

**Educational Inequalities in Sri Lanka:
National Data and Local Perspectives on
Access, Quality and Learning Outcomes**

**Vengadeshvaran Sarma, Stefanie Licht
and Tushani Kalugalagedera**

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and Tushani Kalugalagedera**

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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) 2676 955, 4690200

Fax: +94(011) 2676 959

Email: info@cepa.lk

www.cepa.lk

Tushani Kalugalagedera is a freelance editor/researcher who has worked in the development sector for over 13 years. She received her Masters in Economics from the University of Colombo in 2008. Her main areas of interest are in sustainable energy and community based development and her previous areas of research include microfinance, social welfare and university education.

Stefanie Licht is a Monitoring and Evaluation Officer at the GIZ Education for Social Cohesion Programme in Sri Lanka. She received her Master of Science in Development Studies from Lund University in 2015. She is interested in conflict-sensitive programme monitoring and implementation of development projects as well as the nexus between education and conflict.

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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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
DOE	Department of Examinations
DSD	District Secretariat Division
ECE	Early Childhood Education
ECD	Early Childhood Development
EPDC	Education Policy and Data Centre
GCE A-level	General Certificate of Education, Advanced Level
GCE O-level	General Certificate of Education, Ordinary Level
GND	GramaNiladari Division
HIES	Household Income and Expenditure Survey
LFS	Labour Force Survey
MENA	Middle-East and North-Africa
MHNIM	Ministry of Health, Nutrition and Indigenous Medicine
MNPEA	Ministry of National Policies and Economic Affairs
MOE	Ministry of Education
MSI	Morris Score Index
NAR	Net Attendance Rate
NEREC	National Education Research and Evaluation Centre
NESR	Northern Education System Review
NGO	Non-Governmental Organisation
OLS	Ordinary Least Squares
PISA	Program of International Student Assessment
PIRLS	Progress in International Reading Literacy Study
PTSD	Post-traumatic Stress Disorder
SHN	Student Health Programme
SHPP	School Health Promotion Programme
SLIATE	Sri Lanka Institute of Advanced Technical Education
STEM	Science, Technology, Engineering and Mathematics
TIMMS	Evaluation of Educational Achievement's Trends in International Mathematics and Science Study
TVEC	Tertiary and Vocational Education Commission
TVET	Technical and Vocational Education and Training
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNICEF	United Nations Children's Fund
WIDE	World Inequality Database on Education
ZDE	Zonal Directors of Education

EXECUTIVE SUMMARY

Sri Lanka has had a history of educational policies driven towards providing universal access to education, which has helped the country to expand its access to education, especially for primary and junior secondary education. Yet, this expansion in access was not accompanied by similar quality improvements, with a recent World Bank study quantifying a 4.7 year learning gap for Sri Lankan students. Thus, schooling is not the same as learning in Sri Lanka. As unequal opportunities to access quality education translate into low learning outcomes, disadvantaged groups will face later life disadvantages, which manifest themselves in lower labour market returns and can be cemented through low social mobility.

Thus this study scrutinises the extent of educational inequality in Sri Lanka in terms of access, quality and learning outcomes and investigates which factors contribute to educational inequality on a macro and micro level. Secondary education is emphasised, as educational inequality starts to become more distinct at this point. The study is based on a discussion of the available literature, primary data from the ACTED-CEPA (Citizen Report Card) studies, qualitative interviews with key stakeholders and the Household Income and Expenditure Survey 2016. First, a national overview on educational inequalities is provided, before local dynamics and interdependencies in three district case studies are more thoroughly scrutinised.

The main findings indicate that poverty and rurality are key contributors to educational inequalities. Differences in the types of schools and their congeniality especially limit poor and rural children's learning and educational outcomes and potentially restrain later life opportunities. Data on the quality of in-school learning, like the teacher quality, relevant resource input, and effective school management are very rare. However, even with limited data availability, the educational quality gaps are distinct, especially between rural and urban areas and school types. This inequality of learning opportunities for the rural and poor translates into disparities in learning outcomes for these groups, visible in performance rates at national examinations and NEREC learning outcome assessments. While Sri Lanka is on the path to achieving universal primary and secondary enrolment across the island, evidence points to severe quality inequalities between rural and urban, and rich and poor areas. Conclusions drawn from the main results indicate the need for better data pertaining to learning outcomes and the quality of education that students receive in Sri Lanka.



CHAPTER 1: **INTRODUCTION**

Despite decades of boosting prosperity and reducing poverty, the world continues to be characterised by high levels of inequalities. Major studies indicate that due to rising inequality within countries, the richest 1% in the world captured twice as much growth compared to the bottom 50% since 1980, despite the fact that the poorer half of the global population has experienced significant income growth (Alvaredo et al. 2018) Currently the bottom half of humanity collectively owns less than 1% of the global total wealth, whereas the richest decile (top 10%) owns 88% of all global assets. When looking at the extreme rich, 42 individuals own the same as the bottom 3.7 billion people of the world population (Credit Suisse Research Institute 2017).

1.1 Dimensions of Inequality

Apart from the unequal distribution of income and wealth, inequalities manifest themselves in various other forms, which must be taken into account to understand the complexity of the phenomena. For example, across developing countries, the poorest children are four times less likely to be enrolled in primary school compared to the richest children (World Bank 2016). Rural women in developing countries are up to three times more likely to die during childbirth than women living in urban centers (UNDP 2018). Further, people living in conflict situations are four times as likely to lack basic drinking water compared to populations in non-fragile situations (WHO and UNICEF 2017).

The examples illustrate that inequality does not only have an economic dimension, it also relates (amongst others) to social, cultural, political, gender, spatial, environmental, and knowledge aspects. These varied forms of inequalities have multiple consequences and their interdependence makes it difficult to distinguish causes from effects. Moreover, context-specific dynamics play a role

in creating, maintaining and reproducing varied manifestations of inequalities in various regions. Nevertheless, certain universal patterns emerge, and it becomes clear that inequalities in various dimensions tend to associate with each other and that their impact accumulates (UNESCO 2016).

Inequalities are an inevitable characteristic of our world, as people differ in their talents, skills, personal choices and lifestyle. Inequalities only become a concern if they are perceived as inequities, as something unfair or unjust. Thus, discussing inequalities as inequities comes with a value judgement, which has to be made explicit (Stewart, et al. 2010). Hence, apart from choosing a dimension in which to investigate inequality (like income, education or health) the more fundamental question to address is 'inequality of what?' (Sen 1992). That means to decide which aspect within a certain dimension is scrutinised from an equality perspective. For example, when considering the dimension of education, is it desirable to achieve equal access to education (equal opportunities)? Or, is it desirable to achieve equally distributed learning outcomes across various groups? This consideration points to the fundamental conceptual distinctions between inequality of education opportunities and learning outcomes.

1.2 Defining Inequality – Distinguishing between Opportunities and Outcomes

At its core, inequality refers to the *uneven distribution of resources, like rights, opportunities or outcomes within a group of people* (Klasen et al. 2016). Equality of opportunities describes the idea that "all individuals should have equal chances according to their individual capacities, talents and merit, regardless of where they live, their socio-economic background, gender, origin, cultural identity and so on" (UNESCO 2016: 23). More radically, equality of *opportunities* would exist if "pre-determined circumstances [...] do not affect outcomes" (Stewart 2013: 9). Analysing inequality of opportunities illuminates the extent of inequity due to poverty, ethnicity, gender, location or any other personal circumstance beyond the individual's control. Equality of *outcome* instead describes the distribution of income, wealth, employment, health and learning achievements across a population ¹ (Klasen et al. 2016).

This distinction bears several important considerations. Firstly, even if the differentiation between outcome and opportunity seems subtle it is nevertheless crucial for understanding the reproductive nature of inequalities. The two aspects are intimately connected, as inequality of outcomes often leads to inequality of opportunities among the next generation, which again translates into unequal outcomes. If families' economic resources differ (inequality of outcomes), their children will face uneven conditions when starting their lives, like differences in access to quality education and health care, healthier diets or safer neighborhoods (inequality of opportunities). This influences the children's possibilities to amount economic resources throughout their life. Thus, the cycle of inequalities of outcomes and opportunities has to be understood not only through the transmission of disparities across generations, but also through the transmission of unfair (dis-)advantages from one generation to the next (World Bank 2016).

¹ Another less discussed dimension is that of equal *rights* for every human being. Yet, the mere existence of a right or law does not guarantee that it is implemented and fulfilled. For example, the universal right for schooling does not imply that every child around the world goes to school. A positive interpretation of the law involves an entitlement to the fulfilment of a certain right, whereas a negative interpretation describes the existence of law.

However, secondly, it is impossible to achieve equality in all aspects of human life, as “demanding equality in terms of one variable tends to clash – in *fact* and not just in *theory* – with wanting equality in terms of another” (Sen 1992: x-xi). People differ in their characteristics, like abilities, talents, and proneness to illness and so on. Even if two people have exactly the same opportunities, their differences will lead to non-identical outcomes. Additionally, people’s individual choices influence the course of their life and their well-being. A woman who earns less might be exploited or discriminated against based on her gender or she consciously decided to put less effort into her work and is not as productive as her peers. Hence, it is not only important to be precise about the particular aspect in which equality is discussed (equality of what?) but also to accept, that equality cannot and will not be achieved in all areas. Thereby, focusing on equality in one aspect might justify inequalities in other aspects (Klasen et al. 2016).

Lastly, even though the principle of equality of opportunity seems conceptually simple, operationalising it remains a challenge. Commonly used measures focus mainly on outcomes, which leaves a blind spot on the processes that have led to these results. Apart from the already discussed personal characteristics and individual choices a range of other factors influence people’s well-being. One important aspect is the level of *economic and social mobility* in a society. A highly mobile society is often seen as an avenue to long-term equality and efficiency while setting desired incentives and fostering aspiration and effort. In a highly mobile society a child’s economic status or educational level would be independent from its parent’s income and educational level and poorer households could migrate out of poverty (Rama et al. 2015). The extent of a person’s economic and social mobility, mediated through work and education opportunities, job transitions or options for migration, impacts the individual’s potential for accumulating economic assets or other outcomes related to health or educational achievements (Ferreira et al. 2018). Another factor affecting a person beyond their control and that infringes their well-being are *external shocks*, like natural disasters or economic recessions. This illustrates how difficult it is to conceptually distinguish and account for personal characteristics and choices as well as social mobility and external circumstances when operationalising equality of opportunities. Often identifying a relevant dimension of inequality of opportunity is only possible through scrutinising the distribution of outcomes while considering a range of factors and individual choices beyond equal access that influence well-being through a person’s life circle (World Bank 2015).

1.3 Why Does Inequality Matter

Inequalities are an inevitable part of our world, which affect individual and household behaviour, economic development, and the set up and functioning of social and political institutions. The underlying mechanisms and consequences of various forms of inequalities are debated across academic disciplines as well as in public and political discourses and so far no empirical consensus has emerged as the operationalisation, research designs and contexts are too heterogeneous. Consequences of inequality are not per se problematic and there are arguments stressing the positive effects, most prominently favourable incentive-structures that foster economic growth. Yet, especially large inequalities across several dimensions seem to amount to negative individual and societal effects.

Regarding the relation between *inequality, economic growth and poverty*, it is well established that on average, growth reduces absolute poverty while inequality slows down poverty reduction (World Bank 2016). Generally, if growth is accompanied by declining inequality it has the largest effect on poverty reduction. Moreover, stronger growth, falling inequality and initially lower inequality all promote higher absolute poverty reduction (Klasen and Misselhorn 2008). Scrutinising the *impact of inequality on economic growth* and the question if inequality infringes the size of overall welfare in a society, the correlations seems to be context-dependent. Neves et al. (2016) find that while some studies indicate a negative effect, others establish slightly positive links. Yet, the effect of inequality on growth seems to be negative and more pronounced in less developed rather than in richer countries.² These findings confirm that the context matters for the inequality-growth relationship. Firstly, inequality affects growth differently in developing and developed countries, indicating that different transmission channels exist in different settings. Secondly, country and regional specifics influence the relationship, suggesting space for policy influence. Thirdly, instead of trying to establish universal patterns of inequality, more attention should be paid to regional and local characteristics to understand the local dynamics and enable better informed policy decisions.

Moving beyond economic considerations, research on the interplay between inequality and broader political and social trends in a country provides similar inconclusive insights. Yet, one of the few well documented consequences of inequality are lower *public health levels* in more economically unequal societies. Even though the strength of the correlation varies depending on which health outcome to focus on, generally life expectancy, adult and infant mortality, mental illnesses and obesity rates are lower in more equal societies. Moreover, people living in regions with high income inequality have a higher risk of pre-mature death and display poorer self-rated health, independent of their socio-economic status, age or sex (Kondo et al. 2010).³ Another consensus regards the link between higher vertical economic inequality and increasing *crime rates* (Wilkinson and Pickett 2009). When considering horizontal economic inequality that coincides with high inequalities in other domains, the probability of *intra-state conflicts* rises significantly (Stewart et al. 2010). Moreover, inequality can govern the conflict dynamics, with strong grievances of the poor reducing the opportunity costs for joining or initiating a conflict and increasing incentives to use violence for economic gains, such as controlling resources or business opportunities (Rama et al. 2015). There is greater debate around the question if reducing economic inequality is conducive for *political and social stability* as well as inter-personal trust. This is connected to the poverty level in a country, with political instability being more likely to occur if economic growth and public policies have reduced poverty but have not addressed economic disparities (World Bank 2016). Additionally, inequality hampers the setup of functioning institutions. Through higher incentives for rent-seeking behaviour the *quality of public goods* is lowered, and if the rich have the option to opt-out of public services (like attending private instead of public health care) the quality of services is likely to deteriorate further (Rama et al. 2015).

