



Is the Provision of Education in Sri Lanka Equitable?

**Evidence from the Districts of
Batticaloa, Monaragala and Mullaitivu**

Vengadeshvaran Sarma

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All inquiries relating to this publication should be directed to:

Centre for Poverty Analysis
29 R G Senanayake Mawatha, Colombo 7
Sri Lanka
Tel: + 94(011) 2676955, 4690200
Fax: +94(011) 2676959
Email: info@cepa.lk
www.cepa.lk

About the Authors

Vengadeshvaran Sarma is an Assistant Professor of Business Economics at the University of Nottingham, Malaysia. He received his PhD from the University of Nottingham in 2015. He is interested in policy relevant research on topics related to education, migration, displacement, structural transformation, and land reform. His current projects examine the educational inequality and compulsory schooling policies in Sri Lanka; the effect of parental migration on left-behind Sri Lankan families; and the role of land disputes and the process of industrialisation in India, Nepal and Japan.

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List of Acronyms

CEPA	Centre for Poverty Analysis
CPH	Census of Population and Housing
CRC	Citizens Report Card
CSO	Community Service Organisations
DCS	Department of Census and Statistics
DSD	District Secretariat Division
ECE	Early Childhood Education
GCE A-Level	General Certificate of Education, Advanced Level
GCE O-Level	General Certificate of Education, Ordinary Level
GND	Grama Niladari Division
HEIs	Higher Education Institutes
HIES	Household Income and Expenditure Survey
LFS	Labour Force Survey
LMIC	Lower-Middle-Income country
MoE	Ministry of Education, Sri Lanka
MSI	Morris Score Index
NEREC	National Education Research and Evaluation Center
NGO	Non-Governmental Organisation
NPECC	National Policy on Early Childhood Care and Education
NVQ	National Vocational Qualification
OLS	Ordinary Least Squares
PISA	Programme for International Student Assessment
PISAD	Programme for International Student Assessment for Development
SAARC	South Asian Association of Regional Cooperation
STEM	Science, Technology, Engineering and Mathematics
TVET	Technical and Vocational Education and Training
UGC	University Grants Commission, Sri Lanka
UN SDG	United Nations Sustainable Development Goals
WDI	World Development Indicators

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I. Executive Summary

The provision of education in Sri Lanka is largely led by the state. Free education policies in Sri Lanka have enabled large sections of the society, especially the poor and marginalised communities to access education in a manner that has made Sri Lanka the most literate country in South Asia. While the education system in Sri Lanka has ensured that almost no child is left behind in primary education, there are evident shortfalls in the secondary and tertiary education networks. Consecutive compulsory schooling legislations over the years have ensured that a larger number of children attain at least eight years of schooling. While a lot of focus has been placed on years of schooling, much more needs to be done to ensure that the quality of the education provided in schools is adequate, equitable and does not disadvantage the poor and marginalised.

Evidence from schooling completion rates, type of schools available and performance on standardised national examinations indicate that the Northern, Eastern and Uva Provinces are the three most underperforming Provinces in terms of education. While there have been efforts by the state to channel additional funding for education to these Provinces, progress in equalising access to education, quality of education and educational outcomes have been slow. Schools in these Provinces are of a lower quality (physical resources, staffing etc.), are less likely to belong to the elite categories of schools (national, type 1AB), and have fewer qualified teachers. These inequalities in education perpetuate over a child's schooling years, resulting in widening income inequality, and hindering social mobility; thereby systematically disadvantaging the poor.

Using novel data from the Citizen's Report Card on education services in Mullaitivu (Northern Province), Batticaloa (Eastern Province) and Monaragala (Uva Province) Districts, this report analyses the inequalities in secondary education. Secondary education is emphasised in the analysis as this is the stage in which educational inequalities are emergent. The data comprises of over 1200 households selected through stratified random sampling. Two key variables of interest explored in the study are income and spatial distribution (remoteness). The study constructs a wealth index following the Morris

Score Index methodology and uses the index as a proxy for income and affluence. Remoteness of a household is measured by distance to the city centre. The outcome variables are categorised across three dimensions: access to education, quality of education received and educational outcomes.

The main results indicate that wealth affects a child's ability to access a secondary school in the same GND (Grama Niladari Division) and access tuition. The main results also indicate that tuition is a key determinant of a child's rank in his/her class. Therefore, children from poorer, more remote backgrounds tend to be adversely affected in their educational outcomes through deficiencies in access to formal and shadow education (tuition). There is also evidence that children from more remote areas were more satisfied with the quality of education provided in their school compared to those in more urban areas (indicating a bias in expectations—with those from more urban areas having higher expectations). Wealth has no statistically significant effect on the satisfaction levels; however, students from the poorer DSDs (District Secretariat Divisions) in all districts were relatively unhappy about the quality of sanitation in their schools than children from poorer DSDs. This is indicative of the poorer congeniality of schools in those DSDs.

Progressive efforts, both through legislation and concerted administrative enforcement, need to be undertaken to ensure that the inequality in education between districts, urban and rural areas and between the rich and poor are narrowed. Those from poorer and more remote areas suffer from poorer access to education and receive a lower quality of education services. Inequalities in education create competition to enter more prestigious schools; and unfortunately, there is positive selection into such prestigious schools from urban and richer households. The disparities then lead the poor to being severely disadvantaged even later in life as these inequalities manifest in adverse selection in job market opportunities and social mobility. Policy and implementation initiatives that focus on equalising provision of education in Sri Lanka will help curb these inequalities.



1. Background

“Education is a fundamental human right and is indispensable for the achievement of sustainable development” (United Nations Sustainable Development Goal#4). Sri Lanka, recognising the importance of education, has had provision of education on a large scale since ancient times (Aturupane, 2009). Colonial rulers of Sri Lanka also contributed to widening access of education in the island; the Dutch widened school networks in maritime regions and enacted the first known compulsory schooling policies in the island (in the eighteenth century). During this period, it was compulsory for boys up to the age of twelve and girls up to the age of ten to be in school. However, due to the limited supply of schools and school enrolments, completion remained poor (well below 25%). The British, then made significant improvements to Sri Lanka’s provision of education and extended compulsory elementary schooling via the *Town School Ordinance of 1906 and Rural School Ordinance of 1907*. Under the British rule, over a span of about 140 years (from 1771 until 1911), the number of schools increased from less than 500 to 2,735; the male adult literacy rate increased from under 25% to 43%, and importantly the female literacy rate increased from just 2% to almost 12%. Gender and spatial disparities were widely prevalent during this period, although, overall education outcomes experienced improvements.

Just before Sri Lanka’s independence, access to education was widened through the *Free Education Policy* enacted in 1945. The free education policy is hailed as a hall mark legislation that contributed to Sri Lanka’s education becoming more accessible to all children. After independence in 1948, successive governments in Sri Lanka continued to place great emphasis on education and human capital (Corea, 2008). As a result, the literacy rate in the island is now at 92% and primary school enrolment is 99%. Despite this massive progress in primary education, disparities persist in secondary and tertiary education ¹.

This study explores the state of education in Sri Lanka and places emphasis on the disparities in the provision of education. In particular, the study explores the following questions:

- a) Are there inequalities in the provision of education in Sri Lanka?
- b) What contributes to disparities in education across geographic and income parameters?
- c) What do students and parents in the underperforming districts feel about the quality of education services they receive?

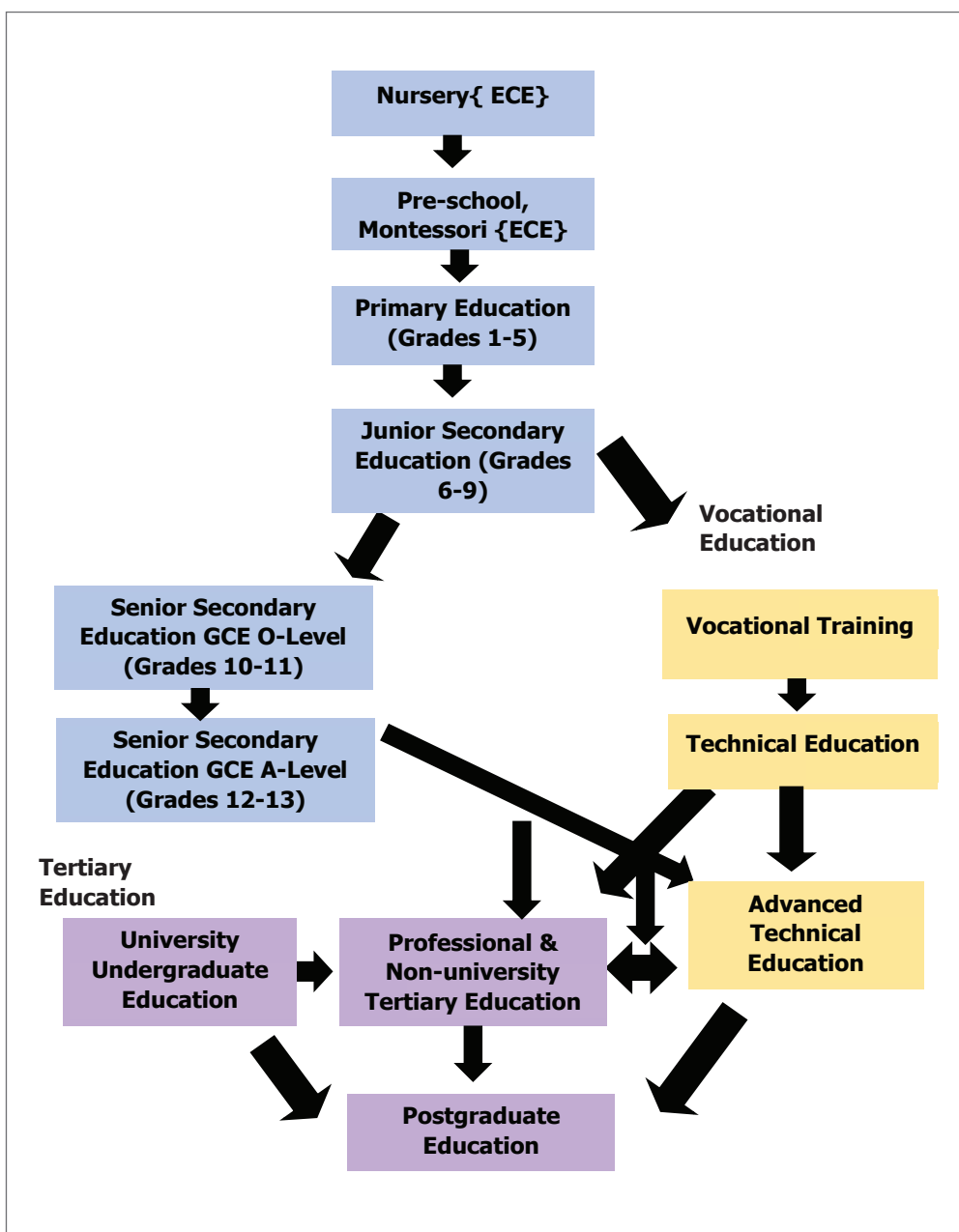
¹ Despite high enrolment rates in primary education, it is important to note that absenteeism may still be an issue. Literacy as an indicator of achievement while being widely used, also needs to be treated with caution as it is the minimum acceptable attainment of education.

In addressing these questions, this study uses data from the WDI (World Development Indicators) and PovCalNet databases of the World Bank; the HIES (Household Income and Expenditure Survey)², CPH (Census of Population and Housing) and LFS (Labour Force Survey) data from DCS (the Department of Census and Statistics); NEREC (National Education Research and Evaluation Centre) data from the University of Colombo; data from the annual reports of the MoE (Ministry of Education) and UGC (University Grants Commission); and data from the Citizens Report Card collected by CEPA (Centre for Poverty Analysis).

1.1. The structure of the education system in Sri Lanka

The education system in Sri Lanka consists of at least five main stages and four broad classifications of education providers.

Figure 1: The stages of education in Sri Lanka



² Section 1 of the report relies primarily on HIES data. The HIES data is compiled by the DCS every five years. This report uses data pertaining to the 2012/13 and 2016 waves. The DCS is a nationally representative dataset.

1.1.1. Pre-schools

There is subpar penetration of ECE (Early Childhood Education) in Sri Lanka. ECE (for children aged 3-5) is crucial for the cognitive development of children, creating equity in education opportunities for children of various backgrounds, preparing children for formal education, and increasing their capacity for learning (Little, 2013; World Bank, 2014). Sri Lanka had formally recognised the importance of ECE during the 1997 education reforms and has worked towards making access to ECE wider. However, Dundar et al. (2017) report that only about 50% children access pre-schools in Sri Lanka and the 2012/13 HIES data report a national ECE enrolment rate of 69%. ECE is primarily provided by the private sector and NGOs with little or no regulation and set learning outcomes. State provision of ECE is very minimal and explains the lower access of ECE among poorer and marginalised communities. Figures 2 and 3 illustrate that children from poorer households and those from the estate sector, in particular, have lower ECE enrolment rates. This inequality in access to ECE by disadvantaged populations is likely to then perpetuate cognitive deficiencies through formal schooling years.

