts, indicating that dropouts largely contributed to the overall exclusion rate. The results are in conformity with previous research findings that exclusion rates are high among the poor, high in the estate sector and urban sectors and are high in less educated families. The need for earning for the family and un-affordability of education could be reasons why exclusion is high among the older children and the poor, nonetheless other reasons such as low appreciation of education and disengagement with children's education stemming from low education of adults having a role to play. High dropouts in the urban sectors could be the higher availability of earning opportunities and in the estate sector it could be low education of adults linked to low appreciation of education and poor engagement with children's schooling. Gender differentials were insignificant in school participation.

21. With $t = -4.9$

22. With $t = -0.02$

23. Tables with exclusion rates by education level of adults and economic activity status can be provided upon request.

Reasons for school exclusion

Table 1 shows the reasons for not being in school, reported at the 2012/13 HIES survey. Around a third were not enrolled and left school mid way due to financial reasons. Though civil disturbances did not appear to be a reason for non-enrollments, close to a third reported civil disturbances as a reason for leaving school. Though 7.4% reported not being enrolled because the school was far away, only 0.9% reported dropping out due to distance. An important observation is that the largest share, 43.9% of the never enrolled and 34.6% of those who dropped out reported existence of reasons 'other' than those asked in the survey schedule.

Table1: Reported Reasons for not being in school by income quintiles

	Never been to school						Left school mid way					
		1- poor	2	3	4	5-rich	All	1- poor	2	3	4	5-rich
School too far	7.4	0.0	9.2	0.0	26.7	0.0	0.9	1.7	0.0	0.0	1.6	0.0
Financial problems	34.1	30.0	52.0	21.3	0.0	0.0	26.3	29.7	27.9	25.9	22.3	0.0
Helping family activities	2.8	0.0	7.0	0.0	0.0	0.0	9.3	8.0	11.0	2.2	36.9	0.0
Civil disturbances	1.6	0.0	0.0	24.7	0.0	0.0	28.9	26.1	36.5	22.2	27.7	29.1
Not willing to go to school	10.1	0.0	0.0	0.0	73.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other	43.9	70.0	31.9	54.1	0.0	0.0	34.6	34.4	24.6	49.7	11.5	70.9
Total	100	100	100	100	100	0.0	100	100	100	100	100	100

Source: Estimates computed by the author based on HIES 2012/13 data.

Financial problems and civil disturbances appeared to be significant reasons for non enrolments as well as leaving school mid way, though severe among the low income households. In all quintiles a large share indicated the existence of 'other' reasons for non enrolments and leaving school mid way.

Financial problems can affect children's education either making expenditure on education unaffordable to the parents or requiring children to work to support family incomes²⁴, or both reasons²⁵. Even if children might be leaving school to work to support family incomes, this possibility is likely to be limited by labor laws prohibiting employing children below 14 years, possibly resulting in low waged employment, and yielding opportunity cost of being in school verses being employed very low. Therefore unaffordable out of pocket cost of education is likely to be the larger issue.

To ensure no child's education suffer due to poverty, the policy of free education was further supported by subsidizing household expenditure on education through the provision of free text books, material for school uniforms, subsidized transport by buses and trains, free mid day meal, special financial support based on merit and on parent incomes²⁶, access to primary education (year 1-5) in a government school within two kilometers from home, and access to secondary education (year 6- 11) from a school within five kilometers from home and special education programs for who either never enrolled in school or dropped out at a young age. Additional support to low income families are also provided by other government agencies²⁷ (UNICEF, 2014).

Despite free education and the education subsidies, hidden costs of accessing education have been cited as a major concern. Literature (e.g. Inter Press Services (2004)) suggests that though education was free in government schools, poor students cannot afford the other "hidden" costs that students are compelled to pay like contributions for extracurricular activities, transport costs where access to public transport is poor, clothing and cost of extra tuition.

24. [31] DCS (2009) *Child activity survey reports high incidence of child labor*.

25. The HIES 2012/13 survey collect economic activity status of individuals over 15 years age and hence the unavailability of quantitative data prevent finding whether those not in school have in fact joined the labour force.

26. e.g. financial support to poor children through year 5 merit based scholarship

27. e.g. Ministry of child development and women's affairs

It further notes that despite country's education policy to provide primary schooling within 2 kilometers from the home for every child in the 6 to 10 age group, and a secondary school within 5 kilometers for children over 11 years, schools are un accessible to children living in remote areas, because funding of government schools, is tied to the number of children in the school.