² However, the inclusion of regional dummies, accounting for other regional factors apart from inequality, considerably weakens this effect (Neves et al. 2016, Neves and Tavares Silva, 2014).

³ Yet, the causality of the relation between income inequality and health outcomes is debated, with some researchers pointing out that controlling for individual income, education, race and region, lessens the effect of income inequality on public health, while at the same time not fully accounting for the observed link between self-rated ill health and societal income inequality (De Mario 2011).

So how does education fit into the picture? The multiple effects of economic inequality tend to be long-lasting and reproductive, as high economically unequal societies tend to have very low levels of social mobility. Even though education is seen as a strong driver of social mobility, this effect is hampered in unequal societies, where educational scores on average are less compared to more economically equal societies (Wilkinson and Pickett 2009). Education serves as a transmission channel for various forms of inequalities within and across generations. Depending on the design of the education system, it can widen or reduce differences between people and groups in a society. Hence, educational inequality appears to be both a consequence and catalyst for broader societal disparities, not just in economic terms, but also in regard to public health and well-being, civic participation and functioning institutions, quality of public services and public safety perspective.

Considering the negative societal consequences of (economic) inequality and education's fundamental role as driver and manifestation of these phenomena, the study investigates the extent of educational inequalities in Sri Lanka and explores factors that impact children's educational opportunities. Thereby, the study acknowledges the context-dependency of inequality and is in line with a global research shift towards regional and local trends, instead of searching for global inequality patterns. This allows for a better understanding of the interplay between different dimensions of inequalities and the local consequences arising from this. This work provides an overview of the Sri Lankan education system from early childhood education to tertiary level and highlights the inequalities in terms of access and quality of education that exist in different magnitudes throughout the system. However, its main focus is on secondary level education, due to data availability and as it is at this level that educational inequality starts to become more pronounced within Sri Lanka's official education system.

1.4 Educational Inequality in Sri Lanka – From Access to Quality

During the last three decades Sri Lanka expanded its access to education and achieved impressive literacy and nearly universal enrolment rates. The country's success in achieving the education related Millennium Development Goal of universal primary education way before 2015 is well-known internationally. However, according to the World Bank, while a child in Sri Lanka generally completes 13 years of schooling (pre-primary to secondary), when this is adjusted for quality of learning a child receives only an equivalent of 8.3 years of learning which amounts to a learning gap of 4.7 years. (World Bank 2018b). Evidently, schooling is not the same as learning for Sri Lankan children, with far reaching consequences. Apart from the intrinsic value of high quality education for all, Hanushek and Woessmann (2015) conclude that cognitive skills, not just school attainment, of the population are most essential to long-term prosperity and growth (Hanushek and Woessmann 2015).

Thus, Sri Lanka's rapid gains in enrolment have not been accompanied by similar improvements in learning levels, a pattern which is visible across the region. In South Asia, as in other parts of the world, the student's socio-economic background constitutes a strong predictor for his or her educational achievements. However, individual household characteristics only explain part of the observed variations in student achievement. In South Asia around one third to half of the variation can be attributed to school-specific quality factors like teachers or school resources – more than

in other parts of the world (Halil et al. 2014).

Moreover, educational inequalities and the associated limited social mobility have led to social unrest in Sri Lanka. Perceived inequitable access of Tamil youth to universities and subsequent limited labour market opportunities was one of the grievances that led to the near three decade long civil war in Sri Lanka (Little and Hettige 2013). The youth unrest in 1971 and subsequently in 1987-1989 was also a reaction to the widening disparity in opportunities for advancement, social mobility and employment between rural and urban youth (The Report of the Presidential Commission on Youth 1990). Therefore, (perceived) education equity bears a historical relevant for Sri Lanka.

Thus, the country provides an interesting case study for investigating the mechanisms that influence children's educational opportunities regarding access – but more importantly – the quality of education they receive. The case study highlights how structural disparities manifest themselves for various groups, and how they intersect with other aspects of marginalisation.

Research Questions and Methodology

In line with the above, this study addresses two research questions:

- (a) How equal is access to quality education in Sri Lanka?
- (b) What factors contribute to educational inequality in Sri Lanka?

The study uses a theoretical framework that hypothesises individual circumstances at birth and in-school learning quality contribute to structural inequalities in learning outcomes. Chapter 2 to 4 are based on the available academic literature and secondary data. Taking into account the contextuality of various aspects governing educational opportunities for different groups, chapter 5 uses primary data collected from the ACTED-CEPA (Citizen Report Card) studies, data from the Household Income and Expenditure Survey (HIES) 2016, and qualitative interviews with zonal education offices and parents, for three, more in-depth, district case studies.

Contributions and Limitations

It should be noted that this body of work does not provide a comprehensive look at educational inequality given that data on certain factors that may contribute to unequal opportunities, such as religious and ethnic considerations, as well as indicators to measure and compare the quality of education are not available. Instead, the study provides an overview of the inequality concerns in Sri Lanka, particularly for secondary education, summarises existing data, and highlights areas where further research is needed. Moving beyond schooling and focusing on learning, the study identifies vast data gaps concerning the quality of education in Sri Lanka. Moreover, the paper provides insights into educational inequality using a unique theoretical framework as well as through an empirical analysis (based on individual, household and geographical parameters) for the districts of Batticaloa, Monaragala and Mullaitivu.

Outline of Chapters

The next chapter delves into aspects of educational inequality, discussing global trends, its consequences and ways to operationalise and measure this phenomenon. The chapter introduces

a theoretical framework on educational inequality, which forms the basis of analysis throughout the rest of the chapters. Chapter 3 provides a historical background to the formation of Sri Lanka's current education system to set the scene for the case study. The existing educational inequalities in terms of access to education, provision of quality education, and educational outcomes (in terms of performance) are then explored providing a national overview in Chapter 4. After this macro overview, Chapter 5 provides a more in-depth local perspective at disparities in secondary education in the poorer and more rural districts of Batticaloa, Mullaitivu and Monaragala through an empirical analysis. This chapter analyses how personal, household and geographical circumstances contribute to the existing outcome heterogeneities in the education system. The final chapter concludes this study by discussing the extent of learning inequality in Sri Lanka and the main individual circumstances at birth that impact a child's access to a quality education, while also providing recommendations and areas for future research concerning educational inequality.



CHAPTER 2: **EDUCATIONAL INEQUALITY**

Stefanie Licht

2.1 Defining Educational Inequality

Education has long been recognised as a basic human right. It is a crucial requisite for individuals to live a meaningful life and to be productive, as well as for societies to thrive economically and socially. The importance of equal access to quality education has been emphasised repeatedly throughout international conventions and national policies. Both, the Universal Declaration of Human Rights and the International Covenant on Economic, Social and Cultural Rights state that education shall be equally accessible to all based on merit and individual capability. With the adoption of the Sustainable Development Goals (SDGs) and the SDG 4, equity in education has been put prominently on the international development agenda through ensuring “inclusive and equitable quality education and promote lifelong learning opportunities for all” (United Nations 2015: 17). Hence, access to quality education and subsequent learning outcomes should not be affected by individual circumstances beyond a person’s control like gender, birthplace, ethnicity, religion, wealth or disability.

Educational inequality has been examined from different angles, including inputs, processes, outputs and outcomes, assessing whole education systems or focusing only on the providers or learners. Within this study, educational inequality will be assessed along the three dimensions of access to education, quality of education, and learning outcomes. Access and quality aspects

concern educational opportunities, while student performances and skills are considered educational outcomes, which are (partly) the result of the opportunities students had. Access not only refers to the physical entry into a school building, but also to the learner's preparedness, the cognitive and social ability and readiness of the child to participate in the learning process when it enters primary school. The quality of education is assessed through focusing on in-school learning. This refers to the school's effectiveness in leading to a qualitative change in the knowledge and skills a student population acquired through education (World Bank 2018a). Learning takes place when several in-school factors⁴ are successfully aligned, most importantly qualified and motivated teachers, relevant school input and equipment, and learner-centred school management. Educational outcomes are student's performances displayed in assessments and tests.

As discussed in the previous chapter, differences in access, quality or other forms of educational opportunities can often only be derived from disparities in outcomes. Arguably, reaching total equality in the learning outcomes of every child is impossible, as differences in outcomes depend on individual differences in ability and talent, as well as personal choice and motivation. Yet, other factors influencing education outcomes, like the child's socio-economic background and the type of resources it has access to, translate into structural educational inequality. Therefore, when discussing equality in education, we are concerned with the way that an educational variable systematically relates to external individual circumstances, which in turn translates into different education outcomes. This implies that the study focuses on horizontal inequality along group-specific determinants like wealth, gender, religion, or location.

2.2 Global Trends in Educational Inequality

When assessing education related dimensions of well-being, despite strong regional and local disparities, a general global improvement can be seen. The global expansion of education has led to rising enrollment rates in primary and to a lesser extent secondary and tertiary education as well as increased literacy rates across the world. But despite global improvements some regions are lagging behind dramatically.

While nearly one-quarter of youth lacked basic literacy skills half a century ago, in 2016 less than 10% were not able to read basic texts. Adult literacy rates achieve nearly 100% in most regions, whereas South-Saharan Africa (65%) and South Asia (72%) stay behind. Up until today 20 countries have more illiterate than literate people and apart from Afghanistan, Iraq, and Haiti all these countries with a literacy rate below 50% are in Sub-Saharan Africa (UNESCO 2017). Enrollment rates in primary education also increased across the world, yet strong and persistent regional and in-country disparities remain, mainly linked to sex, location and household wealth. Whereas only 85% of primary-school-age children had been enrolled at the turn of the millennium, by 2016 92% of children of the relevant age group were enrolled. Yet, while nearly half of the countries have achieved universal primary education⁵, across low and lower-middle income countries the average level of primary school completion is still only 74%. The global

⁴ There are also external factors that are relevant for quality schooling, like education policies and community involvement but they do not form part of the study.

⁵ A net enrolment rate or net attendance rate of more than 95%.

decline of out-of-school ⁶ children has stalled since 2007 at around 58 million children of primary school age (about 6 to 11 years) and 63 million young adolescents of lower secondary school age (about 12 to 14 years) worldwide, mostly because governments are failing to extend opportunities to their most marginalised children (UIS and UNICEF 2015). In the lowest-performing regions, in West and Central Africa, more than a quarter of all primary-school-age children remain out of school (UNICEF 2018). Youth in conflict and war-affected areas account for over a third of all the out-of-school children and still girls remain disadvantaged with regard to access to primary education, particularly in Africa, the Middle East and South Asia (World Bank 2018a). Apart from conflict and gender disparities, a strong urban-rural divide can be observed as children from rural areas are almost twice as likely to be out of school compared children from urban areas. This intersects with economic disparities, as 93% of the children of the richest quintile attend primary school while only 70% of the poorest quintile attend school (UNICEF 2018). Moreover, even if the poorest children attend school, national and international learning assessments suggest that they consistently perform at lower levels than their richer peers (Rose et al. 2017).

Thus, while more and more children are attending school many of them drop out or fail to meet minimum learning standards. Even though the average low-income country is enrolling students in primary school at nearly the same rate as the average high-income country by now, huge differences in the quality of education exist. Preliminary findings of the most extensive dataset across developing countries to date - the Global Data Set on Education Quality – indicate that learning outcomes in developing countries are concentrated around the bottom of the global scale. Although the variation in performance is high within the developing countries, the top performers still often perform below the bottom performers of developed countries. Generally, less than 50% of students in developing countries reach the global minimum threshold of proficiency compared to 86% in developed countries (Altinok et al. 2018). Evidently, schooling is not the same as learning, thus when scrutinising educational inequality, enrollment rates only give a limited perspective. According to UNICEF, four out of ten children fail to meet minimum learning requirements at the end of grade four, worldwide. Especially developing countries are lagging behind with the lowest performance in Sub-Saharan Africa (UNICEF 2018). According to international student assessments of literacy and numeracy ⁷ on average students in low-income countries perform worse than 95% of the students in high-income countries. While nearly all primary school children of high income countries pass a minimum proficiency threshold for reading and mathematics in late primary school, this number drops to only 14% for low income countries and 37% for lower-middle-income countries. In addition, even in upper-middle-income countries only two-thirds of children reach this minimum proficiency. Again, slow learning intersects not only with poverty but also with gender and a rural-urban divide. Students often learn little from year to year which widens initial learning gaps and catching up is nearly impossible because of low-quality schools and poorly performing teachers in more marginalised areas (World Bank 2018a).

⁶ "Any children of primary or lower secondary school age who are not enrolled in primary or secondary education are considered to be out of school. This includes a small number of children in pre-primary education and in non-formal education" (UNESCO 2015: 21).

⁷ Progress in the International Reading Literacy Study (PIRLS) and the Trends in International Mathematics and Science Study (TIMSS).

That means, while access to schools has increased and socioeconomic disparities in enrollment have narrowed, gaps in learning outcomes and school quality have started to widen.⁸ Failing to provide learning for all, means that children who are already disadvantaged, whether because of poverty, location, ethnicity, or gender, fall behind even further. Thus, education systems can widen social gaps instead of narrowing them.