Figure 2: ECE enrolment by income decile

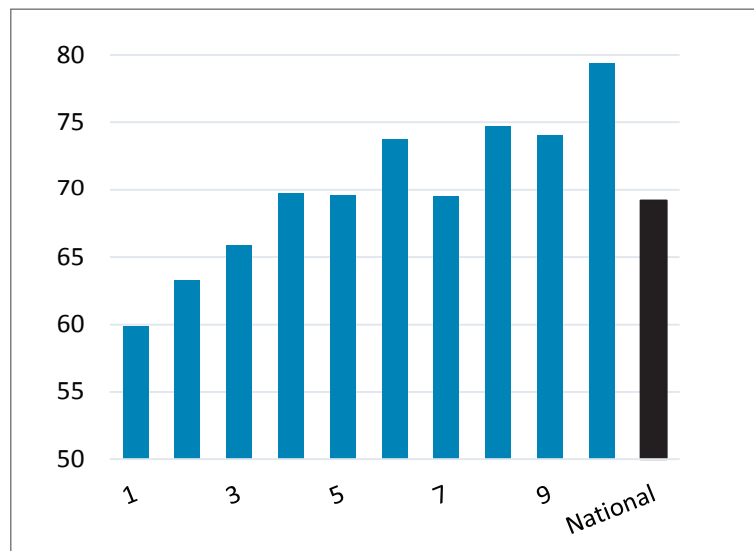
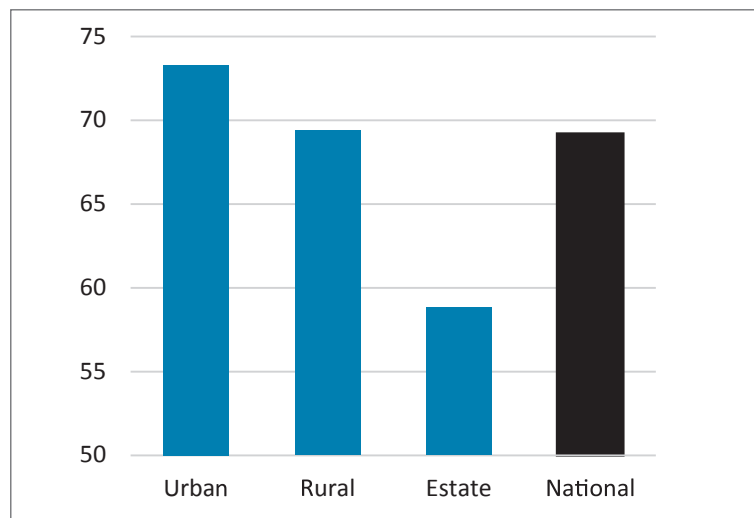


Figure 3: ECE enrolment by sector



Source: HIES 2012

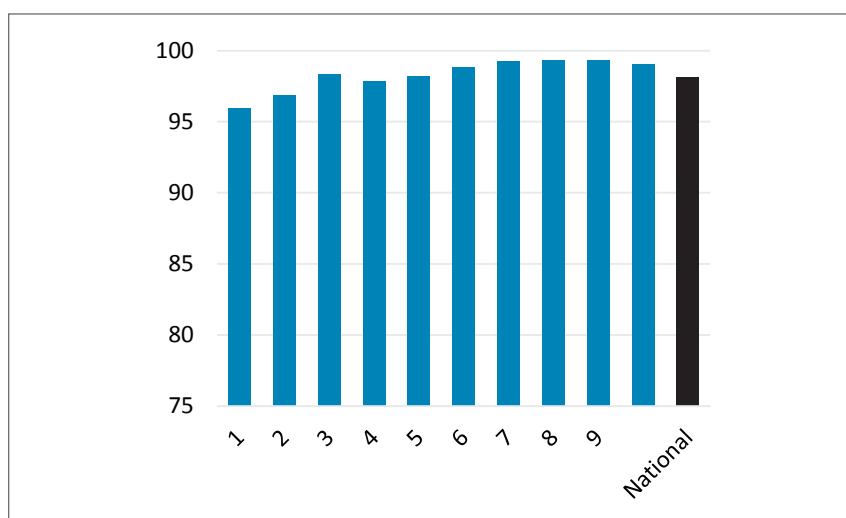
1.1.2. Primary schools

The enrolment rate for primary education in Sri Lanka is 99%. There is also parity in enrolment between genders, sectors of the economy and income quantiles. About 95% of the island's students attend primary schools funded and managed by the state. State schools include those funded directly by the MoE—*National schools* and *Pirivena* (temple schools); and the Provincial Council funded *Provincial schools*. 5% of the island's primary students attend *Private schools* (those that follow the national curriculum and are regulated by the MoE) and *International schools* (those that follow the national or international curricula and are registered as private companies under the 'Companies Act' and are hence not regulated by the MoE). The network of public schools that offer education at least till grade 5 (typically until the age of 10) is extensive and ensures that every child has the opportunity to obtain basic primary education. At the end of primary schooling—grade 5, students sit for the national *Scholarship* examinations. The grade 5 Scholarship examinations were introduced as a pathway for students from provincial and rural schools to enter national and urban schools with additional financial incentives from the state. Over the years, the grade 5 scholarship examinations have become highly competitive, taxing the students and disadvantaging students from rural and difficult backgrounds (Dailymirror, 2018).³

1.1.3. Secondary schools

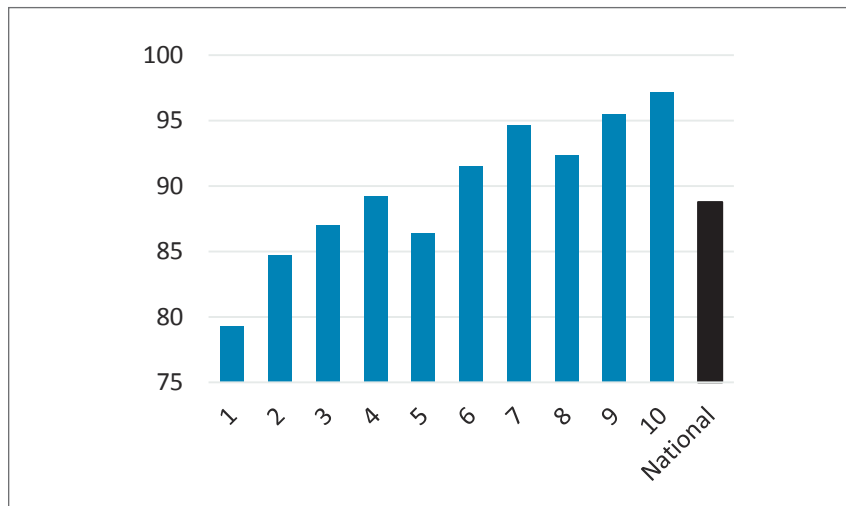
The net enrolment rate for secondary schools is approximately 70-84% (Dundar et al., 2017). Due to the compulsory schooling laws of 1998 (part of the 1997 education reforms) and 2016 (Gazette No. 1963/30, issued on the 20th of April 2016), junior secondary school (grades 6-9; ages 11-14) enrolment rates have been high for both boys and girls. The 1998 legislation made it compulsory for children between the ages of 5-14 to attend school and the 2016 legislation extended the compulsory schooling age to 16. Despite the compulsory schooling legislation, less than 90% of the children aged 16 complete their GCE O-Level (General Certificate of Examinations, Ordinary Level) examinations (based on HIES 2012 data and Dundar et al., 2017). There is also disparity in enrolment by income quantiles and geographic location. As evident from Figure 4, enrolment for junior secondary schooling is close to 98%. Enrolment however declines to below 90% when grades 10-11; ages 15-16 are considered (Figure 5).

Figure 4: Junior secondary school enrolment by income decile



³ <http://www.dailymirror.lk/article/Grade-Scholarship-Exam-are-we-to-continue--153176.html>

Figure 5: Senior secondary school enrolment by income decile



Source: HIES 2012

The disparity in enrolment by income quantiles can also be seen from Figure 4. The difference in enrolment rates for children from the poorest to the richest households was approximately 18 percentage points. There is similar but narrow disparity in enrolment by districts. Discussions with parents, teachers and zonal education officers indicate that children drop out of senior secondary school enrolment due to various reasons (discussed further in section 3 of this study). Some of the reasons include poverty, opportunity cost and access issues (discussed further in section 1.2.1). Discussions with key stakeholders also indicate that secondary school enrolments are lower than that of primary school enrolments partly because of a lack of free mid-day meals—while all primary school children receive free mid-day meals, only a very small proportion of rural secondary school children in small schools receive mid-day meals. For children from poor households, the mid-day meals act as an incentive to attend school and help the families reduce the burden of feeding the child. In the absence of the mid-day meals, families must find additional means to feed the children; further, families must fund the children’s transport (since secondary schools tend to typically be further away).

Only about 60% of students pass the GCE O-Levels; of that about 89% pursue GCE A-Levels (General Certificate of Examinations, Advanced Level) while the rest either pursue TVET courses or discontinue studies (Dundar et. al, 2017). More significantly only 60% of those who sit for A-Levels, pass the A-Levels (in other words, only 36% of those who had sat for O-Levels would have successfully completed their A-Levels). Of those who pass the A-Levels, only about 17% enter public universities. Therefore, while there is significant progress in Sri Lanka’s primary and junior secondary education, the country’s senior secondary schooling and TVETs (Technical and Vocational Education and Trainings) need to be improved to ensure that students who do not pass their GCE O-Levels and GCE A-Levels exit the education system with sufficient skills and qualifications for employment. To this end, new education legislation has been enacted to make it compulsory for a child to complete 13 years of schooling even if they fail their GCE O-Level, through basic skills training (MoE, 2018 and Sunday Times, 2018).⁴

⁴ http://www.moe.gov.lk/tamil/images/Branch_News/Education4All/13_yrs_english.pdf
<http://www.sundaytimes.lk/180128/education/education-news/40000-new-teachers-by-2019-for-13-year-compulsory-education-programme-moe-278645.html>

1.1.4. Tertiary education

Sri Lanka's provision and penetration of tertiary education is abysmal compared to its peers in SAARC (South Asian Association of Regional Cooperation) and other nations at similar levels of development. The tertiary education sector is made up of TVETs, public universities, external degree offerings (by public universities), private HEIs (Higher Education Institutes), and other public HEIs (including teaching training colleges). Based on MoE data, there are about twice as many students in TVETs as in public universities, external degree programmes and other public HEI programmes combined. There are also more students in private HEIs than in public universities (Dundar et al., 2017). Private HEIs operate with little or no oversight as most private HEIs partner with foreign degree or diploma awarding bodies and are not accredited by the University Grants Commission of Sri Lanka.

Figure 6: Tertiary education enrolment by income decile

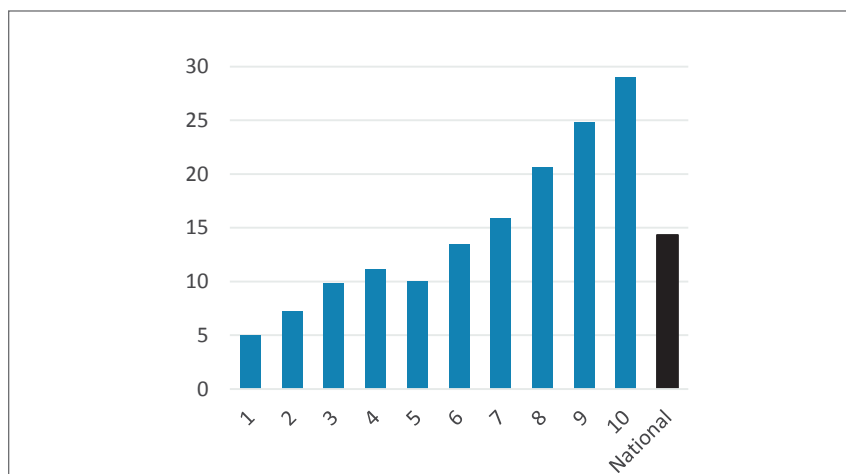
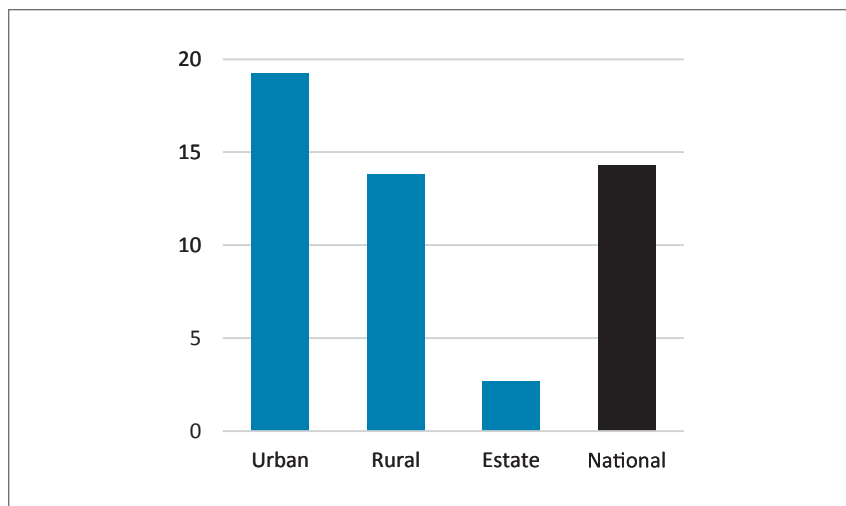


Figure 7: Tertiary education enrolment by sector



Source: HIES 2012

As highlighted in the literature and by education activists, one of the prominent issues facing the tertiary education sector of Sri Lanka is the lack of capacity in the public HEIs to cater to more students with A-Level qualifications.⁵ The limited spaces in the public HEIs perpetuate income and geographic differences in tertiary education enrolment rates (as evident in Figure 6 and 7). While students in

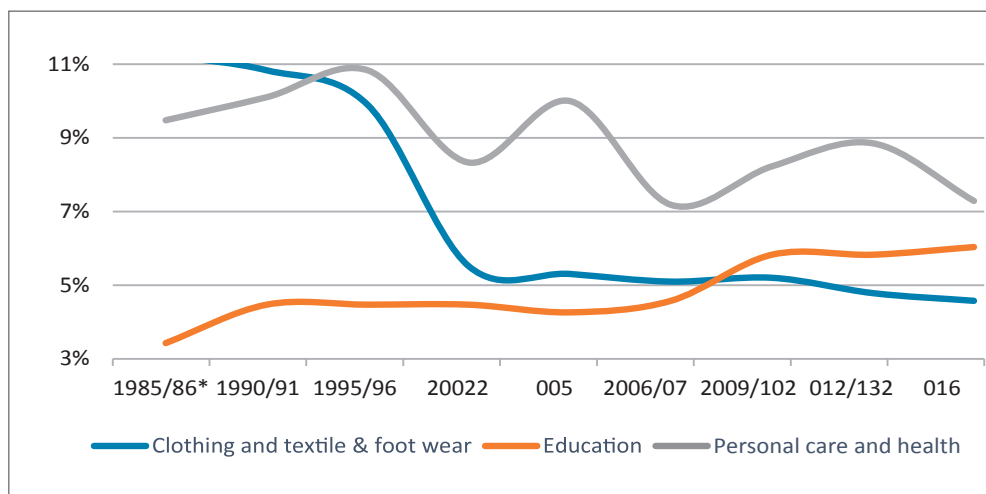
⁵ see Dundar et al., 2017; Little, 2013 and <http://www.dailymirror.lk/article/Non-state-actors-in-higher-education-in-Sri-Lanka-Issues-and-challenges-124528.html>

urban areas have better access to non-university public HEIs (including TVETs), and students from wealthier families can afford private HEIs, the poorer and more rural students primarily depend on public universities (as admission to universities also ensure a stipend, free accommodation and for many graduates, a career in the public sector).⁶ With limited capacities in public universities, many students from rural areas and poor backgrounds are unable to access quality higher education. District cut-off marks for university admission and district quotas for university admission to some extent provide preference to districts that lag in education, but they do not do enough to ensure positive selection on rural and poor students.