Despite the free education system and education subsidies in place, based on 2012/13 data, the monthly out of pocket expenditure for a primary level²⁸ child attending a government school is on an average Rs 1458 and Rs 1759 for a child attending secondary level²⁹. Although the government school facilities fees are only about 2.4-3% of the total expenditure, the share of extra tuition fees is about 30-40%, around 25% is incurred on extra reading material, text books and stationary, and about 25% is incurred on transport. A household on an average spend about 3.7 % of their monthly income on primary school child and about 4.5% on a secondary school child attending a government school. Primary and secondary schooling expenditure shares are respectively 15.4 % and 17.7 % for a households in the poorest quintiles, but are only 2.2 % and 3.1% for those in the richest quintiles. The average expenditure on schooling a primary school child and a lower secondary school child, are respectively 19.8% and 23.5% of the income of a household in the poorest quintile, indicating the unaffordability of the usual out of pocket expenditure to the poorest.

For children studying in government schools, in all quintiles expenditure shares on tuition, reading material & stationary, and transport are the largest. The amount of money spent on extra tuition increases across the quintiles, with children in the richer quintiles spending more than thrice the amount spent by the poor children. Richer people spending a large amount of money on extra tuition, suggests the disadvantageous position poor children face in their inability to compete with the richer children in terms of acquiring extra knowledge in progressing in education. The difficulty to compete with richer children could also be a reason why poor children dropout from school. Although only less than a tenth indicated distance to school as a reason for not being in school, around a quarter of expenditure

28. There are four levels of school education in Sri Lanka: primary for 5-9-year-olds (Grades 1-5); lower secondary 10-13 (Grade 6-9) ; upper secondary for 14-15-year-olds (Grades 10-11); and collegiate for 16-17-year-olds (Grades 12-13) [2] (MOE (2004).

29. Data on out of pocket expenditure on schooling by income quintiles can be provided upon request.

on schooling was incurred on transport, and in the poorest quintiles the largest share of expenditure was on transport, possibly because of the unavailability of schooling within reasonable distance for children in remote areas and despite transport being subsidized, unavailability of public transport in remote areas where a majority of the poor are located. Therefore, despite a free education system and an education subsidy structure, out of pocket expenditure on schooling is high. Similar observations have been made by Ranasinghe and Hertz (2008) and Ranasinghe and Hartog (2002).

More recently there is emerging concern, whether children are leaving school due to people's perceptions of low employment prospects despite education. With costs increasing from primary to secondary, poor households could find it hard to bear the increasing costs, and visibility of poor employment prospects despite education could result in negative perceptions of continuing education. Unemployment levels by education attainment DCS (2005-2013) suggests that even if the basic education cycle is completed, unless one reaches higher levels in education, employment prospects could be low. IRIN (2014) quoting a Northern province education official saying, "they have to settle to manual labour jobs if they remain in the region, so why not take them out of school now?", notes that older children and young adults chose to drop out because jobs commensurate with high school or university graduation levels were hard to find. Similar views have been expressed in the south. World Bank (1998) notes that there are increasing concerns regarding irrelevance of education to labour market. DailyFT (2013) referring to findings from a survey conducted in Ratnapura district notes that a main reason why children were taking on employment early in life and dropping out of school was due to the irrelevance they saw in education as a means of enhancing their employability. Similar observations have been made by Ranasinghe and Hertz (2008). Further the DailyFT (2013) referring to the Ratnapura survey findings note that entrenched attitude of parents and lack of will to encourage children was also a reason for dropouts.