2.3 Consequences of Educational Inequality

In general, having more years of education is positively associated, among other benefits, with better health, more income, stronger economic growth, reduced maternal and child mortality, fewer disaster-related deaths, less conflict and increased civic engagement. Thus, expanding access to quality education for all bears tremendous potential for individual and societal well-being. But even if the overall positive aspects of longer and better schooling for all are well established, research on the consequences of educational inequalities (leaving some behind while others progress), particularly in developing countries, remains limited. The studies suggest that differences in access to quality education and wide disparities in learning outcomes are associated with a range of negative aggregate outcomes, like slower economic growth and higher risk of violent conflict.

Individual Consequences of lack of education & educational inequalities

Education levels are related to higher *income* and lower unemployment, which in turn constitute the main drivers for individuals to invest in education in the first place. On average, one year of education is associated with a 10% increase in wage earnings, with the returns on schooling being the highest in Sub-Saharan Africa (Psacharopoulos and Anthony 2018). For example, Ethiopia's success in poverty reduction was linked to expanding access to primary education, especially in rural areas. Rural households with a household head that had completed primary education were 16% less likely to be poor. The effect was even stronger when households complete secondary school. In Vietnam a similar pattern emerges. Household heads with lower secondary education were 24% more likely not to be poor, while the likelihood for families with the head completing upper secondary education was even 31% higher (UNESCO 2014). Hence, education is key for reducing poverty.

Additionally, education prevents the *inter-generational transmission of poverty*, as high levels of education amongst parents increases the number of years their children spend in school. Reviewing 142 Demographic and Health Surveys from 56 countries between 1990 and 2009 Bhalotra et al. (2013) find that for each additional year of the mother's education, the average child attained an extra 0.32 years of education, and for girls the benefit was even larger (Bhalotra et al. 2013). These findings are backed up by Abdullah, Doucouliagos, and Manning's insights that a more equitable distribution of education opportunities decreases income inequality by reducing the income share of the top earners while, at the same time, increasing the share of the bottom earners. This redistributive effect of education has been particularly effective in reducing

⁸ Yet, this trade-off between expanding access and maintaining a high quality of education is by no means unavoidable. In the 1950s the Republic of Korea started to focus on ensuring quality primary education while expanding access for the majority of its population, before shifting to a similar emphasis on secondary and tertiary education. This strategy yielded tremendous learning results while expanding access, which indicates that it is possible to ensure quality education even while rapidly expanding access to schooling (Lee and Hong 2016).

inequalities in Sub-Saharan Africa (Abdullah 2013). So, expanding access to quality education, particularly by reaching out for the most marginalised, is an essential condition for reducing the widening wealth gaps, increasing the social mobility of a society and alleviating poverty.

With regard to *health*, educated people are healthier, better informed about specific diseases and know how to prevent them. According to the World Health Survey, completing lower secondary school increases the probability of not reporting poor health by 18% compared with having no education. This is due to behaviour change, as more educated people tend to seek out and use health care services more often and more effectively ⁹ (Witvliet et al. 2012). Moreover, educated mothers tend to have healthier children, as the likelihood for seeking skilled birth attendance, providing healthier nutrition and ensuring vaccination is positively related to the level of schooling (UNESCO 2014).

Another consequence of depriving access to quality education is the diminishing effect on later *life opportunities*. In most societies, education paves the way for social upward mobility through better job opportunities and lower unemployment. Yet, research indicates that higher economic inequality in a society is associated with lower social mobility. And as high economic inequality correlates strongly with high educational inequality this creates a self-perpetuating cycle in which only the prosperous are educated and only the educated prosper, leaving little room for individuals to leverage education's promise for upward mobility. (Wilkinson and Pickett 2009).

Societal Consequences of lack of education & educational inequalities

Apart from individual consequences, quality education systems equip the *global economy* with skilled workers, expand knowledge, generate productivity and form the foundation of a prosperous, innovative and competitive economy. The link between education and growth is well established ¹⁰ and an increase in the average educational attainment of a country's population by one year increases the annual growth from 2% to 2.5% (UNESCO 2014). Hence, differences in the distribution of education levels within and across countries have consequences for local, regional and global economic growth patterns. For example, the difference of an average level of schooling of 2.7 years explains about half of the differences in economic growth between East Asia and Sub-Saharan Africa from 1965 to 2010. But not just across, also within-regions, do inequalities in educational attainment explain diverging growth patterns, like Castelló-Climent's comparative research on Latin America illustrates (Castelló-Climent 2013). Hence, widening educational inequalities within a region amplify widening regional economic gaps and perpetuate the negative effects of too extensive economic inequality discussed in section 2.3. Apart from slower economic growth, educational inequality lowers the tax base of a country, through lower income of the less educated, while at the same time costs for social benefits, like unemployment support, rise. Moreover, from an economic perspective, structural educational inequality (where a child's background determines their educational achievements) leads to a situation in which the optimal economic potential of a society remains under-utilised, as individual talents are not fostered based on merit (Wilkinson and Pickett 2009).

⁹ This is partly related to the former insight into higher income, as they can afford to spend more on health care.

¹⁰ For an extensive discussion see Hanushek and Woessmann 2015.

Moreover, education strengthens the *political development* of a nation by fostering civic engagement. People that are more educated tend to vote more regularly and participate more often in political activities. Education enables people to understand and engage in political issues and increases civic skills. Moreover, educated people tend to be more trustful and tolerant, a prerequisite for a peaceful society (World Bank 2018a). Hence, educational inequality is also a concern from a *peace* perspective, especially regarding horizontal inequality between groups. Perceived unfairness in access to education can reinforce disillusionment with the government and can lead to social disintegration. Excluding certain groups from quality education, e.g. discriminatory language policies, unequal public spending or unjust quotas, adversely affects academic achievements, educational aspirations and post-graduate opportunities of these groups. This discrimination within the education system will translate into later-life disadvantages and can lead to powerful grievances which fuel resentments and conflicts. A study of 55 low and middle-income countries between 1986 and 2003 found that if the level of educational inequality doubled, the probability of conflict more than doubled – from 3.8% to 9.5% (Østby 2008). The same is true of other forms of violence. An increase in the percentage of the male youth population with secondary education in 55 major cities in Sub-Saharan Africa and Asia from 1960 to 2006 was linked to a significant reduction in the number of lethal events (Urdal and Hoelscher 2009).

Overall education is at the heart of social transformation, as it has the potential to reduce poverty, empower people, improve public health, increase political engagement, strengthen trust and cohesion in a society, and drive economic growth. Thus, it can be the key to solving broader inequality related problems described in chapter 1. But to unlock education's potential inequality, concerns have to be addressed first, as structural differences in access and learning are evitable. Studies from India, Pakistan, Uganda, Tanzania and Kenya show that the learning gap between rich and poor children reduces significantly when poorer students are given the same educational opportunities provided to richer students. It is estimated, that a better and more-equitable education system can reduce about one-third of the initial poverty-learning gap (Rose et al. 2017). And results from the OECD's Programme for International Student Assessment show that the highest-performing school systems are the ones that allocate educational resources more equitably to under-performing schools (UNESCO 2014). Hence, progressive public policies and reforms offer a way to reach more equitable and inclusive education systems, which in turn positively affect larger societal challenges. It is important to keep in mind that no universal remedy for equitable education systems exist, as inequality patterns differ according to the context. This implies tailor-made policies and reforms which are based on solid and continuous empirical research. Therefore, it is necessary to unearth the determinants of structural educational inequality and the mechanisms that perpetrate its repetitive cycle within it's different contexts. The next section will review measurements of educational inequality and will specify how access, quality and outcome of education will be measured in the case of Sri Lanka.

2.4 Measuring Educational Inequality

As inequality is a complex phenomenon there are various ways of measuring it by applying different definitions or relying on numerous data sets or indicators. It is important to keep in mind that the choices regarding data sets and indicators are not neutral and impact the findings substantially. This explains why it remains a challenge to empirically establish inequality trends

over time. Before we turn to educational inequalities, a few general considerations and challenges for measuring inequalities will be discussed in this section.

Traditionally, inequality was measured in economic terms with a focus on *monetary indicators*, such as the distribution of income or wealth, thereby focusing on outcome inequality.¹¹ A typical challenge for measuring economic – or any other form of – inequality is the underreporting of the rich or better performing due to a low response rate and difficulties to properly assess their wealth. Moreover, because most (income) inequality metrics summarize the distribution into a single index, this value may shadow distributional changes which off-set each other (Alvaredo et al. 2018).¹²

Coming to terms with the complexity of the topic there was a shift from unidimensional to *multidimensional indicators* while also broadening the range of dimensions that were assessed. For example, the most common proxies for measuring the level of educational inequalities are enrollment and literacy rates and years of schooling. For quality of health, the life expectancy at birth, child mortality rate, and nutritional status are compared. But due to the context-dependency and importance of individual choices it is necessary to identify relevant attributes that reflect the heterogeneity of the individuals, households or countries when deciding which dimensions and aspects to compare. But apart from educational attainment and health status, which have been established as conventional parameters, no consensus on other relevant attributes exists. It remains difficult to find indicators that capture the overall non-monetary well-being of a population (World Bank 2015).

Apart from objective approaches, *perception-based* measures of well-being exist. This acknowledges that every person has his or her own understanding on what constitutes a good life and understanding the subjective self-assessment of well-being of different population groups can complement objective-based inequality measures (Rama et al. 2015). This subjective life evaluation is mainly captured through self-reporting.¹³ These indexes measure how satisfied individuals are with their lives, which then is ranked and compared across different groups. This reflects individual perceptions, which may or may not match an 'objective reality'. Regardless of this, the aspects people self-report are perceived as 'real' for the person in question and are crucial for understanding the socio-political impacts of these perceived inequalities (Stewart 2010).

Moreover, the *unit of comparison* is important when measuring inequality. So far, all presented approaches focus on vertical inequality, scrutinising the positioning of individuals or households. This means the units of comparison are ranked (e.g. from the richest to the poorest) to assess the relative or absolute inequality between them. Apart from this, inequality can be measured between groups of a society, which is called group-based or horizontal inequality. Thereby individuals or households are grouped and compared along politically relevant, salient distinctions or identity-groups, like religion, ethnicity or region. How to categorise people will be

¹¹ For a more in-depth debate on different monetary indicators see World Bank 2016, World Bank 2015.

¹² For example, from an economic perspective, a country experiences a decrease in poverty and at the same time a rise in the share of income going to the top 10%. The poverty alleviation would decrease the Gini, while the income accumulation at the top would increase the Gini. Both effects can balance each other out and result in a constant Gini, creating the impression that the income distribution has not changed, while in fact the middle class came under pressure (Alvaredo et al. 2018).

¹³ Like in the World Value Survey, the Eurobarometer or the Gallup World Poll.

context-dependent and should be sensitive to people's self-positioning (Stewart et. al. 2010). This approach relies often on the aforementioned perception-based measures of inequality, as self-identification and group-belonging are also subjective concepts.

Turning to education, within the literature there is neither consensus on how inequality in educational outcomes and opportunities should be measured, nor how education quality and performance in general should be assessed. As inequality in education can accumulate over time, measurements of differences in educational opportunities or learning outcomes should start in the earliest grades of a country's education system and if possible already in pre-primary education, to cover disparities in early-childhood development. Focusing only on a single level of education would ignore the process of accumulating disadvantage throughout the education cycle and at the transition points between different education levels (UNESCO 2018).

Constrained by data availability, early work comparing educational inequality across countries focused on attainment, like the number of years of schooling or the levels of education (such as primary, secondary, or tertiary) that were completed. Yet, both indicators only capture a limited aspect of educational inequality, as the value of one year of schooling is not the same across different countries (or regions within a country) due to quality differences between education systems and the importance of non-school factors influencing skill development (Hanushek and Woessmann 2015). Therefore, attention shifted to comparable tests on student performances. Over the last two decades, various identical cognitive achievement tests have been administered, most well-known the OECD's Program of International Student Assessment (PISA), the International Association for the Evaluation of Educational Achievement's Trends in International Mathematics and Science Study (TIMSS), and the Progress in International Reading Literacy Study (PIRLS). The tests are complemented by data on the student's family background and school information and thereby provide insights into the distribution of test scores across populations disaggregated into gender, wealth, rural-urban disparities, and socio-economic status. Yet, while these assessments provide extensive information regarding unequal outcomes, aspects like access and quality of schooling are often not the main focus of the analysis (Education Equity Research Initiative 2016). A second point of criticism is the limited availability and reliability of the data, as the studies mostly cover high and middle-income countries, thereby leaving a blind spot on the presumably under-performing low-income countries (UIS 2018).

Additionally, with the topic gaining prominence on the global development agenda, international organisations and initiatives like the United Nations Children's Fund (UNICEF), the United Nations Educational, Scientific and Cultural Organisation (UNESCO), the World Inequality Database on Education (WIDE), the Education Policy and Data Center (EPDC), and the World Bank started to collect education statistics disaggregated along different dimensions of inequality. These datasets aggregate their data from slightly different sources, like household survey, national and international assessments and population or school censuses. Apart from gender, rural-urban location and wealth, which are collected across all databases, various group characteristics according to the organisation's interest are collected. Due to this, the dimensions of inequality remain largely unstandardised across the different datasets (Education Equity Research Initiative 2016). Typically, the averages of the different population groups are compared, without using any explicit inequality metric standards. Coming to terms with the importance of intersectionality in inequality research, a slow shift is visible from the unidimensional definition of group categories to

overlapping group categories, which increases the empirical depth of these databases. Hence, for example, the multiple disadvantages faced by a rural girl from a poor family compared to a rural girl with richer parents can be scrutinised more thoroughly (Kaaber 2010).

The specific operationalisation of the three aspects – equal opportunities in terms of access and quality, as well as equal distribution of learning outcomes across groups – will be discussed in detail in chapter 5.