1.1.5. Informal education

In Sri Lanka, the mainstream schooling system is complemented by an informal network of education providers: *Sunday schools* (religious education) and *tuition* (shadow education). Sunday schools or religious education has existed in Sri Lanka for a long time and supplements religion as a subject taught in school.⁷ Sunday schools are free for the students and are funded by the community, religious organisations and sometimes supplemented by the state. The print media, religious leaders and authorities in Sri Lanka have reported a decline in the participation of students in Sunday schools, in favour of private tuition (news.lk, 2018).⁸ There have been proposals to ban private tuition on Sundays and *Poya* days (full moon days) to allow students to engage in religious education; however, some sections of the parents are not in favour of this proposal and view such imposition adversely.

Figure 8: Budget share of household spending



Source: HIES 2016

The tuition sector on the other hand is a for-profit sector that is highly unregulated and tends to operate with little or no tax accountability. The tuition sector has experienced significant growth over the years. HIES (2016) and Pallegedara (2018) indicate that the private tuition expenditure as a percentage of the household budget has increased from 3.3% in 1985/86 to 5.8% in 2016. The share of the household education budget spent on private tuition also increased from 9% in 1990/91 to 48% in 2016. The HIES data also indicates that household spending on education has been increasing over the years (primarily

6 In rural Sri Lanka, despite the relatively lower salaries, a public sector white-collar job is much more coveted than a private sector white-collar job. This cultural phenomenon is rooted in job security, pension provisions and being able to find work in most parts of Sri Lanka, including rural areas. Private sector white-collar jobs on the other hand, tend to be concentrated in Colombo or other urban areas in a few select provincial capitals (Rodrik 2000; Rama, 2003).

7 While the Buddhist, Hindu and Catholic/Christian children go for religious study (*Daham Pasal*, *Araneri Padasalai* and *Bible study/youth club* respectively) on Sundays, Muslim children go for Koranic/ Arabic studies to Madaras as, after school on weekdays or on weekends.

8 <https://www.news.lk/news/politics/item/19954-tuition-classes-on-poya-and-sundaysgovt-will-take-decision-says-president>

driven by spending on private tuition) at the expense of spending on apparel and personal care (see Figure 8). Pallegedara (2012) notes that private tuition in Sri Lanka has transformed from being luxury goods in the 90s to necessities in the 2000s. Given their role as a parallel education system (because they supplement and tutor the school curricula), in the literature, the private tuition sector is termed *shadow education* (Johnes et al., 2017). Access to private tuition is viewed as a proxy for access to a superior quality of education because private tuition helps students to perform better in examinations (Sarma and Parinduri, 2016; Johnes et al. 2017). Many students attend tuition in preparation for the national examinations (Grade 5 Scholarship exam, GCE O-Level exam, GCE A-Level exam). Suraweera (2011) for example, notes that 91%, 73% and 68% of Sri Lankan grade 10 students received private tutoring in Mathematics, Science and English respectively, prior to the national GCE O-Level examination.

Private tuition can take several forms. The most expensive and purportedly more effective form is one-to-one (individual) tutoring. This involves individual attention of the tutor to the student. Given that hourly rates for such sessions are the most expensive of all forms of tuition and can be in the 100s or 1000s of rupees, individual tuitions are only accessible by those in the highest income quantile. Group classes (that can range from 2-1000 students) are the second form. Many students from rural and poorer backgrounds attend large group classes that are organised at *tuition centres*. Students pay in the 100s of rupees for a month for each subject they pursue. Students from districts that lag in education sometimes come to Colombo for such large classes, and students from remote, rural areas patronise large group tuition classes in urban city centres in the district. The third form of tuition is through media and the internet. The state media in Sri Lanka offer free mass tutoring for specific subjects via their TV and Radio channels in preparation for national examinations. Globally, there is also a trend for online tutoring; some of it is individual based while some of them provide resources for students to improve their knowledge and examinations skills. Some online tutoring sites operate a for-profit model by charging students for their service, while others operate a freemium model or generate revenue through advertisements without charging the user for their service.⁹ Online tutoring access is relatively limited in Sri Lanka and is generally restricted to those in urban areas and from affluent households. The growth of the private tuition sector generally exacerbates the inequality in education access by income and geographic parameters.

1.2. Key indicators of education

Sri Lanka enjoys some of the highest education access and completion rates among SAARC nations and peers in the lower-middle income countries group. Sri Lanka also enjoys parity among genders in education, unlike its neighbours.¹⁰ Unfortunately, the same is not true for quality of education provision and education outcomes. This section explores some key indicators pertaining to access, quality and outcomes of education in Sri Lanka.

1.2.1. Access to education

While most students in Sri Lanka have relatively easy access to primary schools, access to junior secondary and senior secondary schools is relatively more difficult. This is best described by the 'type' of government schools.

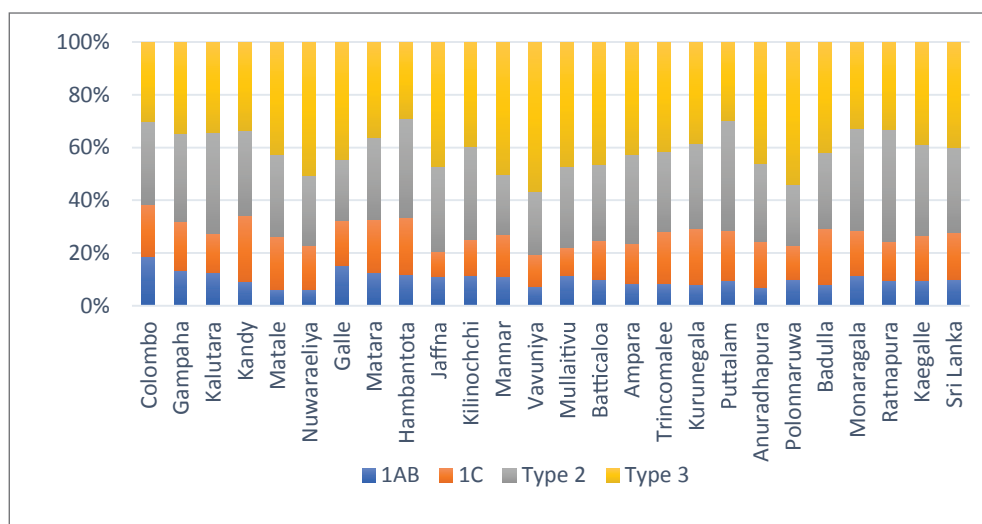
There are four types of government schools (2017 MoE school census report statistics reported in parentheses): Type 1AB (10% of the total number of public schools but account for 40% of the student population), Type 1C (18% of schools and accommodate 25% of the student population), Type 2 (32% of the school count and accommodates 19% of the students) and Type 3 (40% of the schools in Sri Lanka, but only account for 16% of

⁹ Freemium model refers to a two (or more) tiered system, where the basic service is available free while more advanced features require subscription to a premium service; hence the term Freemium.

¹⁰ Girls in Sri Lanka in fact, enjoy marginally lower mortality rates and marginally higher schooling completion rates than boys (Sarma and Parinduri, 2015).

the student population). Type 1AB schools have classes for grades 1–13 or 6–13; they offer the science stream for the GCE A-Level (and in most instances the arts and commerce streams as well). Type 1C schools also have classes up to grade 13, but only for two streams (arts and commerce). Type 2 schools offer classes only up to grade 11 (i.e. only up to GCE O-Level examinations). Type 3 schools on the other hand only have classes up to grades 5 or 8.

Figure 9: Type of school by district

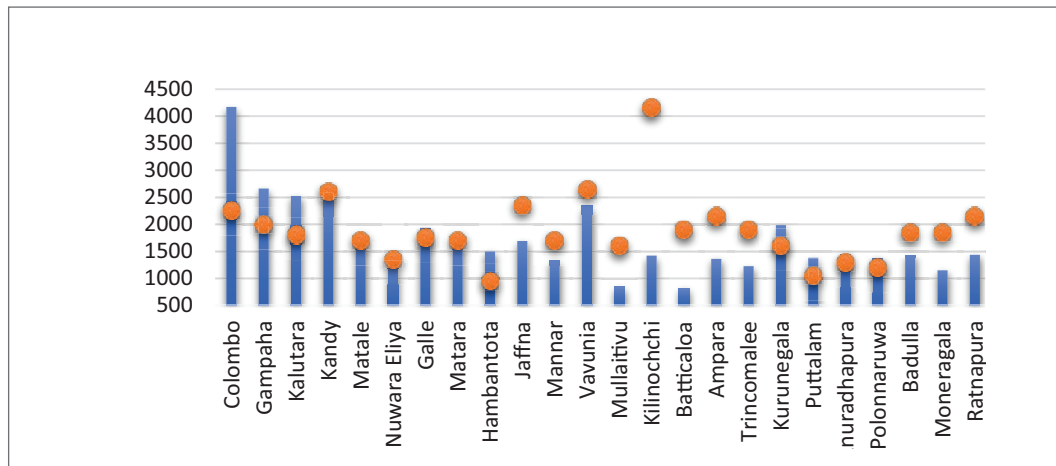


Source: MoE (2018)

As evident from Figure 9, there is disparity in the distribution of school types. In particular, it is worrying to note that 19/25 districts have less than 30% of Type 1AB and Type 1C schools combined. This means that there are several districts where more than 2/3rds of the existing schools do not even have Advanced Level on offer. Given the government aspirations to make education compulsory for 13 years for each child—it begs the question as to whether the infrastructure to enable such provision is available. Further, more than 50% of the schools in the districts in the Northern Province do not have classes beyond grade 8. This makes access to secondary schooling extremely difficult for children in more remote locations. In districts such as Monaragala, Anuradhapura and Puttalam, where the geographical spread of the district is vast—access to Type 1 schools can be very difficult to students from rural and remote areas; their access to secondary schooling would heavily depend on the effectiveness and efficiency of the public transport system.

Therefore, many students in rural areas (especially in remote villages) end-up having access to Type 3 schools. There is a strong and positive correlation between living in rural Sri Lanka and living under the poverty line (HIES, 2012; HIES, 2016). Therefore, we can infer that access to secondary education (and by extension tertiary education) is more difficult for those from the poorest income strata, which eventually leads to a vicious cycle that avert the poor to ascend the social cycle (as evident in section 1.2.3).

Figure 10: Household spending on education by district



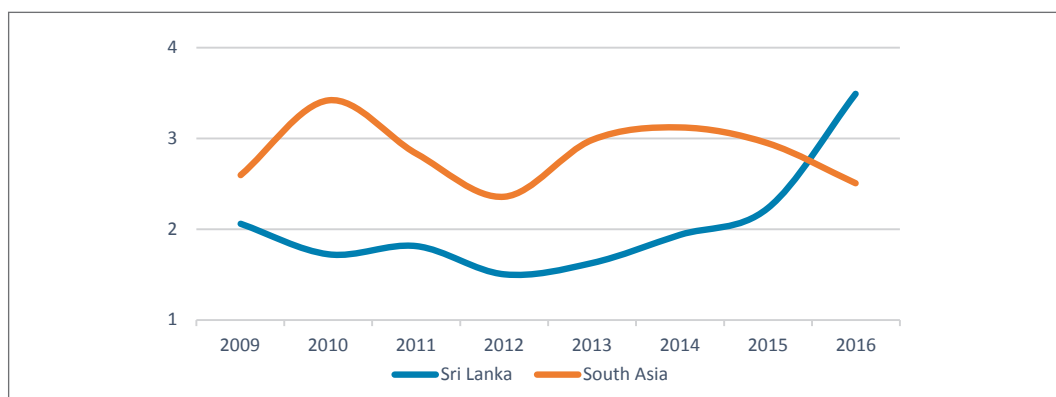
Source: HIES (2016)

In addition to state provision of education, households additionally spend on supplementary educational access, these could include additional text books, stationery, uniforms, or the biggest educational expense for most households—tuition. On average, households spent 48% of their education budget on tuition. Households in Colombo spent an average of Rs. 4,169 per month (or 6.5% of their household budget) in 2016 on education [see Figure 10]. In Mullaitivu where tuition is still a relatively alien concept due to the emergence from a three-decade civil war and poverty, a household’s monthly average spending on education was only Rs. 841 (or 5.2% of their household budget). In districts such as Kilinochchi, while monthly average spending on education was Rs. 1,421 this accounted for 10.3% of the household budget. The fact that most households have to spend at least 5% of their household budget on education is a bane on the free education system in Sri Lanka and highlights how income differences between households can contribute to differences in access to supplementary education.