Table 2: Multinomial Logistic Regression model for schooling status

Explanatory variables	All quintiles		Poor quintiles (1 st & 2 nd)	
	β	Sig (p)	β	Sig(p)
Never enrolled				
Intercept	-4.361	.000	-3.977	.005
Earned income	-.009	.808	.132	.476
Foreign Remittances received	-.128	.684	-3.439	.281
Transfer payments received	-8.759	.068	-7.576	.110
Share of expenditure on education	2.215	.072	2.321	.111
Share of unemployed	1.554	.083	2.511	.010
Children 5 to 18 years	-.178	.361	-.047	.820
Average education of household adults (years)	-.385	.000	-.428	.000
Unemployment rate in the district	-.064	.649	-.330	.061
Estate	1.586	.005	1.766	.012
Urban	1.366	.035	1.751	.026
Rural	0 ^b		0 ^b	
Left school mid way				
Intercept	-2.363	.000	-2.332	.001
Household earnings	-.021	.446	.047	.632
Foreign Remittances received	-.046	.686	-.262	.398
Transfer payments received	-1.238	.118	-3.100	.025
Share of expenditure on education	.465	.551	.860	.315
Share of unemployed	.841	.083	.646	.262
Children 5 to 18 years	.128	.192	.078	.483
Average education of household adults (years)	-.338	.000	-.330	.000
Unemployment rate in the district	-.180	.030	-.162	.089
Estate	.365	.166	-.056	.860
Urban	.685	.013	.505	.127
Rural	0 ^b		0 ^b	
Pseudo R squared	0.15		0.16	

Source: Estimates computed by the author based on HIES 2012/13 data

Dependent variable is a three outcome categorical variable : Base (reference) Outcome category: 'Child in School'. Other two categories: 'Child never enrolled in school'. 'Child left school (dropped out) mid way'. Significant at 99% level of confidence if $P < 0.00$, at 95% level of confidence if $P < 0.05$, at 90% level of confidence if $P < 0.1$

Determinants of school exclusion

To understand the significance of selected factors which are important for policy for improving access to compulsory education, we examine Multinomial Logistic Regression models for all children 6-14 and for the children in the poorest quintile in the income distribution. The coefficient estimates and the statistical significance obtained using the regression model are shown in Table 2. The regression coefficients gives the change in log relative risk (log odds) per unit change in the explanatory variables (Green, 2012).

The regression results show that incomes, share of expenditure on education, receipt of transfer payments, share of unemployed at household level, the unemployment rate in the district, the sector in which the household is located are likely to be the most significant factors affecting school participation, though the level of significance of these factors are different for enrollments and dropouts and for the poorest quintile and when all quintiles are taken together.

The average level of education of the adults in the household turns out to be consistently significant for enrolments and drop outs and for those in the poorer quintiles and for all quintiles. A unit increase in the average number of years of education is likely to reduce the log odds of being non enrolled by 0.4 and leaving school mid way by 0.3 for all children. Education on one hand is linked to employment and income and on the other hand results in instilling in parents the value of educating children for a better life. Therefore educating parents is an important measure to improve schooling, which will yield a cumulative effect on intergenerational well being. Ersado (2005) notes that parental education is the foremost determinant of a child's education. Similar observations have been made by Glick and Sahn (2000), Brown and Park (2002). In the poorest quintile the average level of adult education for those households in which children were not in school was 3.9 years, and for households with children in school was 7 years, and for the richest quintile 11 years, indicating the importance of adult education for children's schooling outcomes.

With regard to incomes to the household, the regression results show that while earned incomes help sending and keeping children in school, the transfer payments to the household including social protection and welfare benefit transfers appeared to be the most significant. For those in the poorer quintiles a unit increase in transfer payments is likely to reduce chances of non enrollments by 7.6 and chances of leaving school reduced by 3.1. Given that only 83.6% of the excluded children in the poor quintiles receive social protection or welfare benefits, better targeting and delivery are likely have a significant improvement on schooling. Though the regression coefficients consistently indicated that foreign remittances were helpful in sending and keeping children in school, the variable did not turn out to be statistically significant possibly because only 8.7% of all households with 4-15 year old children received foreign remittances. In the poorest quintile though an increase in the share of expenditure on schooling is likely to increase both non-enrolments and schooling, it did not turn out to be significant possibly because even for those households in which children were in school the share of expenditure on schooling was very low.

Though the level of unemployment in the household resulting in increasing the chances of both non-enrollments and dropouts, possibly being linked to low incomes, but it could also be a reflection of hopelessness and discouragement to go to school. Household unemployment turned out to be statistically significant only for enrolments in the poorest quintile. District unemployment rates were significant for both non enrollments and dropouts in the poorest quintile, but with a negative sign indicating an inverse relation, indicating a fall in both enrolments and dropouts where unemployment rates were high. For dropouts it could be less opportunity to find employment and hence discouraging leaving school.