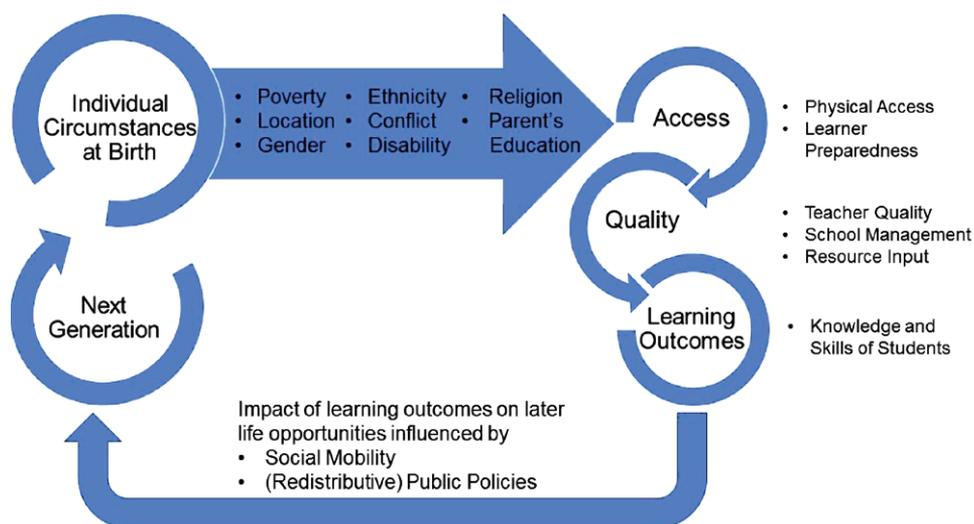
2.5 A Conceptual Framework on Educational Inequality – Uncovering Transmission Channels

With a closing enrollment gap but widening quality disparities it becomes necessary to understand the mechanisms behind educational inequality to formulate adequate policy responses. The opportunities children have in accessing quality education are governed by individual circumstances beyond their control. These unequal opportunities in turn lead to unequal learning outcomes, which, amplified or mitigated through wider societal aspects like social mobility and redistributive policies, translate into unequal opportunities along their life cycle and lay the basis for the individual life circumstances of their children. Hence, education systems and the structural inequalities they (re-)produce have to be understood within the larger society in which they are embedded.

Within this section the theoretical transmission channels of different individual circumstances which determine children's educational opportunities will be discussed. These individual circumstances intersect with each other, thereby amplifying or limiting the overall barrier children face when accessing quality education. It should be clear that the extent and impact of these individual circumstances is context-dependent and what is relevant in one context might not be relevant in another. Therefore, no exhaustive list of universal factors influencing equality of education can be presented, but the main aspects, established in the literature, are discussed and converted into a theoretical framework.

The framework distinguishes between education opportunities – access and quality – which lead to learning outcomes. Unequal educational opportunities in regard to access and quality manifest themselves in unequal learning outcomes. Access is understood in terms of physical access and learner's preparedness. Quality of education is understood as in-school learning by assessing the three main determinants for learning: teacher quality, school management and resource input. These insights are derived from the World Development Report 2018 of the World Bank. The framework addresses structural learning inequalities. Differences in student performance due to individual talent, skill or motivation do not form part of the framework.

Figure 2.1: Conceptual Framework for Analysing the Education-Inequality Nexus



(authors' own illustration)

Individual Circumstances Influencing Equal Access to Education

Access to educational institutions, addressing physical access and learner's preparedness, is the first barrier when talking about educational inequality. Access to education is affected by individual circumstances like living in conflict-affected areas, gender, poverty, location, parental education level, disability and ethnicity or religion.

Conflict-affected regions remain the large outlier in the global expansion of schooling. Children in conflict situations are more likely to be out of school, to drop out of primary school before completion, have higher gender disparities, and lower literacy levels than those living in non-conflict contexts (World Bank 2018a). For displaced children, the obstacles are even more significant, as only one out of every two refugee children has access to primary education, hence a refugee child is five times more likely than the average child to be out of school (UNHCR 2016). In emergency situations access is disrupted though unsafe (ways to and from) schools, forced migration, (forcefully) recruiting child soldiers, or rising poverty levels which push children out of schools. Apart from disrupting physical access, teacher absenteeism, lack of resources or the trauma from violence impede the learning process and the quality of education, which diminishes the likelihood of children to access or continue schooling even further.

Perceptions and traditions around *gender*, often combined with location, household income, and age is a second determining factor when assessing whether a child is in school or not. Out of the 58 million primary school children which are out of school, 31 million are girls (UIS and UNICEF 2015). Female gender roles are traditionally associated with taking care of the family and household duties, which do not necessarily require formal education. Moreover, in many cultures girls traveling on their own is perceived as unsafe or improper, making it harder for them to access schools which are not within the immediate vicinity. If a family has several children either favouritism or financial constrains often lead to boys being preferred over girls. Additionally, in

many countries the labour market is biased towards men, implying a higher and quicker return in terms of investment in education. Female enrollment rates tend to fall even more when they reach lower secondary school age, which coincides with puberty and the age to marry¹⁴, and plunge even further for upper secondary education (UNESCO 2015). Some girls remain far more likely to be out of school than others, as gender-related aspects often add up with other factors that prevent children from accessing education. Women from poor households in general, and the poorest girls in rural areas in particular, are the most disadvantaged in terms of access, as in more rural and poorer communities gender stereotypes which are unfavourable towards education tend to be more prominent.

Poverty remains another main variable affecting the likelihood of accessing schools. Children from poor families are less likely to start school and even if they enroll, poverty forces many children out of school and into employment. Only a quarter of the poorest children in low-income countries complete primary school and again this gap widens when disaggregating the data by gender. Due to the double exclusion from gender and poverty only 25% of the poorest girls in low-income countries complete primary education (World Bank 2018a). For poor households schooling requires trade-offs. Apart from direct costs, like fees, paying for books or uniforms, and transportation cost, indirect opportunity costs, like loss of employment-related income or work force, have to be considered. Especially in rural areas distance to the nearest school plays an important role for poor households when considering sending their children to school, even more if social norms or safety concerns make it difficult for children (particularly girls) to travel far from home (Heath and Jayachandran 2017). Another variable constraining access for poor children is the perceived return, either for the labour market or the 'marriage market'. The willingness to invest in educating their children will be lower if poor parents underestimate the returns of education and if the education quality is perceived as low (this will be discussed in chapter 5). This relates back to the decrease of education quality in conflict-settings (UIS and UNICEF 2015).

Poverty is strongly related with another determinant, the *parent's educational level*. As early childhood development is slower for children from poorer households, and poverty correlates strongly with educational level, this negatively correlates with student's enrollment and attainment rates. Especially children from non-literate homes need support to master the basic literacy and numeracy skills when entering schools and to catch up on already manifested disadvantages. Unfortunately, classroom overcrowding is at its worst in the early grades – and the most qualified teachers are typically deployed at higher grades (World Bank 2018a).

A fifth important individual aspect governing access to education is the location of the household and the severity of the urban-rural divide. Often students in remote areas have to travel further to reach schools, which leads to higher transportation costs. And even if a primary school is within close proximity, secondary or even tertiary education institutions are further away, sometimes requiring resettling permanently if the students from rural areas want to continue schooling (UIS and UNICEF 2015). Moreover, there are structural reasons for a rural-urban divide regarding education quality, which is discussed in the next sub-chapter.

¹⁴ Moreover, many girls are already married off as child brides, even before they have finished primary school.

The second aspects of access – *learner’s preparedness* – stems from the insights into the importance of adequate early childhood development (ECD).¹⁵ Before children enter primary school the way they have grown up affects their physical growth and well-being, brain development, cognitive skills, and socio-emotional development. Different outcomes of early childhood development are strongly related to the family’s socio-economic status and their location and many children from poorer backgrounds already face disadvantages when entering school. So even in a good school, deprived children learn less, as they enter school less prepared than their peers.

Preschool malnutrition, stunting and wasting has profound and irreversible damaging effects on language, memory and motor skills that enable effective learning. Various studies validate the importance of good child nutrition on lifetime learning and productivity and how birth weight and growth of children under two years are linked to later schooling outcomes (World Bank 2018a). In a cross-country study Rose et al. (2017) find that cognitive differences at the age of 5 are strongly associated with learning at age 8 and 12, which translated into limited opportunities in later life.

Low cognitive development in early childhood correlates closely with low socio-economic status as measured by wealth and parental education as well as with malnutrition. Parental illiteracy impedes children’s early reading, language and numeracy skills which form the basis for learning. These children struggle to make the transition to school and their parents struggle to provide support with homework (World Bank 2018a). Moreover, affectionate caregiver-child interactions impact the developmental process of a child and promote the growth of cognitive and socio-emotional skills. Yet, care-giving is influenced by the time available for the child, which might be less for poorer households. More resilient and healthier children will face less out-of-school days due to illness or other health related issues.

Early developmental shortfalls contribute substantially to the intergenerational transmission of poverty through reduced schooling, less learning and subsequent low productivity. Globally, for preschool enrollment the income or wealth disparity is greater than for primary school enrollment, indicating that wealthier children enter schools better prepared. Even though a pre-school child’s development is mainly the result of home activities and investments, research of the World Bank suggests that community and pre-school health and education programmes can enhance them, thereby providing space for policy interventions (World Bank 2018a).

Factors Influencing Learning Quality

The quality of education a child receives is influenced by the school the child attends. A high-quality school, in which children can learn and thrive, is characterised by skilled and motivated teachers, efficient school inputs (like equipment, infrastructure, instructional material, etc.) that facilitate teaching and learning, and a learner-centered school management (World Bank 2018a). If these factors are systemically unequally distributed, for example along spatial or wealth factors, this results in structural inequalities in the availability of quality education for certain societal groups.

Teachers are the most important school-level factor for effective learning, yet especially in rural and poorer areas they lack the skills or motivation to be effective. Studies find that a teacher can have

¹⁵ ECD covers the period from conception until a child is age 6 to 8, depending on the study.

a tremendous effect on a student's learning, with research from the U.S. indicating that students with a great teacher advance 1.5 grade levels within a school year compared to only 0.5 grade levels for students with an ineffective teacher. (Rockoff 2004 in World Bank 2018a). In developing countries, the effect between effective and ineffective teachers on student's performance seems to be even more pronounced (Bau and Das 2017). A teacher's qualification, teaching experience and teaching methods are profound factors influencing his or her effectiveness. Regarding formal teacher qualification, countries worldwide have set minimum qualification standards for teachers, yet many struggle to qualify enough teachers according to their national needs. And even though the teacher qualification standards for primary and secondary level are generally lower in Sub Saharan Africa than the rest of the world, this region struggles the most to supply enough qualified teachers (according to their national standards) (UIS 2006). But formally reaching minimum teacher qualifications is not the same as teacher's content knowledge and skills. In a global study on teacher supply and demand UNESCO found that in 14 Sub Saharan African countries the average grade 6 teacher performed not better on reading tests than the high performing students in that grade (World Bank 2018a). Regarding teaching experience, several studies (e.g. Bau and Das 2017, Araujo et al. 2016, Chetty et al. 2014) confirm that within the first two years of teaching the teachers skills and thereby the teacher-value added effect on student's learning are increasing significantly. That means especially a high staff turn-over of young and inexperienced teachers limits teaching quality drastically. Considering teaching methods, many education systems stress the importance of rote learning and teachers often spend time on lecturing, leaving little time for practical work or problem-solving. Additionally, teacher absenteeism and lost learning time (due to other school activities, like rehearsals and practices for extra-curricular events, or cleaning tasks) diminish the quality of schooling further and lead to teachers rushing through the curriculum (World Bank 2018a). Research from Bangladesh, Indonesia, India, Peru and Uganda found that on average 20% to 24% of primary teachers were absent from school during unannounced visits, with absence rates generally higher in poorer regions (Muralidharan et al. 2017, Chaudhury 2006). Teachers may perceive low efforts and absence as justifiable, especially when they completed the assigned curriculum or left the students with work to do and often feel they have little impact on poor children's learning anyway (World Bank 2018a). Yet, teacher absenteeism is also a school management problem, which will be explored further below.

A second variable determining quality of education is school input, like school books and accompanying teacher guides, but also functional facilities like gender-segregated toilets and furnished class rooms. Considering the expansion of education in many countries, especially in the global south, the resource input did not keep pace with the explosion in enrollment rates. An increase in student-teacher-ratio in many countries during the last two decades bear witness to this. Learners and teachers have a more productive relationship when they are supported by adequate learning materials and other inputs. But simply increasing the inputs does not improve the quality, if books, teacher guides, and worksheets do not reach the schools or are not used by the teachers and students. This relates to school management and the importance of school autonomy, as schools know best which educational material they need. Another relevant input is gender-specific toilets, which - relating back to access - considerably increased enrollment rates, but it is not clear if this increased learning (Adukia 2017).

The third important aspect governing the quality of a school, is effective school management and autonomous decision-making, which enables schools to efficiently respond to problems when they arise. A meta-analysis of 27 studies found that leadership which ensures a supportive environment, focuses on learning, teaching and teacher learning, as well as protecting teaching time from disruption which leads to higher educational outcomes (Robinson et al. 2008). School autonomy is strongly related to improving education's service delivery, but even though formally assigned, many principals and school committees shy away from exercising their authority (Bruns and Luque 2015).