1.2.2. Quality of education provision

Sri Lanka spends less than 3.5% of its GDP (Gross Domestic Product) on education (in the 5 years prior to 2016, it was well below 2%) [Figure 11]. As a share of the total government expenditure, spending on education was less than 11% in Sri Lanka from 2009-2015 (in 2016 it increased to 18%); comparatively, for the same period, lower middle-income countries and other South Asian countries on average spent 13-14% of their fiscal budget on education (WDI, 2018). Given that more than 90% of children in Sri Lanka benefit from free education by attending public schools, the limited budget for education dampens the quality of education received by them.

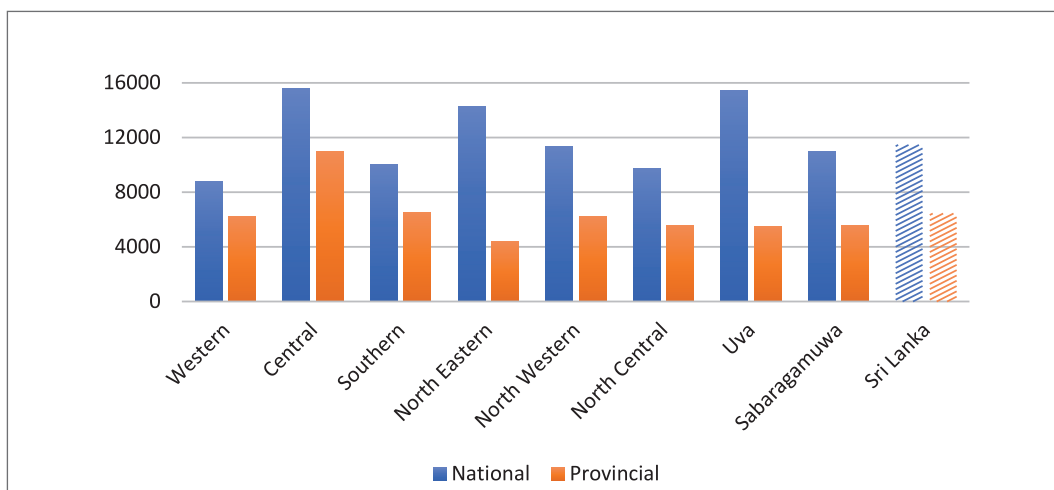
Figure 11: Education spending as % of GDP



Source: WDI (2018)

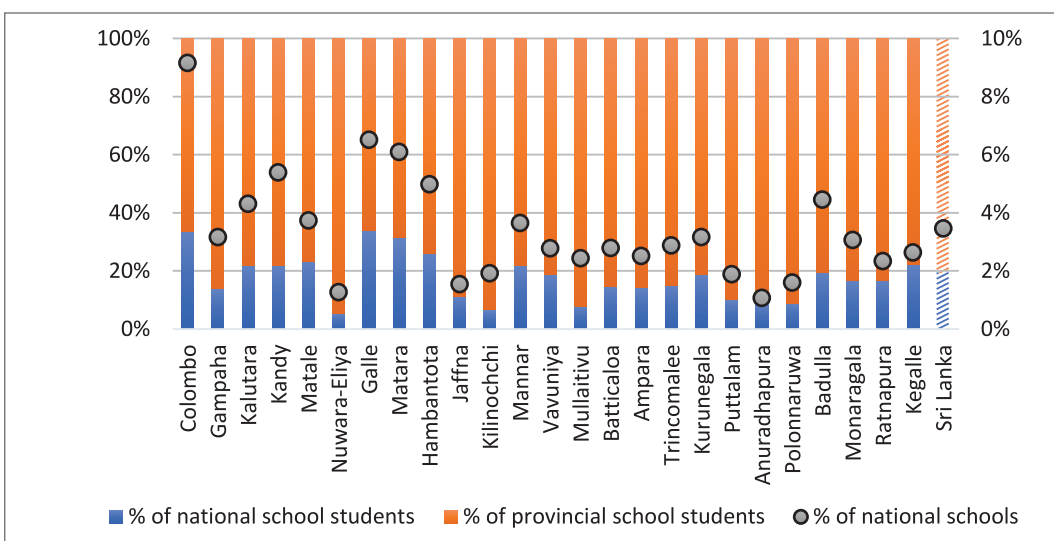
There is also wide discrepancy in the quality of education provisioned by the public schools in Sri Lanka. Schools with physical and human capital deficiencies are the worst affected by low funding; they tend to be in more rural areas and, heavily rely on public funds. Schools in more affluent and urban areas tend to benefit from funding channels setup by Old Pupils' Associations and parents themselves. Most evident of these differences is between national schools and provincial schools. National schools that come directly under the purview of the central government (and located in urban areas) receive 35% of the education budget, but only account for 5% of the public schools. Therefore, national schools provide a superior quality of education as opposed to provincial schools and lead to huge competition from parents to enrol their children into such elite national schools. The state spends more than 10,000 Sri Lankan rupees *per child*, per year in a national school, but spends half of the said amount on a child in a provincial school. As evident from Figure 12, while there are differences in the per child spending between provinces, the difference is starker between national and provincial schools within those provinces. Further, given the disproportionate number of national schools by district, less than 20% of the children in 16/25 districts have access to the elite national schools, but in districts such as Colombo, Galle and Matara more than 30% of the children are enrolled in a national school (see Figure 13).

Figure 12: Recurrent expenditure per student, National vs. Provincial schools (2001)



Source: Arunatilake and de Silva (2004)

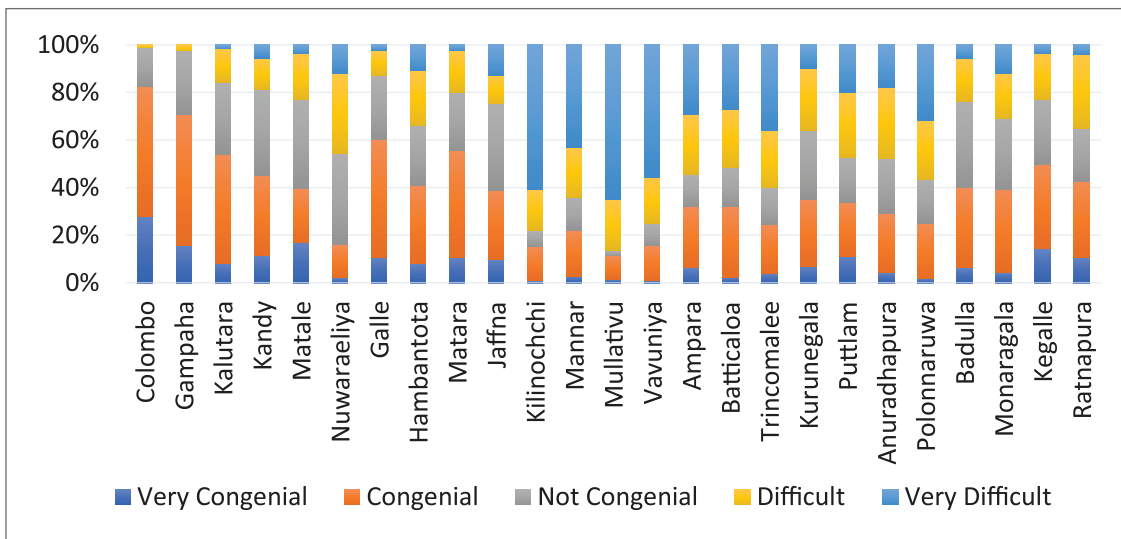
Figure 13: National vs. Provincial school enrolment by district



Source: MoE (2018)

The MoE in Sri Lanka also rates schools by their congeniality. This is assessed on a multitude of factors which include: the availability of basic resources (electricity, water, telephone and library facilities); the durability of existing equipment such as photocopier machines, televisions, and computers; the number of usable toilets; the size of the school buildings; availability of a principal's office, teacher common rooms etc.; the number of teachers and shares of those with vocational and graduate qualifications; distance from school to the nearest bus stop and/or train station; the number of available trips by bus or train towards the school between 7–8am; and distance from the school to key education ministry offices, the nearest bank, post office and government hospital. Figure 14 depicts the congeniality of schools as reported in the 2017 MoE school census. Schools in the former war-torn Northern Districts such as Kilinochchi, Mannar, Mullaitivu and Vavuniya report close to 50% of the schools being non-congenial, i.e. less accessible and less conducive as a learning environment due to the insufficiency of available facilities. Districts in the Western Province—where the capital Colombo is located, report that at least 70% of the schools are congenial. This regional disparity further widens access to quality education.

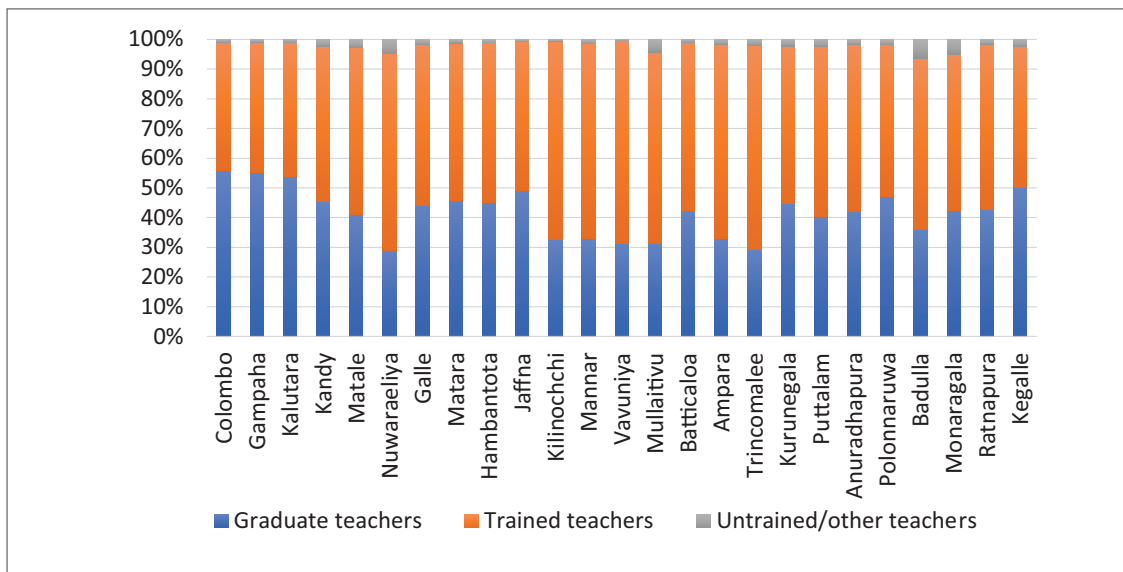
Figure 14: School congeniality by district



Source: MoE (2018)

One critical issue that is important for school education is teachers. While metrics to assess the quality of teachers in Sri Lanka is limited, the quality of teachers is proxied by the education and training they possess. Districts such as Nuwaraeliya and Mullaitivu, on average, produce fewer graduates. This results in having fewer graduate teachers in these districts since teachers prefer to work in their home districts and provinces, [see Figure 15] who in return produce fewer graduate students, and hence continues a cycle of inequality in graduates by geographical location. Even within a province or district, there can be significant differences in the proportion of qualified teachers (i.e. graduate/trained). Rural areas in any district are likely to have less graduate and trained teachers compared to urban areas, as teachers prefer to live in urban areas with closer proximity to amenities.

Figure 15: Teacher qualifications by district



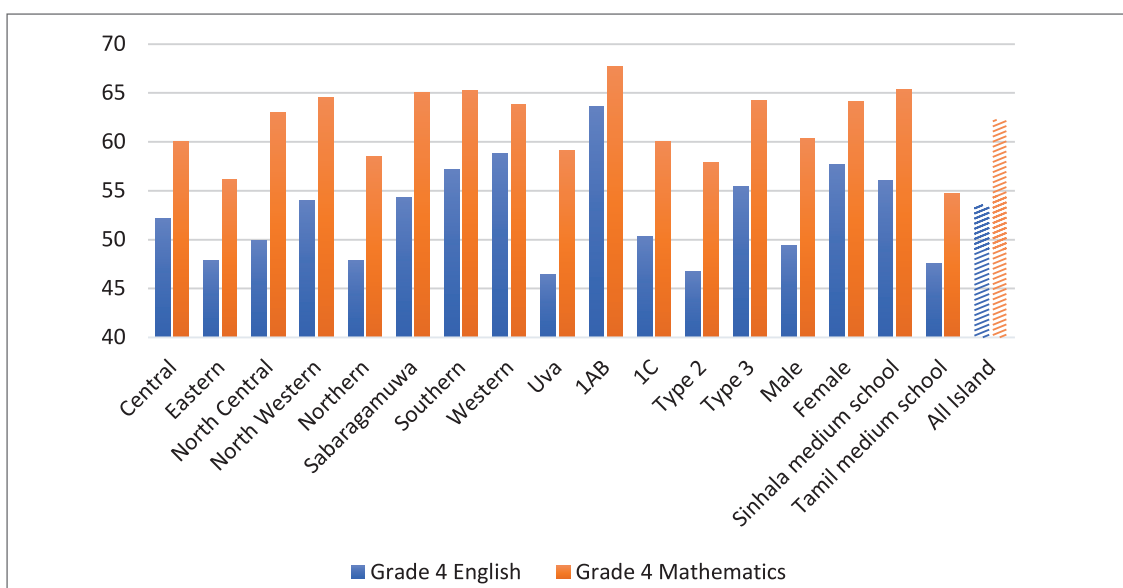
Source: MoE (2018)

Despite access to education being empowered by free education, inequality in education widely persists. This is most evident in the quality of education received by the children as it depends on whether the child is enrolled in a national school or provincial school and the congeniality of the school. The state funding formula for schools, the geographic location of the school and the quality of the teachers (among other factors) affect the congeniality of the school. The quality of education the child receives then affects his/her educational outcomes, which is discussed in the next sub section.