Economic sector – whether estate urban or rural- turnout to be statistically significant for non enrollments but not for dropouts. In the poorest quintile, the relative log odds of never being enrolled increased by 1.8 when moving from rural to estate, and by 2.1 from moving from rural to urban indicating that the chances of being none enrolled was high in the latter case. But for drop outs, chances of dropping out increased when moving from rural to urban but reduced when moving from rural to estate, indicating that though exclusion rates are high in the estate sector chances of exclusions were slightly more in the urban sector, the opportunities for unskilled employment in the urban sector possibly playing a role.

Summary and Conclusions

Despite Sri Lanka reaching near universal school attendance for children 5-14, still there are some children who are never enrolled or who are leaving school mid way, due to social and economic reasons. The study finds that school exclusions are clearly associated with the income level of the household with the poor being the most affected. Though children from poor income households could be leaving school to support family incomes, with labor laws preventing child employment, children are likely to be in low waged employment, and hence opportunity costs of schooling verses being employed are unlikely to be a reason for termination of schooling. But high out-of-pocket expenditure on schooling is likely to be seriously affecting schooling. Despite free education and education subsidies, expenditure on extra tuition, extra reading material and transport takes the largest shares in schooling expenditure. The poor children are likely to be suffering from the critical disadvantages stemming from not being able to afford costs of extra learning. With expenditure on extra tuition increasing with the income of the household, a child in the richest quintile spending more than thrice the amount a child in the poorest quintile would spend on tuition and extra reading material and stationary, places children from low income households at a very disadvantageous position in progressing through school, possibly forcing children to dropout being unable to compete with the extra learning acquired by the children coming from the richer households. Despite subsidized transport and 'distance limits' to access school, the large share on transport expenditure require examining the effectiveness of the transport subsidy, where availability of public transport and access to schools are limited. With costs increasing from primary to secondary, poorer parents could be finding it hard to afford continuing schooling of children to secondary level. Such costs coupled with visibility of poor employment prospects could result in negative perceptions of continuing education. Therefore from a policy perspective there is the crucial need of addressing the hidden costs of schooling which places the poor children at a very disadvantaged position.

While increases in all types of incomes to the household help sending and keeping children in school, the transfer payments to the household including social protection and welfare benefit transfers appeared to be the most significant. But the observation that not all poor households with children receive social protection and welfare benefits indicate that better targeting for transfer payments could have very positive implications on schooling especially among the poor.

Poverty though a significant factor affecting education, still 98.6% of the children even in the poorest quintile continuing schooling, indicates the play of other factors affecting schooling. Education level of the adults in the household, show up as an important factor effecting both enrollments as well as continuation of education. There is a very significant association between the level of adult education and schooling even in the poorest quintile, with the children of the better educated families being in school despite poverty. Low levels of education of adults are on one hand is associated with poor quality employment which limit free time resulting in low engagement with children's education. On the other hand low education of adults limits the ability to appreciate the instrumental and intrinsic values of schooling. Disengagement of parents with their children's education is therefore a critical issue that needs to be addressed through suitable policy interventions.

Further the survey data reporting a large share indicating 'other' reasons for not being in school, beyond reasons such as financial, having to help family, distance to school or war, raises concerns about perceptions of returns to investment in education especially the perceived irrelevance of education as a means of raising employability. For the children in the poor quintiles ability to spend on education is limited and therefore reaching higher levels in education at which investments could yield higher returns are narrow possibly resulting in the low perceptions of the poor on returns to investment in education and relevance of schooling.

Though no clear pattern was seen between exclusion rates and provinces, there was a marked shift in exclusions from the rural to the estate sector and also to the urban sector. In the urban sector the opportunities to be employed is likely to be a push-pull factor causing dropouts. This indicates a greater need for monitoring the implementation of laws against child employment. In the estate sector poor education of household adults and disengagement with children's education due poverty and social problems such as alcoholism among adults could be affecting schooling.

In conclusion, policy interventions to overcome the issue of large out of pocket expenditure on schooling and education, more precise targeting of the poor in delivering social protection and welfare benefits, raising awareness of the instrumental and intrinsic values of education among the children and the adults, and the monitoring the implementation of laws against child employment are likely to be

unfailing factors which could bring about improvements in schooling. The findings also have implications for the supply side of education. Why extra tuition is needed by children in the basic education cycle, and the people's perception of irrelevance of education for employability indicates the need of a critical appraisal of the basic education delivery system.

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