The three quality determinants – teachers, input and management – are spread unequally within countries, and especially the rural-urban divide seems to affect the quality of education schools offer. On the one side, many rural areas have difficulties to attract and retain qualified staff, often employing younger and less experienced teachers. This leads to a high turnover, which in turn impedes the teacher-child relationship. Due to the staff shortage, teachers in rural areas often have to teach several subjects regardless of their qualifications and receive limited administrative and classroom support. A cross-country comparison by UNESCO showed rural schools in Sub Saharan Africa had significantly less qualified teachers that have passed the national minimum requirements compared to urban schools (UIS 2006). Rural schools which are unable to employ specialised subject teachers are unable to offer the same range of courses than urban schools. Rural students consequently have fewer opportunities to take certain courses, yet especially senior science courses are often required for enrolling in post-secondary education institutions. When rural schools do offer these courses, the lack of specialised teachers sometimes means that they are taught by non-science specialist teachers. As a result, rural students are limited in their ability to pursue certain areas of post-secondary education, so low quality in one educational level translates into access barriers for the next educational level. On the other hand, public spending often reinforces spatial disadvantages, with the best performing schools in urban regions cornering the lion's share of the budget. Rural schools are often less well equipped (furniture, educational material, ICT) and face larger resource shortages than urban schools (Canadian Council on Learning 2006).

2.6 Conclusion

Many countries faced an initial trade-off between increasing access to and improving quality of education, yet this phase has passed. Today, education systems across the world are characterised by narrowing enrollment gaps but widening quality and learning disparities. This “learning crisis” strikes poor and marginalised communities most severely, with individual circumstances at birth – like poverty, gender, and location – leading to lagging learner preparedness and restricted access to quality schools, resulting in low educational outcomes. The learning gaps for the disadvantaged starts early, even before primary school, and without affirmative interventions, widens throughout the school years. Hence, even though education systems have the potential to level the playing field for children from different backgrounds, they can also manifest and amplify existing inequalities between them.

Learning reserved only for the more fortunate has negative individual and societal consequences, such as slower economic growth, political instability, less civic participation, and lower public health. Moreover, individuals’ later life choices and opportunities are limited through low quality education and weak educational outcomes. Apart from this, equal access to quality education carries an intrinsic value for most societies in itself.

The mechanisms and dynamics of educational inequality are context-dependent, creating a need to better understand the interplay between individual circumstances and low-quality education at a local level, in order to determine what kind of reforms and inputs the specific education system needs. As an individual’s behaviour and aspirations are not just shaped by real but also perceived inequalities, subjective measures should be taken into account. The presented framework summarised the main individual determinants governing access to quality education discussed in the literature and reflects the growing understanding that learning has to be put at the centre of research on educational inequality. The framework will be applied to the Sri Lankan context in the next chapters.



CHAPTER 3:

SRI LANKA'S EDUCATION SYSTEM, HISTORY AND CURRENT STRUCTURE

Tushani Kalugalagedera

In order to apply the theoretical framework discussed in chapter 2 and examine educational inequalities in Sri Lanka, this chapter provides a historical background to the formation of the education sector in Sri Lanka and an overview of the current education system. Specific focus is placed on secondary education where educational disparities become more prominent in the country's public education system.

3.1 Historical Background of Education in Sri Lanka

In ancient times, Sri Lanka's education system evolved around Buddhist and Hindu temples, Pirivenas¹⁶ and Brahmin schools, with education limited to clergy and individual groups often from the upper echelons of society or castes (Prasangani 2014). In 1505, the Portuguese arrived on the island and captured the maritime provinces. Under their occupation education was placed in the hands of missionaries who established schools to propagate the Roman Catholic religion (MOE 2013). In these schools, the medium of instruction was in Portuguese and education was only available to those who adopted Catholicism (Baldsing 2013). Elementary education was provided to children in the parish while secondary school was reserved for children of Portuguese military, civil officers or local chieftains (MOE 2013). The Portuguese were succeeded by the Dutch in the

¹⁶ Pirivenas are monastic colleges for educating Buddhist monks.

mid-17th Century. The Dutch expanded the education system in the country in an attempt to support civil administration and trade. The school network was widened in the maritime provinces and education was made compulsory for boys up to the age of twelve and for girls up to the age of ten (Aturupane 2009, p.2).

British colonisation in 1815 led to Ceylon's education system being adjusted to cater to the needs and objectives of the new colonial administration. A dual system of education was formed with primary and secondary education being provided free in the vernacular languages for the masses and a fee levying English education accessed by well-to-do urban families (de Silva 2013). The vernacular schools were meant for the poor sections of society and had narrow literacy programmes while the English schools catered to a minority but had more resources, and provided a high quality education up to secondary level.

The Donoughmore Constitution in 1931 gave the country a large measure of internal self-government and universal suffrage. The Education Ordinance No.17 that followed in 1939 empowered the State Council and Executive Committee and paved the way for educational reforms, commonly referred to as the Kannangara reforms, after Dr. C. W. W. Kannangara who was Sri Lanka's first Minister of Education. By 1937, the existing education system had achieved only 39% literacy among the populace and 8% with some form of secondary education (Sedere 2005). Thus, universal and equal education provision were of paramount importance and reforms included the opening of the first university in the country, introduction of Central Schools and the passing of the Free Education Bill, with the aim of expanding access to different levels of education.

Central Schools were a third category of schools introduced to the education system in 1940- apart from the already established vernacular schools and fee-levying English medium schools. They were introduced with the aim of providing quality education to the less advantaged rural population and giving children access to free education in the English medium. This also paved the way for better access to university education, which at the time was conducted only in the English medium. Dr. Kannangara when addressing the State Council in 1944 with regard to Central Schools stated, 'For the sake of the poor children in these distant and far off places, whose parents cannot afford to send them to places like St. Thomas', Wesley, Ananda or Royal, let us establish these schools. Why should only the children in big towns – why should only they profit from higher education?' (de Silva 2013, p.150). English was an important qualification for employment in the civil service and for administrative appointments under the colonial system (Prasangani 2014). Thus, free access to an education in the English medium was viewed as a means of facilitating social mobility across the social tiers (ibid.).

The Free Education Bill passed in 1945 was one of the main catalysts for change in the education sector, making education free from kindergarten to university on the grounds of social justice and social efficiency (Sessional Paper XXIV 1943: Chapter XI: 64 – 66). Absence of equality of opportunity within the education system and inequality between the English and vernacular schools were of concern to the Special Committee on Education that drafted the Bill (Hansard 1944). Thus fees were abolished in state and state-subsidised educational institutions. Other reforms introduced while Dr. Kannangara held the education portfolio included a change in the medium of instruction to national languages (initially with Sinhala and Tamil being made the

medium of instruction in primary schools)¹⁷, changes to the curricular and the introduction of student welfare measures (e.g. bursaries for promising students from disadvantaged families and a free midday meal for school children) (MOE 2013).

A Grade 5 scholarship examination was introduced in 1948 to pick promising pupils from surrounding areas to go to Central Schools where they were provided with free board and lodging (Department of Examinations (DOE) 2015d; de Silva 2013). This scholarship examination continues to this day. Administered by the Department of Examinations (DOE), the examination currently selects high achieving, disadvantaged students for scholarships and selects the best students for highly ranked schools.

Denomination schools¹⁸ were taken over by the government in 1960 -1961 on the basis of developing a national system of education (MOE 2013). As a result, the majority of schools came under government control. The government also attempted to increase education accessibility for poor students by introducing more student welfare measures. In addition to the midday meal and scholarships, textbooks and uniforms were also supplied ¹⁹, school transport was subsidised by the government, and free medical services for children provided, including free dental care and spectacles for poor children (ibid).

National schools, currently considered the leading government schools in the country, became a category of schools in the 1980s and in 1985 the Education Ministry laid down the criteria for National Schools (de Silva 2009). Initially 18 schools were identified as meeting the criteria which included (among others) schools having; an enrolment of 2000 or more students with sufficient numbers in science, arts and commerce streams; a well-established collegiate section; Advanced Level (A-level) results indicating a certain academic standard; and generally accepted by the community as one of the best in the region (ibid.). The criteria was revised in 1990, and revisions included (but were not limited to) meeting facility and infrastructure requirements, A-level performance requirements and having 200 or more students in science GCE A-level classes (ibid.). Adherence to these criteria has reduced over time and the status symbol of National Schools has led to political interference²⁰ in the designation of schools as National Schools(ibid.). Thus, by 2017, 27 Type 1C schools (which do not offer science A-levels) and 3 Type 2 schools (with classes only up to O-levels) had been given National School status (MOE 2018a).

The education system has also been responsive to changes in the country's language policies over the decades. The Official Languages Act No. 33 of 1956 and Tamil Language (Special Provisions) Act (Sri Lanka Consolidated Acts 1958) meant that children were to be educated in their mother tongue (Sinhala/Tamil) [Martyn 2013]. Subsequently, the 13th Amendment in 1987 to Article 18 of the 1978 Constitution designated Sinhala and Tamil as national languages and English as the link language (ibid.). These policies resulted in an increase in the number of Sinhala and Tamil

¹⁷ Initially, Sinhala and Tamil were made the medium of instruction in primary schools with the option of continuing in English post-primary (de Silva 2013).

¹⁸ Denomination schools are schools associated with a particular religious denomination.

¹⁹ The supply of free textbooks was introduced in 1980 and free uniforms in 1983.

²⁰ Getting schools in an electorate upgraded to/recognised as a National school was a way of gaining political mileage (de Silva 2009)

language schools at primary and secondary education level and the commencement of university courses in the vernacular languages. By 2017, all government schools in the country had either Sinhala and/or Tamil as a medium of instruction with 778 out of the 10,194 government schools also teaching three or more subjects in the English medium for at least one grade (MOE 2018a).²¹

Table 3.1: Educational indicators 1940 – 2003/4

Indicator	1940	1960	1980	2003/4
Literacy	40%	72%	88%	93%
% no schooling	68	26	15	8
% with secondary education	11	27	42	62

Source: extracted from Sedere, 2005, Table – 1

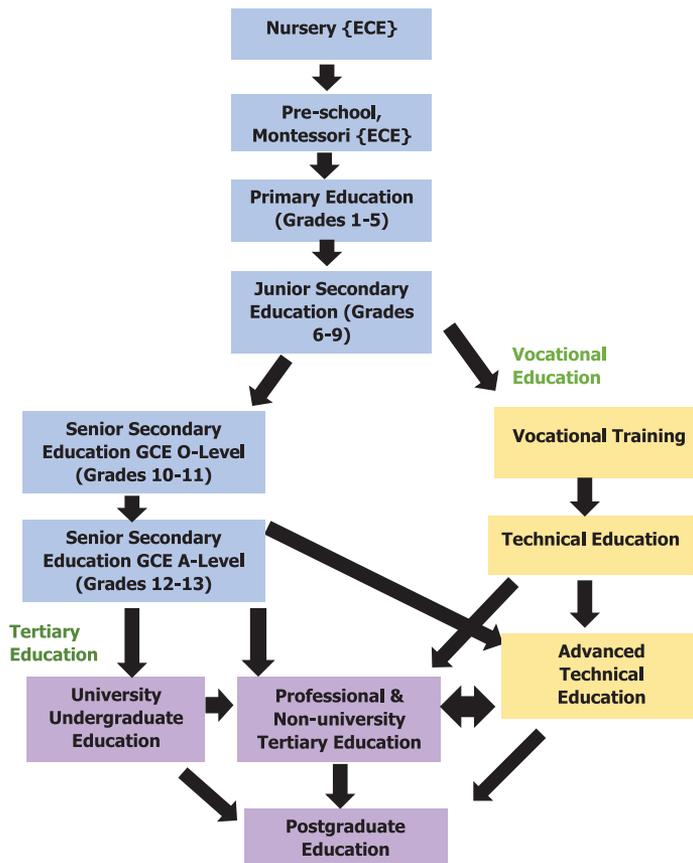
Education reforms were largely successful in improving access to education among the general populace post-independence (as shown through some socio-economic indicators in Table 3.1). However, efforts to facilitate the equitable distribution of educational opportunities, primarily by targeting rural schools for development, in the early 1990s, 1997 and 1999 were largely unsuccessful (Little 2011). School principals attributed the failure of the latter largely to shortcomings in administrative processes and human resources – for example teacher shortages, political interference in the selection of project schools, and poor supervisory and monitoring systems (ibid). Little (2011) states that political will across all stakeholder levels has an important role to play in the success of reforms, as in the case of the (largely considered) successful primary education system reforms involving curriculum changes and improved classroom facilities - the success of which was partly attributed to the President’s personal involvement in early policy formulation and implementation.

3.2 Sri Lanka’s Current Education System

After the above brief historical overview which highlights the government’s long-standing commitment to universal education, the current education system will now be scrutinised. This will help to contextualise the findings on educational inequality and to identify bottlenecks or factors that amplify or mitigate these inequalities.

²¹ For a historical perspective on Sri Lanka’s ethnic conflict including in the contexts of language politics and education politics refer Perera’s (2001) paper ‘The Ethnic Conflict in Sri Lanka: A Historical And Sociopolitical outline’.

Figure 3.1: The stages of education in Sri Lanka



Source: MOE 2013, 27

Sri Lanka consists of 25 districts which contain 98 educational zones. There are private and public institutions providing early childhood education (ECE), primary, secondary and tertiary education in the country.

ECE is a child's first introduction to the education system, and Sri Lanka recognised its importance as early as 1997 in the education reforms. However, enrolment of children into ECE institutions has been lagging. ECE, for children 3 to 4 years of age, is provided mainly through private institutions and lacks public investment by the government (Dundar et al.2017). Section 4.1.1 explores the resulting disparities in ECE access and attendance.