1.2.3. Educational outcomes

Inequality in access to and quality of education adversely affects students' educational outcomes. The most widespread measure of educational outcomes tends to be performance at examinations. An evaluation of the grade 4 and grade 8 NEREC standardised tests reveal that the difference in outcomes is much severe in secondary schooling (grade 8) than in primary schooling (grade 4). [See Figures 17 and 16 respectively].

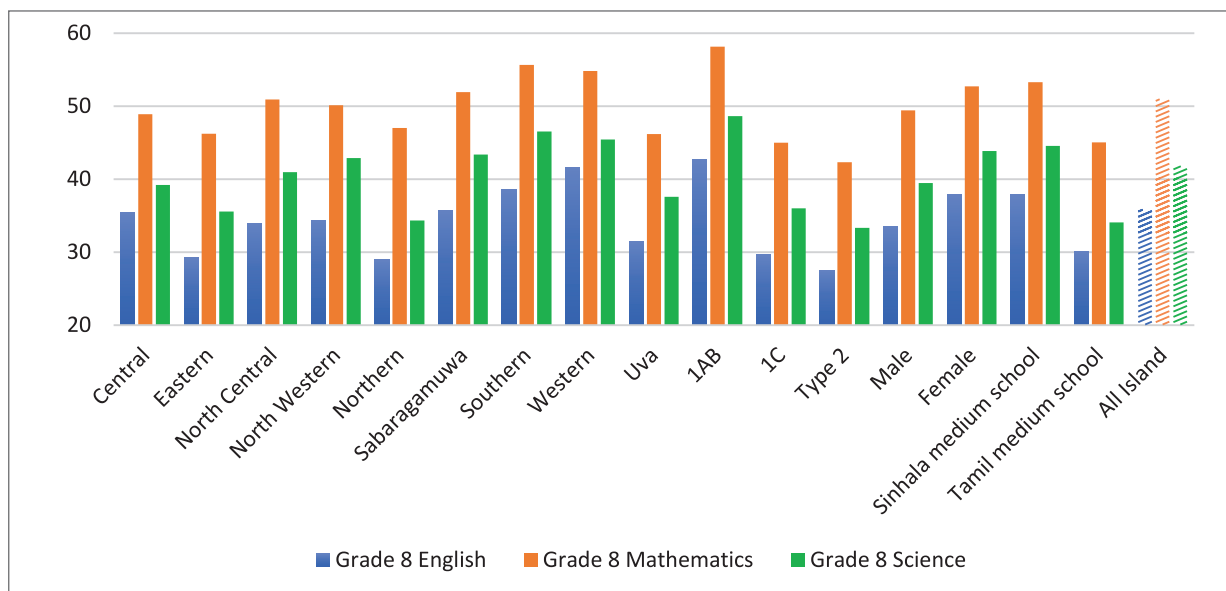
Figure 16: Scores on NEREC tests among Grade 4 students



Source: NEREC (2016)

Grade 4 students of Uva, Northern and Eastern Provinces score only between 46-48 marks on their English tests on average which is the lowest in the Island. The same three Provinces also rate poorly on Grade 4 Mathematics, with students on average scoring between 56 and 59 compared to the national average of 62. Tamil school students underperformed Sinhala school students by 9-10 percentage points and boys underperformed girls by 4 percentage points for mathematics and by upto 8 percentage points for English.

Figure 17: Scores on NEREC tests among Grade 8 students



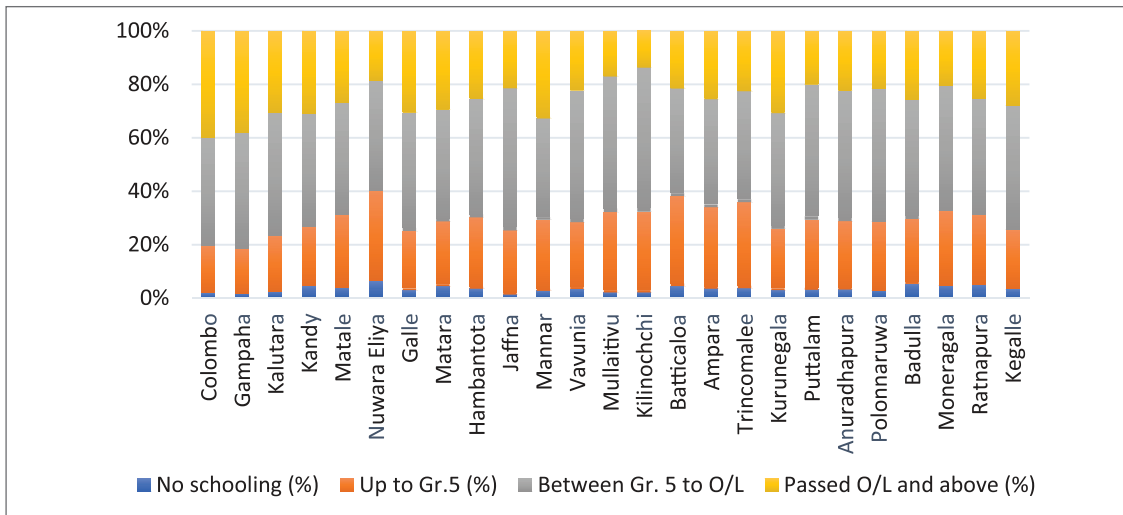
Source: NEREC (2017)

Student performances significantly dip during secondary school. The national average for the grade 8 English test is a mere 36%. The Uva, Northern and Eastern Province Grade 8 students on average only score between 29-31 marks on their English tests; again being the lowest in the Island. The same three Provinces also rate poorly on Grade 8 Mathematics and Science, with students on average scoring between 46-47 and 34-38 respectively. While the student performance on these three key subjects is worrying even at a national level, the disparity between regions and type of school are cause for concern. Students in Type 1AB schools on average performed 13-14 percentage points (or 25%-35%) better than students in the next best category of schools—type 1C. Tamil school students underperformed Sinhala school students by 7-10 percentage points and boys underperformed girls by 3-5 percentage points.

These heterogeneities in performance culminate in lower university admission for children from the Uva, Northern and Eastern Provinces. In general, there is low university admission among individuals from Districts such as Kilinochchi, Mullaitivu, Polonnaruwa and Monaragala, among others. In addition to being generally less likely to enter university, students from these three Provinces were much less likely to specialise in STEM subject areas (Engineering, Biomedical, Medicine and Computer Science). For example, in Monaragala, 33% of the students entering university pursued Arts and less than a quarter pursued STEM subjects. The abundance of Arts and Management students, coupled with a shortage of English skills unfortunately leads to at least some of these graduates being underemployed or unemployed. This further exacerbates the divide between districts; urban, rural and estate sectors; and income quantiles. Students from Colombo, urban areas and the highest income quantile are more likely to enter university, more likely to enrol in a STEM related profession and secure work that is commensurate with their education. ¹¹

¹¹ Based on evidence from HIES and LFS surveys.

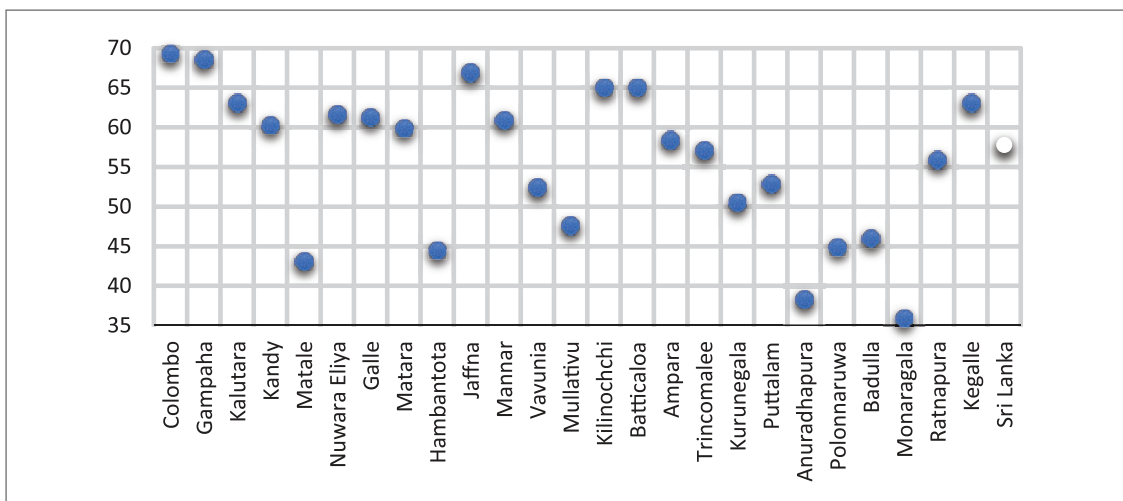
Figure 18: School completion rates by district



Source: HIES (2016)

A summary of the effects of educational inequality is presented in Figure 18. Individuals from districts with better qualified teachers, better types of schools (national, 1AB) and more spending on education (both state spending and household spending) are more likely to have a national level educational qualification (O/Level and above). In Colombo for instance, 40% of the individuals passed O/Level and above; in Kilinochchi and Mullaitivu the corresponding rates were only 14% and 17%. As a country, more than 2/3rds of Sri Lankans do not even possess O/Level qualifications as of 2016. This leads to less salaried employment and upskilling as evident in Figure 19. In districts such as Monaragala, only 36% of the active labour market participants engage in salaried employment. The others engage in self-employment, entrepreneurship, or more commonly, informal employment. The lack of salaried employment deprives individuals of job security, insurance, provident funds and social mobility.

Figure 19: Salaried employee proportion by district



Source: LFS (2016)

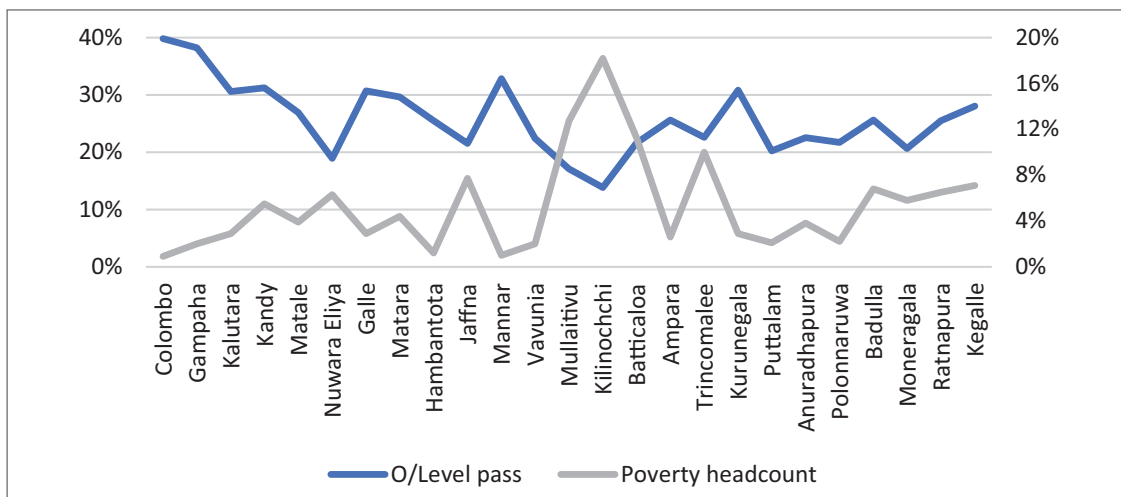
Thus, despite state efforts to ensure equality in education to all pupils, inherent differences in the type of schools, congeniality and geographical remoteness perpetuates schooling access and quality across children's schooling years, and results in differences in outcomes. To better understand what contributes to some of these differences, in the subsequent sections, this report takes a more micro analytical approach focusing on three districts.

1.3. Micro analysis on three selected districts

Given the heterogeneities in access, provision and education outcomes, this study will focus on secondary education in some of the poorest areas. Secondary education is emphasised in the analysis because this is the point at which there is divergence in education access and outcomes for children from poorer and rural backgrounds (sections 1.1.3 and 1.2.3). Three districts are chosen for the analysis of Batticaloa, Monaragala, and Mullaitivu, because:

- a) As discussed in section 1.2.3, the Northern, Eastern and Uva Provinces are the most educationally backward Provinces in terms of education access, quality and outcomes. In addition, they are the poorest districts and home to the poorest divisions in 2012/2013 (based on HIES 2012). Choosing these Provinces allow us to explore the strong inverse relationship between poverty and educational outcomes especially at the secondary school level (see Figure 20).