Primary education in Sri Lanka covers the first 5 years of schooling (Grades 1 to 5) while in government schools the secondary stage of education (Grades 6 – 13) consists of junior secondary and two senior secondary levels as shown in Figure 3.1 (MOE 2013). In 2017 there were 265 international schools, 80 private schools (36 fee levying, 44 non-fee levying), 26 special schools, 753 Pirivenas, and 10,194 government schools across the country. Despite this wide variety of schools, it is the government schools which cater to approximately 94% of Sri Lanka's primary and secondary student population (MOE 2018a).

Government schools are divided into two main categories, National Schools and Provincial Schools. National schools are recognised for providing the best primary/secondary education in the country and, as shown in Table 3.2, consist mainly of Type 1AB and Type 1C schools, with 91% being Type 1AB in 2017 (MOE 2018a). The prestige of these schools, better facilities, and their ability to offer more subjects for A-levels, with most offering continuous education from primary to secondary, has resulted in fierce competition to enter these schools. National Schools make up only 3.5% of the public schools and cater to 19.5% of the student populace. However, approximately 35% of the total general education spending goes mainly to National Schools (Dundar et al.2017) ²².

Table 3.2: Schools types and their student population in Sri Lanka, 2017

Type of school	Education offered	Percentage of total public schools (breakdown of national and provincial)	Percentage of student population
1AB	Grades 1–13 or 6–13, offer all three curriculum streams for the GCE A-level courses (arts, commerce, and science)	10% National Schools 323 nos. Provincial Schools 706 nos.	40%
1C	Grades 1–13 or 6–13, classes upto A' Level Arts and/or Commerce streams but no Science stream	18% National schools 27 nos. Provincial schools 1,791 nos.	25%
2	Classes up to grade 11 (GCE O-levels)	32% National schools 3 nos. Provincial schools 3,285 nos.	19%
3	Schools have classes from grade 1-5 or 1-8	40% National schools 0 nos. Provincial schools 4,059 nos.	16%

Source: MOE 2013, MOE 2018a

Government schools are also divided into four types which determine the subjects and grades covered, as shown in Table 3.2. Thus, Type 1AB schools cater to the most number of students even though they have the smallest number of schools. The demand for Type 1AB schools could be attributed to the fact that they offer science A-levels with some offering continuous schooling from primary to A-levels. Type 2 and 3 schools make-up over two thirds of the schools in the country but they do not offer A-level education and their combined student population is less than that of Type 1AB schools. The implications of the geographical spread of these different school types and the implications for student-teacher ratios are further explored in Chapter 4.

Entry to Grade 1 in government schools depends on a point based entry system, with the main conditions for admission being the proximity of the applicant's residence to the school (50% of marks), and whether the child's parents are Past Pupils (25%) and if their siblings attend the school (15%)[MOE 2018b]. There is scarce research on the impact of these conditions on school access. A possible area of future research could be whether these conditions, especially regarding proof of residency and property ownership, disadvantages children in low income families from entering leading schools in their education zones.

Within the education system there is a shortage of trained teachers, particularly in certain subjects. Teacher training takes the form of pre-service training (training prior to recruitment

²² National Schools are managed and financed by the MOE while Provincial Schools are managed and financed by the Provincial Councils (Dundar et al.2017).

as teachers) and in-service training (training while teaching). The opportunity for degree level training is limited with only two of the universities in the country having a faculty of education and only three universities a department of education. University teacher education programmes offer little or no real classroom level experience and equip graduates with limited competence in science, ICTs and other subjects not offered by the Faculty of Arts (Sethunga et al. 2016). Eighteen National Colleges of Education also provide pre-service training (which includes an internship) and produces diploma holders qualified to teach at either primary or secondary levels. However, these colleges lack adequate resources, have weaknesses in their enrolment processes and lack coordination with other educational institutions (ibid.). In-service training is provided by several institutions – universities, the National Institute of Education, Teacher Training Colleges and Teacher Centres. Pre-service and in-service teacher training programmes in the country are insufficient to cater to the demand in schools, resulting in an inadequate number of qualified and trained teachers being produced.

The shadow education system of tuition is flourishing in Sri Lanka, with parent's sending their children for private tuition from as early as primary school in the hopes of giving their child an edge in the competitive education system. Parents are willing to pay fees for their children to attend private tuition classes after school or on weekends, particularly in preparation for qualifying for national school examinations such as the Grade 5 scholarship exams, GCE O-levels and GCE A-levels. With the private tuition system in Sri Lanka unregulated and classes varying from one-to-one instruction to group/hall tuition classes (Pallegedara 2011) it threatens the equity of the schooling system, aspects of which are described in Box 1 in Section 4.3.

University education is often a young adult's exit point from the education system, however in Sri Lanka, the majority of students do not enter university after their A-levels. Sri Lanka has 20 universities, with 15 coming under the University Grants Commission. The expansion of the primary and secondary education sector has led to an increased demand for university education, a demand with which the public university sector is unable to cope. In 2017, only 19.1% of the 160,517 students eligible to enter university were admitted (Central Bank 2018). The remaining majority have a choice of entering a foreign university if they can afford it, entering a private institute in Sri Lanka, or joining the labour force (Wijesiri 2017).

After Grade 9 children also have the option to opt out of the university stream and engage in vocational education which would result in them obtaining an advanced technical education and either entering the non-university or professional tertiary education. The Technical Vocational Education sector issues national certificates, diplomas and bachelor degrees in applied disciplines.²³ In 2015 there were 417 training providers registered under the Tertiary and Vocational Education Commission (TVEC), the apex body in the sector, and 44,148 National Vocational Qualification²⁴ Certificates were issued (TVEC 2017). Students can also follow advanced technical courses after passing their A-levels under the Sri Lanka Institute of Advanced Technical Education (SLIATE) [MOE 2013]. There are also higher education private institutions which are often affiliated to foreign universities or offer professional courses (such as CIMA).

²³ Sectors covered include (but are not limited to) agriculture, construction, education, and manufacturing (TVEC 2017).

²⁴ National Vocational Qualification is a quality assurance qualification system and can be awarded only by training courses accredited to the TVEC (TVEC 2017).

3.3 Conclusion

Sri Lanka's education system is the result of historical processes and policies specially focused on reducing inequality of access and learning outcomes for poor and rural children. While many of these early policies are still being implemented today their effect has been diluted over time due to various changes within the system, for instance in terms of resource allocation and politicisation. The categorising of schools as National and Provincial point to existing inequalities in the education structure as does the limited access and high competition to enter the 'good schools' which threaten equity. These inequalities are explored further in the next chapter.



CHAPTER 4:
**EDUCATIONAL INEQUALITY IN SRI LANKA –
A NATIONAL OVERVIEW**

Tushani Kalugalagedera and Vengadeshvaran Sarma

Sri Lanka's Free Education Bill and national policies to provide universal and equitable education for all has resulted in the country achieving impressive educational statistics, as shown in Table 3.1. However, there remain inequalities in education provision which will be explored in this chapter based on the theoretical framework set out in Chapter 2 focusing on three main areas: access (learner preparedness and physical access), quality (learning process) and learning outcomes (academic performance). These areas will be discussed in relation to a child's individual circumstances at birth, in terms of gender, economic, ethnicity and spatial dimensions.

4.1 Equal Access to Education

While the number of primary and secondary schools in Sri Lanka have increased over the decades, access to a quality education throughout a child's schooling years remains a challenge for children in certain communities. This section focuses on factors affecting a child's access to education, in terms of physical access and their learner preparedness. Factors affecting learner preparedness include a child's health and his/her capacity and willingness to attend school.

4.1.1 Learner preparedness and early childhood development

The initial years of a child's health and development are a crucial start to their progress in life, and similarly their progress through the education system. As stated in Chapter 2, disparities in early

child health can be an initial factor leading to, and reinforcing, inequalities in school access and performance. Improving a child's health and nutrition improves that child's cognitive abilities and better early childhood nutritional status has a significant positive impact on test scores (Wisniewski 2009). Similarly, the early childhood development (ECD) that a child receives improves his/her socio-emotional skills outside the home environment and equips the child with pre-literacy and maths skills, preparing the child for formal schooling from Grade 1 onwards (DCS & MHNIM 2017).

Health and early childhood development

In Sri Lanka, parental income and education levels impact the health of the child. According to the Demographic and Health Survey 2016 (ibid), 17% of Sri Lanka's children under 5 are stunted (short for their age), 15% are wasted (thin for their height) and 21% are underweight (thin for their age)²⁵. There was an inverse relationship between the occurrence of stunting and wasting and the mother's level of education attainment and household wealth. In addition, a higher percentage of children are stunted or underweight in the estate sector than in urban or rural areas of the country, with Nuwara-Eliya District having the highest percentage of cases. Children under 5 who were categorised as wasting were highest in Monaragala (25%), Mullaitivu and Hambantota (22% each). Iron intake, which is essential for cognitive development, was higher among children in urban areas and among older mothers, richer households and mothers with high levels of education. In addition, in households where the mother had no education a child was more likely to suffer from acute respiratory infections, fever and diarrhoeal diseases²⁶ (DCS & MHNIM 2017). This link between a child's physical health and household wealth and the parent's educational levels could translate to disparities in the learner preparedness of a child, with ill-health resulting in absence due to sickness and poor attention and performance in class.

Apart from physical health, mental health issues in children can impede their overall wellbeing and academic performance. The Sri Lankan populace has experienced a unique set of stresses brought on by decades of civil strife and natural disasters such as the tsunami in 2004. Children in former war-torn provinces in the country are particularly vulnerable. For instance, Catani et al.'s (2008) survey of 296 Tamil school children in the North-Eastern Province, found that 82.4% of the children surveyed had experienced at least one war-related event and 95.6% reported at least one negative experience out of the family violence spectrum. Post-traumatic stress disorder (PTSD) was prevalent among 30.4% of the children and 19.6% of the children interviewed met the criterion of major depression and 22.6% reporting past periods of suicidality (ibid.). In addition, the competitive Grade 5 scholarship examination has been shown to create stress among students, with the level of stress and associated negative mental health impacts varying according to the parents' education levels and attitude (Peiris, cited by Daily Mirror 2015). Research is lacking on whether mental health issues, related to educational stresses, disproportionately affects children from marginalised communities.

School Health and Nutrition Programmes have been recognised as a means of effectively 'levelling the playing field' for all children, particularly for the more vulnerable and poor, helping to reduce

²⁵ At the other extreme, obesity and diabetes are on the rise in Sri Lanka. Drake et al. (2014) state that Sri Lanka is in the process of a 'nutrition transition' where there are extremes of both excess and deficiency.

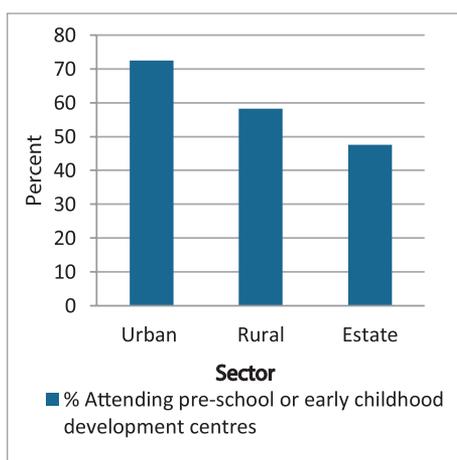
²⁶ Against traditional patterns of positive association the higher the education level of the mother the less likely a child under 5 years of age was to be vaccinated. (DCS and MHNIM 2017).

disparities (Jukes et al. 2008). Sri Lanka started a Student Health Programme (SHN) as far back as 1918, and the present programme is run by the Ministry of Education, Educational Services and Health and includes dental clinics, school medical inspections and school feeding programs (Drake et al. 2014). The School Health Promotion Programme (SHPP) also includes psychosocial interventions that focus on the Northern and Eastern Provinces as well as initiatives to improve health education and life skills and improve water and sanitation facilities and hygiene practices (ibid.).

Early Childhood Education

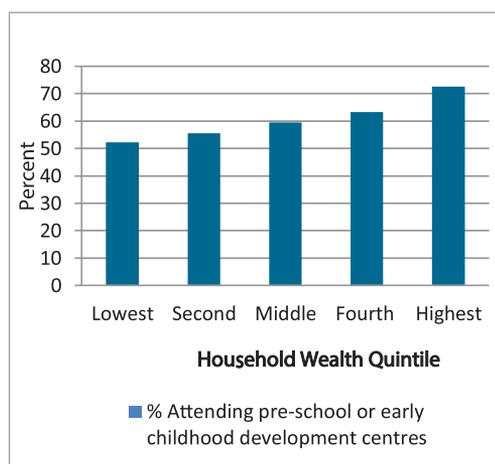
From a very early age children in Sri Lanka experience disparities in their education, starting with their ECE. Only about 60% of children access pre-schools and early childhood development centres in Sri Lanka (DCS & MHNIM 2017). Primarily provided by private institutions or NGOs, there is little or no regulations and set learning outcomes. Children’s attendance in pre-school or ECD centres show vast differences, with attendance among rural and estate children significantly lower than that of urban children (see Figure 4.1). This disparity in attendance may be due to the lack of ECE institutions in rural/estate areas and the lack of importance given to ECE by parents. State provision of ECE is minimal, which may explain why children from wealthier households are more likely to obtain ECE compared to children from poorer households or marginalised communities (see Figure 4.2). There is currently a lack of data on the quality of ECE that is available in Sri Lanka and how disparities in ECE access may impact future learning outcomes.