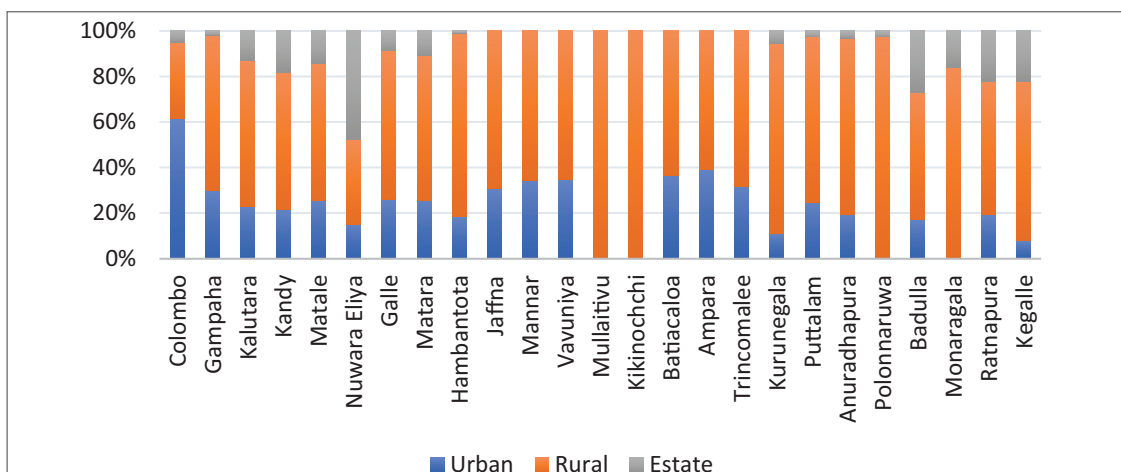
Figure 20: Poverty headcount and O/Level pass rates by district



Source: HIES (2016)

- b) The three Districts provide a good geographical coverage and about 17% of the Sri Lankan land mass. Given the wide geographical extent, the districts also have a lower concentration of urban areas making them ideal districts to study access to schooling in far and remote locations (see Figure 21). Almost all households in Mullaitivu and Monaragala belong to the rural or estate sector, and in Batticaloa almost 2/3rds of the households belong to the rural sector.

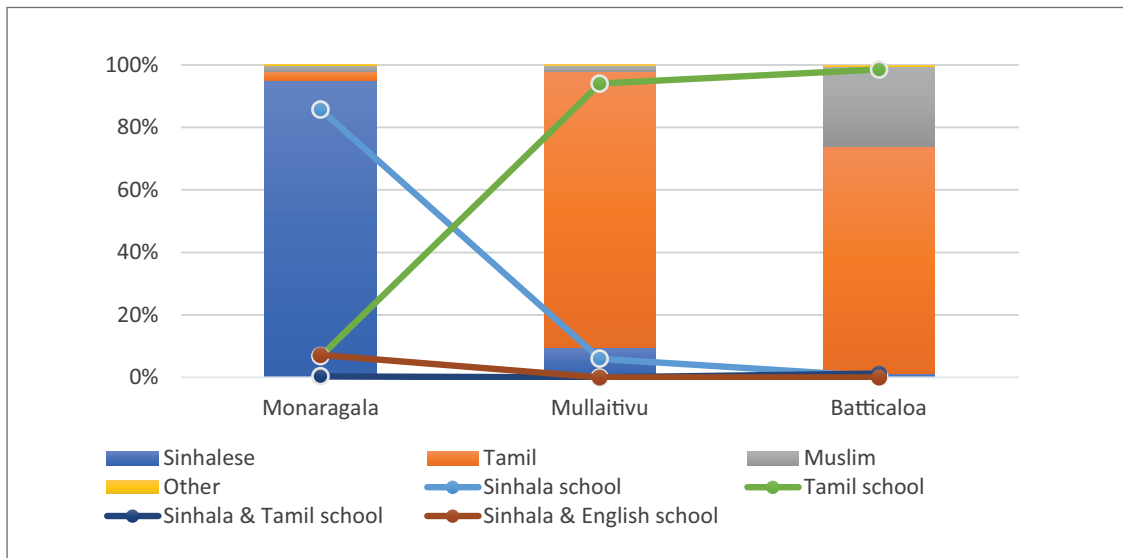
Figure 21: Rurality by district



Source: HIES (2016)

c) There is a good mixture of ethnic groups and Sinhala & Tamil medium schools in the three Districts (see Figure 22). Monaragala is predominantly Sinhalese and Mullaitivu predominantly Tamil while Batticaloa has a mixture of Tamils and Muslims. Further, as discussed in section 2.2, the choice of zones within these Districts allows a mix of Sinhalese, Tamil and Muslim representation in the aggregate district level analysis.

Figure 22: Ethnic composition and schools by medium of instruction in the three key focal 22districts



Source: CPH (2012) and MoE (2018)

In the next section, the report outlines the data and methodology employed to understand the provision of education in the three Districts.



2. Data and Methodology

The data used in the analysis presented in the next section is from the ACTED-CEPA CRC (Citizens' Report Card) studies conducted in the districts of Batticaloa, Monaragala and Mullaitivu. The ACTED-CEPA CRC project titled "Co-creating Social Development and Good Governance: Fostering Cooperation between CSOs (Community Service Organisations) and Government Authorities for Better Social Services", was funded by the European Union. The project aimed to "strengthen and enhance the capacity of CSOs to collaborate with government authorities to promote better access and improved quality of public services, while ensuring the accountability of service providers". One of the public services explored in the project was secondary education in public schools.

2.1. Sampling and summary statistics

The project covered 60 GN Divisions selected by ACTED in the Mullaitivu, Batticaloa and Monaragala Districts. 20 GNDs were selected from each District for the purpose of the study. The choice of GNDs was based on poverty and ethnic composition (so as to create a more balanced study). 20 (+5%) households were chosen at random from within those GNDs for the purpose of the study. Thus, 400 (+5%) households were randomly selected from each District, resulting in a planned sample size of 1200 households. Since the study focused on secondary education, only households with children of a secondary schooling age were chosen (this was done from a list provided by CSOs). In total, 1248 households (421 in Batticaloa District, 417 in Monaragala District, and 410 in Mullaitivu District) were captured within the CRC dataset.

Some basic descriptive statistics on the variables is presented in Table 1 below.

Table 1. Descriptive Statistics

	Batticaloa	Monaragala	Mullaitivu
Sinhalese	0.007 (0.087)	0.976 (0.8061)	0.193 (0.554)
Tamil	0.701 (0.458)	0.022 (0.146)	0.805 (0.397)
Muslim	0.292 (0.455)	0.002 (0.049)	0.002 (0.049)
Average age of respondent parent	40.342 (8.852)	42.434 (8.740)	41.783 (8.188)

Respondent was the father	0.095	0.333	0.182
	(0.294)	(0.472)	(0.386)
Child was a boy	0.333	0.344	0.309
	(0.472)	(0.476)	(0.463)
Wealth Index Score	14.399	13.070	9.912
	(12.604)	(12.661)	(11.244)
Samurdhi	0.569	0.424	0.548
	(0.496)	(0.495)	(0.498)
Distance to town (in km)	4.306	7.492	0.295
	(3.893)	(4.074)	(3.268)
Distance to school (in km)	1.889	3.300	2.578
	(1.678)	(2.655)	(2.221)
Debt consumption	0.393	0.387	0.496
	(0.489)	(0.488)	(0.501)
Household size	4.879	4.715	4.868
	(1.332)	(2.411)	(1.621)
Number of children	2.135	1.899	2.412
	(0.935)	(0.857)	(2.055)
No. of family members without schooling	1.484	1.056	1.631
	(0.721)	(0.492)	(1.245)
Overall satisfaction with educational quality in school (1-low, 3-high)	1.525	1.383	1.485
	(0.560)	(0.543)	(0.534)
Discrimination	0.062	0.015	0.063
	(0.241)	(0.120)	(0.243)
Abuse	0.070	0.005	0.063
	(0.255)	(0.070)	(0.244)

There is no apparent difference of the age of the parents and the child interviewed, and children's gender within the three Districts. The ethnic composition within the districts is reflective of those reported in Figure 23; i.e. representative of the district population. Households in Batticaloa were wealthier (measured by a composite index—the Morris Score index, outlined in the next section) but also reported the highest proportion of Samurdhi beneficiaries among the districts. The differences in means between the districts however are not statistically significant for both measures. About half of the households in the sample from Mullaitivu borrowed money for consumption; the highest among the 3 Districts; in comparison, only about 39% of the households in Batticaloa and Monaragala had to borrow externally to smooth consumption. Households were on average, between 3-4km away from the town; households in Monaragala were more distant from the town centre than households in the other two districts, however, again the differences in means between the districts is not statistically significant. Similarly, overall satisfaction of the provision of education was between medium and high in all three districts and the differences in means not statistically significant. Moreover, secondary school children in Mullaitivu and Batticaloa reported a higher proportion of discrimination and abuse (about 6% for both indicators in both districts), compared to children from Monaragala (less than 2% for both indicators). Abuse here refers to both physical and emotional abuse resulting from being neglected, choice of words to address the student etc.¹²

¹² Abuse here refers to both physical and emotional abuse resulting from being neglected, choice of words to address the student etc.

2.2. Methodology

The study uses a combination of cross-tabulation and standard ordinary least squares (OLS) estimates to identify inequalities in education access and satisfaction of the school service (secondary schooling). There are two key factors of interest as determinants on the level of access, quality of education and outcome of education, they are: (1) income (proxied by a wealth index, type of dwelling, type of toilet used and whether the household borrowed for consumption) and (2) rurality (proxied by distance to town and distance to school).

Based on this approach, we estimate the following equation:

$$D_{ijl} = \alpha + \beta_1 W_{kl} + \beta_2 Z_{kl} + X\gamma + \zeta_l + \varepsilon_{ijkl}$$

where D_{ijkl} is a set of outcome variables that measure access, provision and outcomes of education. These outcome variables include whether the child goes to a school in the same GND, receipt of tuition, satisfaction of teaching and school quality, whether the child is discriminated or based in class and the rank of the child in his/her class); These outcomes variables are estimated at the individual level, where i represents individual, h represents household j represents district secretariat division and l represents district. W_{kl} is a vector of variables that proxy wealth and Z_{kl} is a vector of variables that proxy rurality; X is a vector of the individual and household characteristics; ζ_l is the district fixed effects, which control for observed and unobserved time-invariant district-specific factors that affect both education access and outcomes, and the individual's wealth and rurality; ε is the error term.

One of the key determinants that affect educational access and outcomes is wealth. As established in section 1, wealthier households can better afford education (especially tuition and national schools, due to being able to more easily buy property in areas with access to national schools) and therefore have access to better schools and are therefore more likely to have better educational outcomes. A key challenge is to measure wealth effectively. In this study, the Morris Score Index (MSI) (Morris et al., 2000) is used to proxy for the household's wealth position. The MSI is a weighted asset indicator that weighs each durable asset owned by the household by the share of households in the sample owning the asset. Therefore, assets that are more commonly owned receive a lower score while those that are sparsely owned (a proxy for affluence) receive higher scores. The breakdown of weights assigned for each asset in the data is listed below in Table 2.

Table 2. Weights assigned to various assets

Asset	Weight
Refrigerator	3.16
Television	1.26
Telephone (incl. mobile phones)	1.07
Fan	1.82
Personal computer	12.87
Sewing machine	5.55
Washing machine	16.64
Cooking gas	3.83
Rice cooker	3.01
Gas cooker	6.18
Savings account	1.27

More commonly owned assets such as mobile/telephones receive a weightage of 1.07 compared to more rarely owned assets such as washing machines (weightage of 16.64) and PCs (personal computers) (weightage of 12.87)—they are sparsely owned as they are considered luxury items.

The weightages are computed as $1/(\text{percentage of households that own the asset})$. For example, 33.22% of the households in the sample own a rice cooker, therefore the MSI weightage for rice cookers would be computed as $1/0.332 = 3.01$. The MSI is then computed as the summation of the number of items owned of each asset times the weightage of that asset. Therefore, a household that owns only a PC and 3 fans would have a MSI value of 5.46 (i.e. $12.87 + 3*1.82$).

In the next section, the report explores results estimated from the CRC data.



3. Results

Results are presented along the three main thematic areas discussed in section 1.2: access, quality and outcomes. Since the ACTED-CEPA project focused heavily on service delivery and end-user satisfaction, the sub-section on quality of education provision is emphasized more in this report.

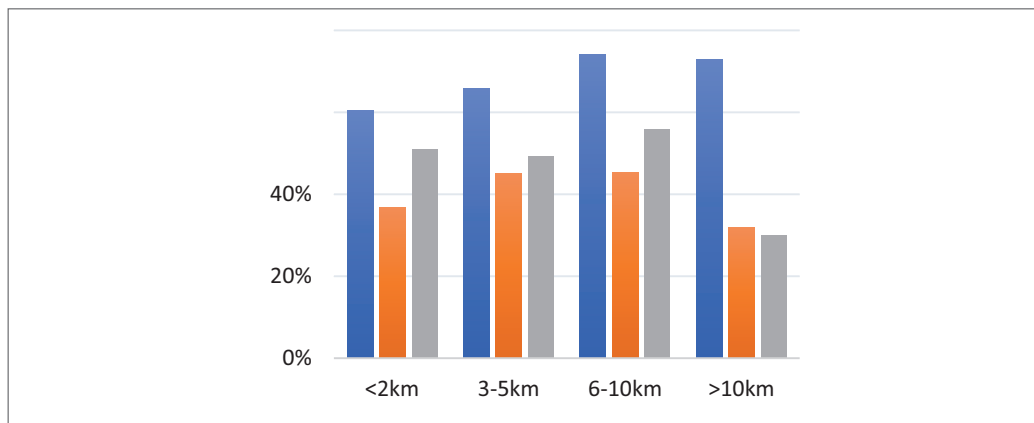
3.1. Access

Geographical distance is one of the key determinants of access to schools in Sri Lanka (section 1.2.1), this is particularly the case for secondary schools in the three districts that are focal to this study. The proportion of type 3 schools in Batticaloa, Mullaitivu and Monaragala are 47%, 47% and 33% respectively (see Figure 9), which indicates that a large number of schools in the districts cater only primary education. Therefore, as evident in Figure 23, more than 50% of the students living 5km away from the town (except in Batticaloa) have to travel out of their GND to access secondary schools.¹³ This indicates structural issues in the provision of education that makes access to secondary education difficult to students from these districts (based on the CRC data, more than 25% of the students live at least 5km away from the school, in Monaragala it is about 64%).¹⁴ However, the correlation between the two variables is not sufficiently strong. The effect of geographical remoteness is more prominent in access to tuition. More than a third of the students living at least 5km away from the city do not access tuition (a shadow education system that is perceived as providing superior education). From Figure 24, it is evident that the further away from the town the student is, the less likely they are to access tuition (despite national averages being hovering around 60-80% access to tuition (Suraweera, 2011)).

¹³ The cut-off is designed based on data available in the survey.

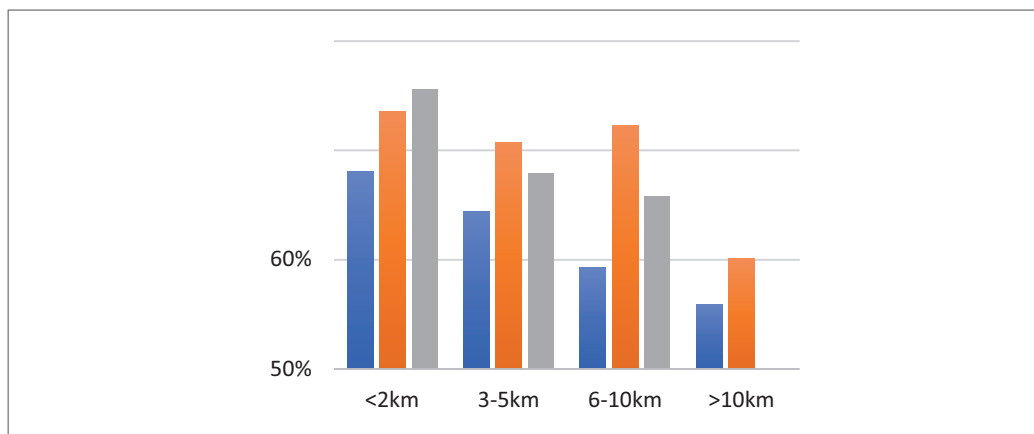
¹⁴ Access to schools from further away places would depend on the quality of public transport available. In the absence of this data in the CRC dataset, this report assumes this is homogenous between the districts, although admittedly this is not a very valid assumption.

Figure 23: Distance to town and access to secondary school in the same GND



Source: CRC data

Figure 24: Distance to town and tuition enrolment



Source: CRC data

Table 3 presents the OLS estimates of a secondary school child going to a school in the GND and accessing tuition. As discussed above, distance to the town is not a good predictor of whether a child goes to a secondary school in the same GND—but the DSDs are. Students from Monaragala and Mullaitivu were less likely to go to a school in their GND compared to those from Batticaloa. The clustering of houses in areas such as Eravur Town, Koralaipattu (in Batticaloa) ensure that students in the GND have a school nearby to attend, this is not the case in DSDs in Monaragala and Mullaitivu, especially Medagama (in Monaragala) and Maritimé pattu (in Mullaitivu), where the wide population spread makes it difficult to have schools in each GND.

Further, the wealth indicator is not significant; however, children from households that own their current residential plot (another measure of wealth and influence) positively affects a child’s propensity to attend a secondary school in their own GND by 46%-47%. This implies that wealthier households—households wealthy enough to own their own plot and have a deed for it are able to send kids within their same GND. i.e. they live in wealthier GNDs with access to schools and other merit goods and infrastructure facilities.

Table 3. OLS estimates of access to formal and shadow schooling

	(1) Same GN school	(2) Tuition
Distance to town	-0.00218 (0.00388)	-0.00940* (0.00390)
Teachers available for all subjects		0.107** (0.0366)
Koralaipattu South	-0.127 (0.0892)	0.0976 (0.133)
Manmunai South West	-0.186* (0.0949)	0.198 (0.133)
Poraithivupattu	-0.398*** (0.101)	0.166 (0.135)
Badalkumbura	-0.374* (0.171)	-0.289 (0.165)
Madagama	-0.725*** (0.169)	-0.0735 (0.167)
Madulla	-0.547** (0.177)	-0.0286 (0.171)
Oddusudan	-0.229* (0.0903)	0.161 (0.131)
Welioya	-0.514** (0.180)	-0.280 (0.176)
Maritimepattu	-0.482*** (0.0868)	0.206 (0.128)
Male child	0.0258 (0.0305)	-0.0356 (0.0309)
Household size	0.00432 (0.00933)	-0.0104 (0.00899)
Number of children	-0.00211 (0.00971)	-0.00278 (0.00895)
Undocumented dwelling	0.494*** (0.144)	0.0484 (0.181)
Rental dwelling	0.117 (0.300)	-0.0538 (0.231)
Live for free	0.543*** (0.134)	-0.0456 (0.170)
Own without deeds	0.463*** (0.0963)	-0.0668 (0.150)
Own Dwelling with deeds	0.469*** (0.0934)	-0.0495 (0.146)
Tamil	-0.0634 (0.140)	-0.351** (0.132)
Muslim	-0.349* (0.173)	-0.430* (0.167)
Wealth class	-0.00445 (0.00458)	0.0246*** (0.00432)
Constant	0.479 (0.261)	0.866** (0.275)
Observations	1,132	1,060
R-squared	0.118	0.102

Note: Robust standard errors in parentheses, *** p<0.001, ** p<0.01, * p<0.05

Access to tuition is however primarily affected by wealth. The effect of wealth is positive and highly statistically significant at the 0.1% level, although the marginal effect of the coefficient is small (2% increase in tuition access

for an increase in wealth quantile). Surprisingly (or not so surprisingly), there is evidence that children who go for tuition come from congenial schools. I.e. children from schools where they had teachers for all subjects, were about 11% more likely to enrol in tuition, inferring that tuition is not a substitute for formal schooling but rather they supplement formal education (sometimes provisioned by the school teachers themselves). This effect is statistically significant at the 1% level. There is also evidence that Tamil and Muslim children were about 35-40% less likely to access tuition compared to Sinhala children. This may be partly explained by the deficiency of teachers in Tamil medium schools.¹⁵ The gender of the child, the number of children in the household etc. do not affect access to schools in the same GND or access to tuition.

3.2. Quality of education

Table 4. Distance to school and satisfaction with the quality of education provision

		<1km	1-3km	3-5km	5-10km	>10km
High satisfaction with quality of education provision	Batticaloa	57.34%	53.33%	57.14%	66.67%	33.33%
	Monaragala	45.59%	38.57%	32.73%	41.86%	60.00%
	Mullaitivu	41.91%	55.09%	47.92%	59.26%	62.50%
Medium satisfaction with quality of education provision	Batticaloa	38.99%	45.19%	35.71%	33.33%	66.67%
	Monaragala	41.18%	61.43%	63.64%	58.14%	37.14%
	Mullaitivu	55.15%	44.31%	50.00%	40.74%	37.50%
Low satisfaction with quality of education provision	Batticaloa	3.67%	1.48%	7.14%	0.00%	0.00%
	Monaragala	13.24%	0.00%	3.64%	0.00%	2.86%
	Mullaitivu	2.94%	0.60%	2.08%	0.00%	0.00%

This study uses perceived quality of schools as reported by secondary school students from the three focal districts. Table 4 indicates that students further away from schools (a proxy for remoteness—as secondary schools seem to be clustered in more urban areas) are happier with their current schools (except to some extent in Batticaloa)—a key reason for this is the benchmarking—rural students are likely to compare schools in their own GNDs and be more content with the provision of education; the same is not true for students in closer proximity of the schools. Therefore, perceived quality is not an objective measure of school quality but serves as an important user feedback evaluation tool. Students from Samurdhi recipient households (a proxy for being poor) were relatively less satisfied with the quality of the school education compared to non-Samurdhi recipient households (Table 5); the differences in means however are not statistically significant.

Table 5. Samurdhi recipient status and satisfaction with the quality of education provision

		Received Samurdhi	Did not receive Samurdhi
High satisfaction with quality of education provision	Batticaloa	54.70%	56.74%
	Monaragala	37.50%	43.46%
	Mullaitivu	55.86%	43.09%
Medium satisfaction with quality of education provision	Batticaloa	41.45%	41.01%
	Monaragala	58.52%	54.43%
	Mullaitivu	42.79%	54.70%
Low satisfaction with quality of education provision	Batticaloa	3.85%	2.25%
	Monaragala	3.98%	2.11%
	Mullaitivu	1.35%	2.21%

¹⁵ Based on discussions with Zonal Directors of Education.

Table 6 presents the OLS estimates of the satisfaction of overall school quality (columns 1 and 2), teaching quality (column 3) and sanitation facilities (column 4). In column 1, the specification uses the MSI wealth index as a proxy for income while column 2 uses a combination of independent variables that account for the type of toilet and whether the household borrowed for consumption as a proxy for income. Students in closer proximity to the school, i.e., those who go to a school in the same GND are less happy with all three perceived qualities of school provision (this conforms to the cross-tabulations above). More congenial schools (proxied by teacher availability for all subjects) result in higher student satisfaction. The largest contributor to school dissatisfaction in sanitation seems to be the District Secretariat Divisions they are located in. Students from Koralaipattu South and Poraitivupattu (in Batticaloa), Oddusudan and Maritimpattu (in Mullaitivu) and Madagama and Badalkumbura (in Monaragala) on average, reported much higher dissatisfaction with the sanitation facilities in the school. It is no irony that these DSDs are the 2nd, 13th, 6th, 9th, 16th, and 25th poorest DSDs in the island (out of a total 231). Wealth, whether measured by MSI or a combination of toilet type and indebtedness for consumption had no statistically significant effect on the perceived quality of education received in schools.

Table 6. Estimates of satisfaction of school quality

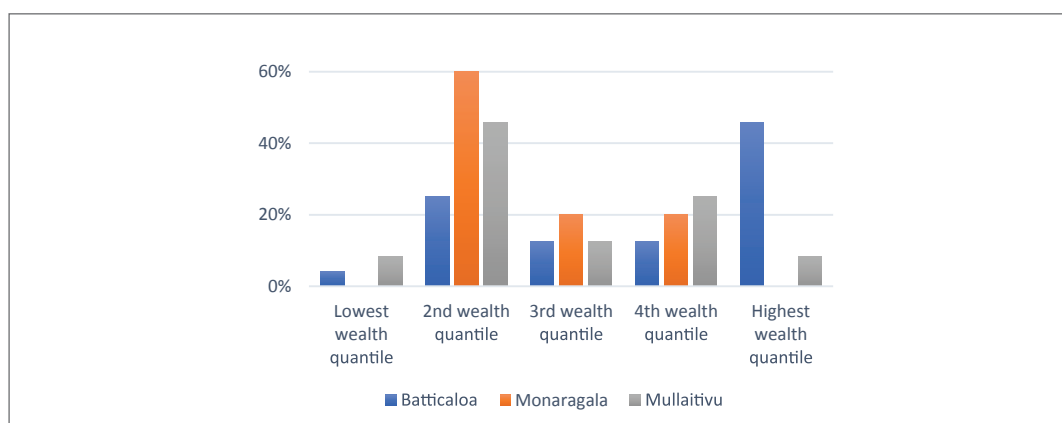
	(1) Satisfaction with overall quality of education	(2) Satisfaction with overall quality of education	(3) Satisfaction with quality of teachers in school	(4) Satisfaction with quality of sanitation in school
Same GN School	-0.154*** (0.0370)	-0.148*** (0.0364)	0.000623 (0.0363)	-0.109** (0.0389)
Distance to school	0.00587 (0.00794)	0.00739 (0.00784)	0.0140 (0.00755)	0.0129 (0.00855)
Teachers available for all subjects	0.152*** (0.0452)	0.158*** (0.0450)	0.271*** (0.0421)	0.152** (0.0481)
Koralaipattu South	-0.236 (0.144)	-0.269 (0.143)	-0.301 (0.169)	-0.384** (0.139)
Manmunai South West	0.0144 (0.147)	-0.0214 (0.143)	-0.177 (0.172)	-0.286 (0.152)
Poraithivupattu	-0.131 (0.152)	-0.160 (0.150)	-0.125 (0.170)	-0.366* (0.144)
Badalkumbura	0.00177 (0.202)	-0.0429 (0.195)	-0.232 (0.214)	-0.476** (0.171)
Madagama	-0.146 (0.208)	-0.174 (0.202)	-0.244 (0.218)	-0.573*** (0.173)
Madulla	-0.0924 (0.209)	-0.143 (0.203)	-0.156 (0.224)	-0.284 (0.181)
Oddusudan	-0.185 (0.144)	-0.232 (0.141)	-0.270 (0.168)	-0.365** (0.139)
Welioya	-0.167 (0.212)	-0.207 (0.206)	-0.273 (0.223)	-0.233 (0.187)
Maritimpattu	-0.0602 (0.142)	-0.103 (0.139)	-0.121 (0.166)	-0.352* (0.139)
Male child	-0.00241 (0.0366)	0.00252 (0.0357)	0.0290 (0.0348)	-0.0393 (0.0371)
Household size	-0.0177 (0.00929)	-0.0180 (0.00954)	0.000869 (0.00699)	-0.0120 (0.00833)
Number of children	0.0162 (0.0107)	0.0188 (0.0109)	0.00638 (0.0127)	0.0349*** (0.00855)
Undocumented dwelling	-0.0325 (0.264)	-0.0134 (0.266)	0.00288 (0.267)	0.273 (0.463)