Figure 4.1: ECD attendance by sector, 2016



Source: DCS & MHNIM 2017

Figure 4.2: ECD attendance by wealth quintile, 2016



Source: DCS & MHNIM 2017

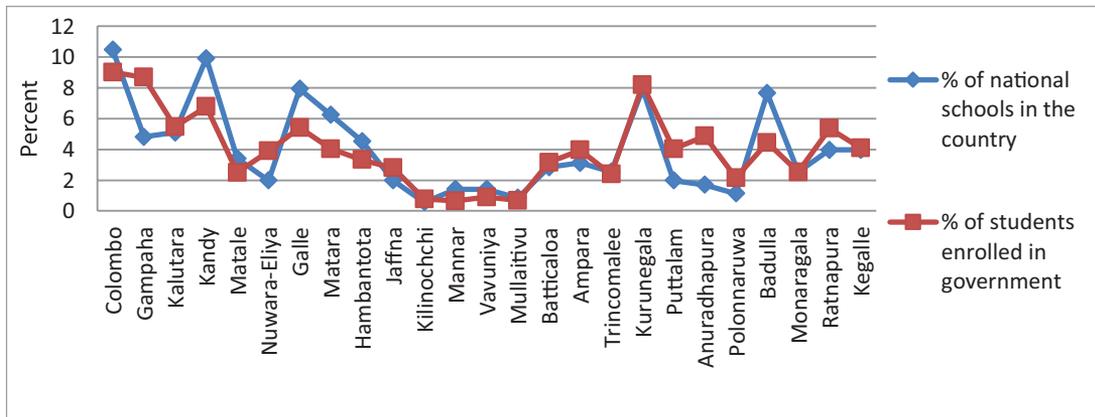
4.1.2 Accessing different types of schools

As described in Chapter 3, Sri Lanka has two main categorisations for government schools; National and Provincial Schools, and Type 1 (1AB and 1C), 2 and 3 schools. The distribution of

these different types of schools is explored in this section and shows how access to different categories of schools and the educational experience they provide is dependent on a child's place of residence.

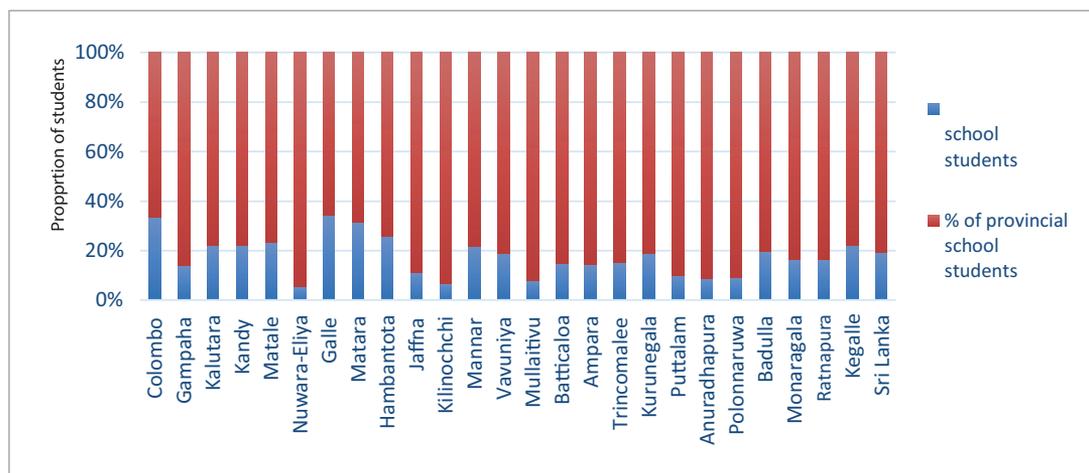
Figure 4.3 provides an initial overview of the distribution of National Schools countrywide compared to the countrywide distribution of student population in government schools, with districts such as Gampaha, and Anuradhapura showing the most shortage from this perspective. However, it is important to note that the mere equal distribution (in number) of National Schools to student population is not enough to ensure equal access to these schools. Geographical spread, terrain issues, school capacity and the proportion of rural students in the district are also important factors in access. These spatial disparities can lead to differences in enrolment rates. For instance, as shown in Figure 4.4, 16/25 districts have less than 20% of their students enrolled in National Schools. While over 30% of the student population in Colombo, Galle, and Matara are enrolled in National Schools, in districts such as Nuwara-Eliya and Killinochi enrolment rates drops to 5% and 7% respectively (MOE 2018a). According to Figure 4.3 Killinochchi has a proportionate number of National Schools to its student population; however, the wide geographical spread of the district and given that most students are in rural areas results in the district having a low student enrolment rate in National Schools.

Figure 4.3: Total student population in government schools compared to National school distribution, 2017*



Source: MOE 2018 *does not take into consideration the size of the school(s).

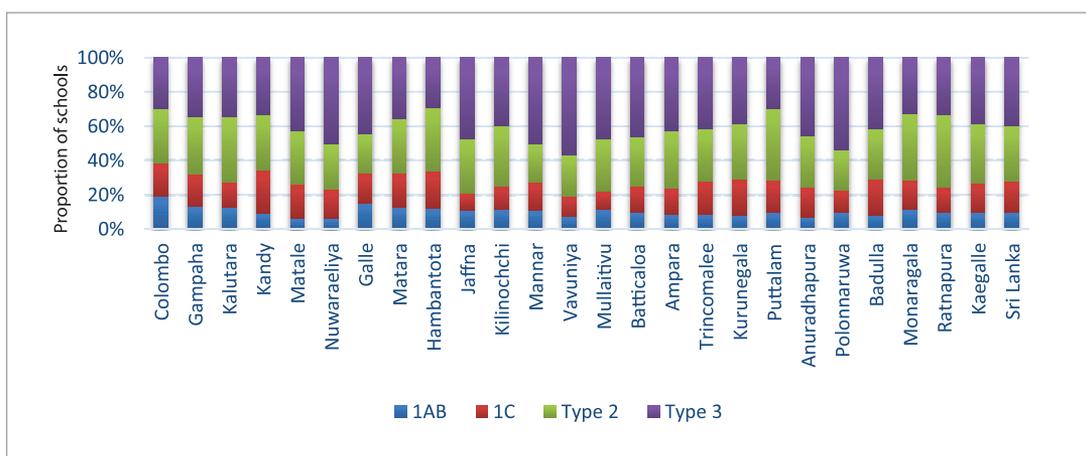
Figure 4.4: District proportion of National vs. Provincial school enrolment, 2017



Source: extracted from Sarma 2018, based on MOE School Census 2017 (MOE 2018)

In addition to the inequitable distribution of National Schools among districts, there is also a disparity in the distribution of school types (as shown in Figure 4.5). In Sri Lanka, 19/25 districts have less than 30% of Type 1AB and Type 1C schools combined. i.e. there are several districts where more than 2/3rds of the existing schools do not even have Advanced Level on offer (Sarma 2018). In areas such as Monaragala, Anuradhapura and Puttalam, children from rural areas find it difficult to access schools due to the large geographical spread of the district, where the distance to secondary level schools increase(ibid.). In these areas, school attendance is more reliant on access to reliable public transport. Further, in the Northern Province 50% of the schools do not have classes beyond Grade 8 (ibid). This makes access to secondary schooling extremely difficult for children in more remote locations.

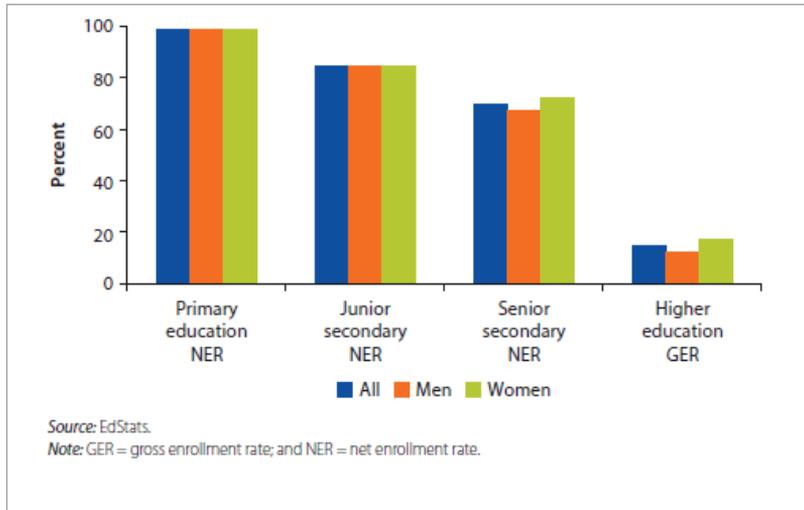
Figure 4.5: Type of school by district, 2017



Source: Sarma 2018, based on MOE School Census 2017

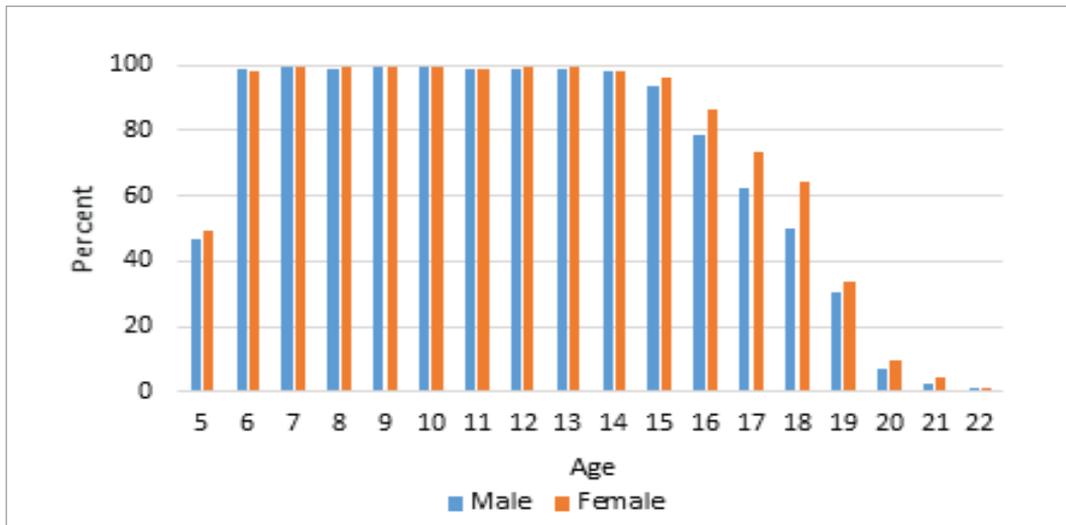
4.1.3 Enrolment and attendance

Figure 4.6: Enrolment rates by Education Level, 2016



Source: Dundar et. al. 2017, Figure 0.1,p.3, based on EdStats

Figure 4.7: Age specific school attendance rates, 2016



Source: DCS & MHNIM 2017, Figure 3.4, p. 32

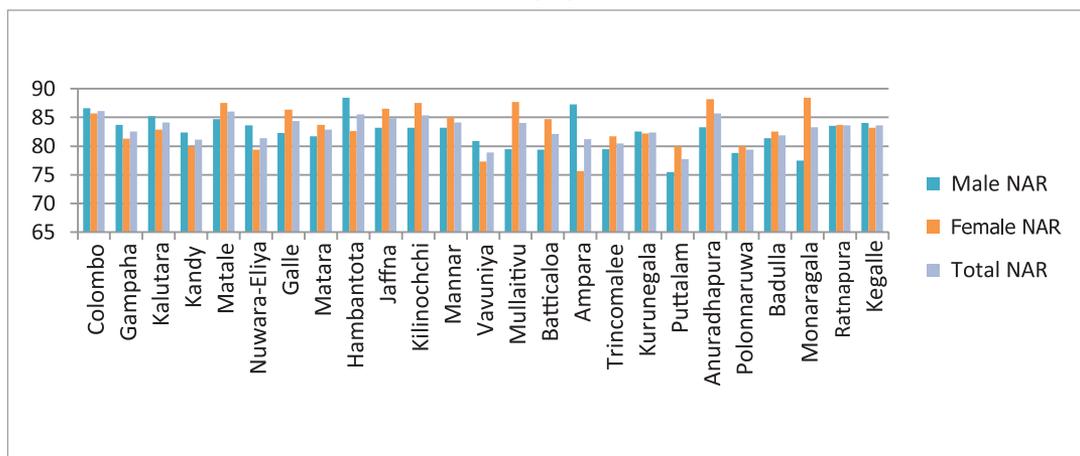
Sri Lanka has achieved enrolment rates of 99% for primary, 84% in junior secondary and 70% in senior secondary education with near gender parity in enrolment rates across the different education levels (Dundar et al. 2017). However, the progressive drop in enrolment and attendance rates across education levels, as shown in Figures 4.6 and 4.7, are an indication of the difficulties children face when accessing and remaining in senior secondary and tertiary education in the country. Children from ages 15 –17 years, and more boys than girls, have a higher drop-out rate or do not enrol in senior secondary education, reasons for which are explored in this section.

Low enrolment rates at university level may mainly be linked to the limited student intake capacity of universities.

Aturupane (2017) states that one potential reason for a higher drop-out rate among boys at secondary and higher education levels is early employment opportunities in the informal sector. There is a general preference in the labour market for men over women, with more males than females in the labour force with an educational attainment of A-level or less (Arunatillake 2017). This increases the opportunity cost of boys staying in school when they could already be entering the labour market. Social and cultural influences may also play a role, with teachers and parents perceiving boys as naturally smarter than girls, requiring less oversight and not requiring as much education to have good employment opportunities (Aturupane 2017).