Rental dwelling	0.518*	0.532*	0.388	0.361
	(0.252)	(0.259)	(0.239)	(0.461)
Live for free	0.0947	0.100	-0.0541	0.266
	(0.261)	(0.263)	(0.257)	(0.413)
Own without deeds	0.168	0.189	0.0811	0.422
	(0.242)	(0.244)	(0.240)	(0.409)
Own Dwelling with deeds	0.124	0.138	0.0581	0.350
	(0.241)	(0.242)	(0.238)	(0.409)
Tamil	0.157	0.161	0.185	0.118
	(0.160)	(0.156)	(0.163)	(0.132)
Muslim	0.123	0.0878	0.0652	0.102
	(0.208)	(0.201)	(0.215)	(0.173)
Type of toilet		0.0183		
		(0.0357)		
Borrowed for consumption		0.0397		
		(0.0346)		
Wealth index	0.000588		0.00190	0.000934
	(0.00153)		(0.00137)	(0.00145)
Constant	1.332***	1.284***	1.196**	1.059*
	(0.366)	(0.373)	(0.372)	(0.511)
Observations	1,030	1,071	968	1,004
R-squared	0.086	0.088	0.146	0.136

Note: Robust standard errors in parentheses, *** p<0.001, ** p<0.01, * p<0.05

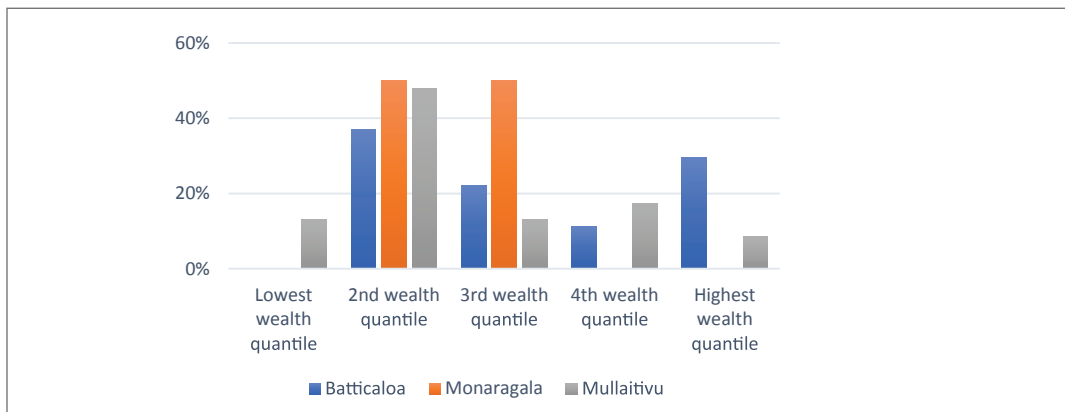
Interestingly, the CRC data also had information on discrimination and abuse self-reported by students. While these are not direct measures of quality of the education the child receives, they affect the quality of the experience the child has in school. Experiences of discrimination or abuse could scar a child and adversely affect their educational outcomes. Fortunately, the prevalence of both discrimination and abuse are relatively low (see Table 1). Cross-tabulations in Figures 25 and 26 indicate that children from relatively poorer households in Monaragala and Mullaitivu were more likely to report discrimination and abuse faced by them, compared to children from richer households. When the type and reasons for such discrimination and abuse were further probed in separate qualitative interviews with parents and zonal education officers, it was evident that most of this relates to bad behaviour of students in class, but some of it is related to parents not providing sufficient money/their labour for school activities and/or students not attending tuition classes conducted by the school teachers.

Figure 25: Wealth class and experience of discrimination



Source: CRC data

Figure 26: Wealth class and experience of abuse



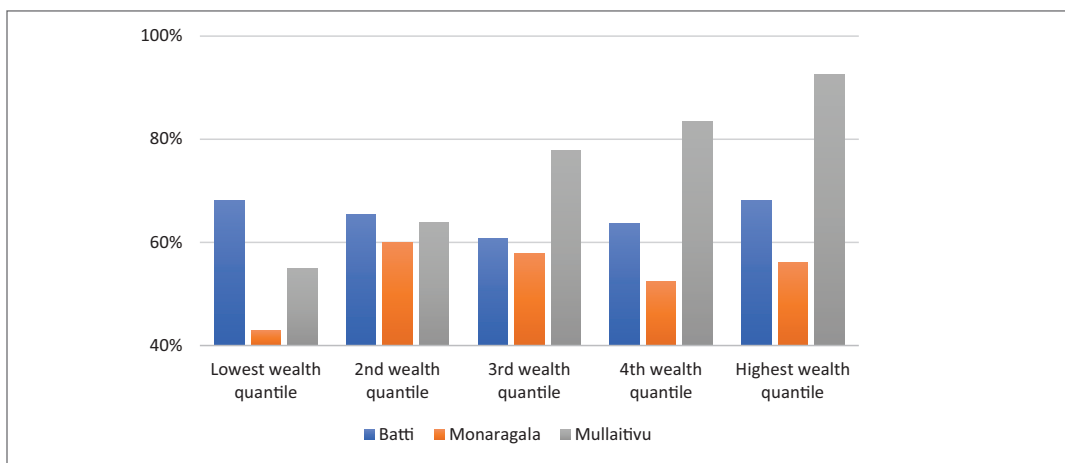
Source: CRC data

An OLS regression (not presented here for brevity) however, did not yield statistically significant explanations on what factors contribute to a child facing discrimination or abuse in school. Even wealth was not statistically significant. Unobserved variables such as a child’s behaviour in class, parental contribution to school ¹⁶ etc. among others, may therefore be more important in understanding discrimination and abuse in secondary schools.

3.3. Outcome

As discussed in section 1.2.3 students from these three districts perform poorly in their GCE O-Level and A-Level examinations and are also less likely to complete tertiary education. At the secondary schooling level in the absence of any standardised tests between the grades of 5 and 11, this report uses a student’s rank in his/her class as a proxy for educational outcomes. While this is a very rudimentary measure and does not make comparisons easier, for example, comparing being first in a remote Type 2 school to being first in a national school; intra class comparisons are still a useful way to identify whether more remote and poorer children from the same school and class have adverse outcomes. Cross-tabulations (Figure 27) of rank and the index do not yield any strong correlations (except in Mullaitivu); i.e. the wealth of the family does not seem to affect a child’s rank in his/her class (in Batticaloa and Monaragala). In Mullaitivu, there is a strong relationship between wealth and the child’s ability to be in the top-10 of his/her class. 93% of students belonging to the highest wealth class ranked 1-10, while only 55% of those belonging to the lowest wealth class could achieve this feat. Probing this relationship further, with additional covariates; the study uncovers interesting findings as evident in Table 7.

Figure 27: Wealth class and school class position/rank within top10



¹⁶ Since parents can also contribute their time and labour, it is not the case that poorer families are disadvantaged when it comes to parental contribution.

OLS Results from Table 7 indicate that children who came from more distant areas had poorer ranks (proxied by whether the child went to the same GND school).¹⁷ There is also indication that girls on average ranked 1.5 positions better than boys and those who were satisfied with the overall quality of education in the school ranked 1.5 positions better than those who were not satisfied. The most statistically significant covariate with the largest coefficient is tuition enrolment. On average, students who attended tuition classes ranked 3 positions better than students who did not go for tuition. While wealth does not directly affect a student's rank in school, it manifests through tuition. The fact that tuition plays an important role in determining the student's rank in a class also signifies the role of the shadow education system and how this widens the gap in education provision between the haves and have nots.

Table 7. Estimates of class-rank

	Rank
Same GN school	-1.753** (0.613)
Satisfied with educational quality	-1.469*** (0.530)
Koralaipattu South	-2.458 (1.870)
Manmunai South West	-2.026 (1.872)
Poraittivupattu	-2.182 (1.997)
Badalkumbura	-0.950 (7.510)
Madagama	1.269 (7.521)
Madulla	0.0594 (7.598)
Oddusudan	-0.505 (1.900)
Welioya	-4.132 (7.637)
Maritimepattu	-2.904 (1.810)
Male child	1.538** (0.554)
Household size	-0.00294 (0.100)
Number of children	-0.00207 (0.130)
Undocumented dwelling	2.225 (2.383)
Rental dwelling	0.683 (2.736)
Live for free	-1.127 (2.371)
Own without deeds	-0.747 (2.322)
Tamil	-1.107 (7.304)

17 Note: In this regression, a negative coefficient is preferred over a positive coefficient as a negative sign indicates an improvement in rank for example from 3rd to 2nd rank etc.

Muslim	-1.673 (7.544)
Wealth index	-0.0151 (0.0218)
Tuition	-3.050*** (0.631)
Constant	13.41 (7.909)
Observations	516
R-squared	0.152

Note: Robust standard errors in parentheses*** p<0.001, ** p<0.01, * p<0.05

The main results discussed in this section conform to patterns evident in section 1. Access to secondary schools is available across income quantiles, but geographic location limits the ease of access to schools. Access to tuition (the shadow education system), however, is dependent both on income and location. Quality of schools varies by location, specifically the DSDs, and there are no statistically significant differences in the access to quality education by income quantiles. Outcomes of education, in particular, the rank a child holds in his/her class depends on income (which manifests through access to tuition). There is a strong link between income and geography (and even ethnicity and geography), for example, geographical location may act as a proxy for marginalised communities, given the higher concentration of poorer and Tamil households in estate sectors in Monaragala.

4. Conclusion

Sri Lanka provides free education to children regardless of their gender, ethnicity, location or other circumstances. The state supplements free education with provision of free textbooks, uniforms, scholarships, mid-day meals (for primary children and some secondary children), subsidised transport and free insurance coverage. Sri Lanka thereby enjoys the highest primary (96%) and secondary school (87%) completion rates in South Asia. In addition to these, compulsory schooling policies ensure that more than 90% of the children now complete at least 9 years of schooling. Despite these achievements, there are wide differences in access to, provision of and outcomes of education (especially at the senior secondary and post-secondary education).

Results from this study indicate that wealth, remoteness, and the geographic location are primary drivers of educational inequality. Students from poorer households and DSDs have to travel out of their GNDs to access secondary schools and are less likely to access tuition. Given that tuition acts as an important shadow education system in Sri Lanka and tend to positively affect students' performance in their class, lack of access to tuition further disadvantages poor students. Students from the poorest DSDs go to schools with poor sanitation and in general, less congenial schools. The type of school the child attends is thus a function of the divisions between the wealthy and less wealthy students and differences between regions.

There is a need for state policy initiatives to focus on the prevalent educational inequality. Recent increases in the education budget as part of the fiscal policy are welcome initiatives that need to be accompanied with a disbursement formula that focuses on upgrading rural schools. Current expenditure, resource and teacher staffing patterns favour urban and elite schools which contribute to widening disparities in Sri Lanka. Given the importance of education for later outcomes in life, government focus should be directed towards early childhood education and senior secondary education to ensure that children receive sound basic education in an equitable manner. There is also a need for a scrutiny of the tertiary education system given the abysmal enrolment rates. Policy and implementation initiatives that focus on equalising provision of education in Sri Lanka will help curb inequalities.

Results from this study provide further insights into the disparities in education provision in Sri Lanka. The results align with those at the national level (section 1.2.) but also shed more light on facets of educational inequality at the district level. However, this study has several limitations. First, the inability to use household income and expenditure data to understand the nexus between income and educational inequality. Second, lack of analysis of interactions between covariates, such as gender and remoteness. Third, focus on rudimentary outcome variables and perception-based quality of education variables. Fourth, the focus on three of the poorest districts does not allow for comparison of inequalities with districts such as Colombo. Studies that are able to address at least some of these limitations will likely provide more nuanced findings that enable better understanding of the inequalities that persist in Sri Lanka's provision of education.

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The provision of education in Sri Lanka is largely led by the state. While the education system in Sri Lanka has ensured that almost no child is left behind in primary education, there are evident shortfalls in the secondary and tertiary education networks. Further, through evidence from schooling completion rates, type of schools available and performance on standardised national examinations, it is apparent that the Northern, Eastern and Uva Provinces are three of the most underperforming provinces in terms of education. This study explores the inequalities in the provision of quality education in Sri Lanka by focusing on the Batticaloa, Monaragala and Mullaitivu Districts in the Eastern, Uva and Northern Provinces respectively. The main results indicate that a child's ability to access a secondary school in the same Grama Niladari Division and access tuition is driven by the child's geographic remoteness and wealth. Wealth, through tuition, also affects a child's performance in class. There is also evidence that schools in these provinces are of a lower quality (physical resources, staffing etc.), are less likely to belong to the elite categories of schools (national, type 1AB), and have fewer qualified teachers. These inequalities in education perpetuate over a child's schooling years, resulting in widening of income inequality, and hindering social mobility. The study therefore highlights the need for action in reducing educational inequality.