The high overall enrolment and attendance rates seen at primary and junior secondary education levels mask the existing gender and district imbalances in attendance. As shown in Figure 4.8, at junior secondary level, Puttalam and Vavuniya districts have the lowest attendance rates. The net attendance ratios (NAR) of females in Mullaitivu and Monaragala are 8.2 and 10.9 points higher respectively than of males, while in Ampara District male attendance is 11.7 points higher than females. To understand these heterogeneous gender imbalances specific socio-economic, spatial, and cultural aspects of the different districts have to be taken into account and this could be an area for future research. (Mullaitivu and Monaragala districts are scrutinised more closely in Chapter 5.)

Figure 4.8: Junior secondary male and female net attendance ratios across districts, 2016



Source: DCS & MHNIM 2017

At senior secondary and higher levels of education, the educational inequality based on income levels become more significant and are reflected in the enrolment rates across economic groups. In 2010, the net enrolment rate at senior secondary level among the lowest economic quintile was 29% less than that of the highest quintile (84%) (Aturupane et al. 2014). In the same year enrolment in higher education programmes dropped to 4% for the lower quintile compared to 24% for the highest quintile (ibid.). Thus, children from lower income households are more likely

to leave the education system at an earlier age (often after completing their junior secondary level of education) and not continue onto higher education.

In Sri Lanka, a child's early exit from the education system could be linked to the income generating potential of his/her parents which in turn is linked to their parents' education levels. Children in households where the head of the household had passed O-level or above are less likely to be engaged in work related activities (DCS & MNPEA 2017). In addition, a person's earning capacity is positively associated with their levels of education attainment (Aturupane 2012). Thus children of parents with low education levels are more likely to be in low income families and are more likely to engage in work related activities, which can impact their continued enrolment, attendance and performance at school.

The intergenerational transmission of schooling (i.e. education levels across generations) reproduces and cements schooling disparities over time, with more educated parents tending to invest more in their children's education than less educated parents. However, Aturupane and Deolalikar (2011) state that the intergenerational transmission of schooling is observed in Sri Lanka at a diminishing rate, suggesting that the determining effect of a parent's schooling on their child's schooling in Sri Lanka has reduced over the last decades and across groups. This may be due to the introduction of compulsory education and the expansion of the primary and secondary education system.

Despite this progress, income concerns continue to affect school attendance with household expenditure on education increasing over the decades, placing a larger financial burden and a higher opportunity cost on low income families of sending their children to school. Household education expenditure has increased from a monthly average of LKR.632 in 2006 to LKR.2,066 in 2016, an increase of approximately 227% (DCS 2008, DCS 2018). The majority of the 63,414 working children in Sri Lanka who are not attending school are aged 15 to 17 and from rural areas (DCS & MNPEA 2017). Zonal officers in the impoverished districts of Batticaloa, Mullaitivu and Monaragala have suggested that the provision of a mid-day meal for secondary school children would likely improve attendance among children from poorer households, relieving them of the financial burden of providing one meal²⁷ (Sarma 2018). All the above, highlight the link between income concerns and the continued challenges faced by children from low income and disadvantaged families to continue their education.

In connection to these income concerns, the continued enrolment and attendance of a child in school is also linked to how valuable education is perceived by students and parents. According to the Child Activity Survey 2016, the largest portion of children not attending school in the country are in the 15 to 17 age group²⁸ and almost one fifth of them (71,139 children) cited disinterest in education or not considering education valuable as a reason for non-attendance. Almost one third of the non-attending children in the 12 to 14 age group (5,240 children) cited these same reasons for non-attendance, implying that the disenchantment students have with the education system starts from junior secondary years accompanied by any financial burdens or

²⁷ The MOE provides midday meals to all students in schools with less than 100 students, while for schools with more than 100 students meals are provided to students from Grade 1 to 5 (Drake et.al. 2014). The MOE also has a milk programme where a child receives a glass of milk or yogurt. The United Nations World Food programme provides meals for students in the Northern Province, Grades 1 to 9.

²⁸ Over half were waiting for O-level results or for A-level classes to commence.

employment opportunities they come across (DCS MNPEA 2017). This in turn negatively impacts their decision to remain in school after the compulsory schooling years. Whether their decision to not attend school is directly linked to the quality of education offered is difficult to assess due to the lack of data (in terms of the types of schools these children used to attend and the education opportunities in their area). It was also highlighted that in age groups 5 – 11 and 12 -14 years, 14.1% and 30.9% of the non-attendees respectively stated disability as the reason for not attending school. Therefore, the lack of adequate facilities to cater to special needs of children with disabilities is also a concern.

From the above it is evident that while near full enrolment and attendance rates and gender parity exist at primary and junior secondary levels (all be it with district disparities), there is a sharp drop in these rates and an increase in overall gender disparities at senior secondary and tertiary levels. This fall in enrolment and attendance is linked to income concerns (and related parental education levels), as well as student and parent perception of the value and quality of education provided.

4.2 Quality of Education

The heterogeneous characteristics of schools across the country has meant that not all children have access to the same quality of education. This section explores quality through factors affecting a child's learning process, with regard to the type of school, teacher quality, school facilities and resource management.

4.2.1 Type of school

In Sri Lanka, the type of school attended can play an important role in determining the quality of education a child receives. As shown in Table 3.2 the subjects and grades covered vary with school type, as do the facilities provided. Thus, disparities in the distribution of school types described in Section 4.1.2 translate to an inequitable access to a quality education.

National Schools are recognised for providing the best primary/secondary education out of the government schools and their disproportionate distribution can lead to spatial disparities in educational quality. The resource inequity in education (in terms of human, financial and institutional resources), as described in Chapter 2, favours National Schools. For instance, Table 4.1. depicts how National Schools have more IT facilities, libraries and science teachers compared to Provincial Schools. National Schools are located in urban areas, with 54% located in the Western, Central and Southern Provinces and the highest numbers of Type 1AB National Schools located in the Western, Southern and Central Provinces. With children from the rural sector making up an estimated 77.7% of the country's children (DCS MNPEA 2017), it can be surmised that a large proportion of the country's children do not have access to recognised quality education schools near their place of residence.²⁹

²⁹ It should also be noted that the quality of some National Schools may also be sub-par, as stated in Section 4.1. For instance, in Badulla District the number of National Schools increased from 1 in 1992 to 27 in 1994 but it is unclear if all these schools met the criteria of a National School (de Silva 2009).

Table 4.1: Resource distribution among National and Provincial schools, 2012

School type	No. of schools	%of students enrolled	IT labs (% in school category)	IT teachers	Libraries (% in school category)	English Teachers	A/level science teachers
National	342	19.7	78.30	153	97.95	3,185	2,519
Provincial	9563	80.2	31.31	869	54.68	17,229	1,937

Source: extracted from Ranasinghe et al. 2016, Table 13,22& 24 based on School Census 2012

The presence of certain categories of Type 1AB, 1C, 2 and 3 schools in a district results in district disparities in the quality of the educational service and opportunities provided as well as impacting a students' subject choices from secondary schooling to university. In 2017 the MOE conducted a quality assessment of almost 2/3rd of the schools in the country, based on student achievement, learning and teaching assessment, curriculum and resource management. While the majority of schools in all 4 school types were rated satisfactory or above, the percentage of Type 1AB, 1C, 2 and 3 schools which required development/immediate development were 6.1% (46 schools), 7.7% (118 schools), 12.2% (318 schools) and 11.7% (288 schools) respectively (MOE 2017).

The majority of schools do not offer A-level, and even fewer science A-levels, which speaks to the inequality in the comprehensiveness of education offered. In Sri Lanka, different A-level subject combinations are required to access different university degree programmes. For university entrance into the biological science and physical science streams, in the year 2017/2018, students must meet A-level grade requirements in science subjects (such as biology, physics, chemistry and mathematics) [University Grants Commission Sri Lanka n.d.]. As Type 1AB schools are the only schools in the country to offer science A-levels, the presence of such schools in a district affects the number of students from that district entering university in the science streams. For instance, Killinochchi, Mannar, and Mullativu districts, each had only approximately 1% of the country's Type 1AB schools in 2015 and had no students entering university via the science stream on merit in 2016/2017 (MOE 2015, Central Bank 2018). Given that university course choice can impact career choices and life opportunities in adulthood, limitations on subject choice at secondary education level can have far reaching consequences.

4.2.2 Teacher quality

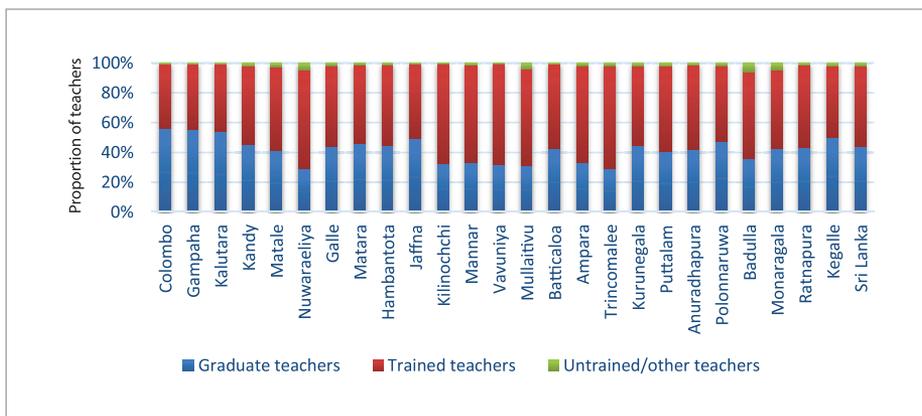
In Sri Lanka a professional qualification is not a compulsory requirement for teacher recruitment and there is no consistently implemented policy on teacher recruitment (Sethunga et al. 2016). Inequalities exist in terms of staff distribution and teacher quality - from their experience and training to the types of subjects they can teach (ibid.). While student-teacher ratios show that Type 1AB schools have a higher ratio (21 students per teacher) than other categories, the data does not indicate the quality of the education provided (MOE 2018a). Type 1AB schools attract more qualified teachers and are generally equipped with more facilities, thus the education experience students have in these schools may be superior to that provided in schools with lower student-teacher ratios.

Disparities in the distribution of qualified teachers across the country exist with the Nuwara-Eliya District and most of the districts in the Northern Province having high percentages of untrained/

trained/other category of teachers (refer Figure 4.9). The teacher requirements of the schools are often ignored when recruiting untrained teachers and teachers are recruited to districts on 'the basis of difficulty service'³⁰ by the Ministry of Education and the Provincial/Zonal Educational Departments (Sethunga et al. 2016). Some teachers use political and other influence to transfer to a school of their preference (ibid.).

Districts that produce fewer graduates (such as Nuwara-Eliya and Mullaitivu) have fewer graduate teachers (often teachers prefer to work in the home district/province), continuing the cycle of inequality in access to quality teachers by geographical location. Even within a province or district, there can be significant differences in the proportion of *qualified* teachers (i.e. graduate/trained), with rural areas likely to attract fewer graduate and trained teachers than urban areas due to difficult conditions and lack of amenities.

Figure 4.9: Teacher qualifications by district, 2017



Source: Sarma 2018, based on MOE School Census 2017

The distribution of teachers in schools compared to student numbers also vary significantly. In 2017 there were 262 schools with 15 students or less and 54 schools in the country with only one teacher (23 of which were in Jaffna and Vavuniya) [MOE 2018a]. Out of the 54 one-teacher schools, five had one student and one school had 101 (or above) students. This clearly highlights the poor management of teacher resources in the country.

This disparity in distribution is also reflected in children's access to teachers who cover certain subjects. There is a shortage of teachers for English, Science and Math subjects (Ranasinghe et al. 2016). Ranasinghe (2016) states that by 2012 there were 205 students per English teacher. Teacher absenteeism magnifies these issues, with teacher leave days averaging 15% of total working school days and student achievement being low in schools where the days of leave taken by teachers is high (IPS 2017). Thus disparities in the range of subjects provided, teacher quality and presence in schools can impact students' education experiences.

This above analysis of teacher quality is limited by the lack of publicly available data; data such as teacher quality distribution across different school types (national/provincial, type 1AB/1C/2/3),

³⁰ It is mandatory for a teacher to serve in a 'difficult' or 'very difficult' school for a period determined by the government (minimum of three years) [Balasooriya 2013].

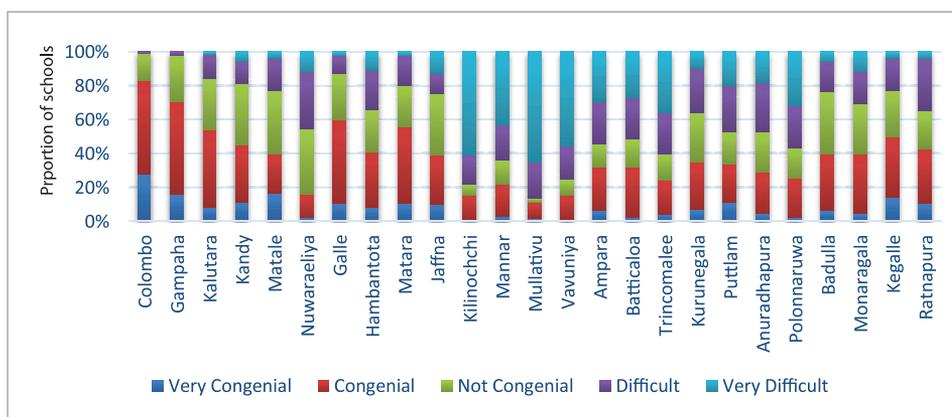
teaching methodology used, access and use of teacher guides, teacher turnover rates, and lost learning time (due to time spent on other school activities).

4.2.3 Resource inputs and school management

Government expenditure on education in 2016 was less than 3.5% of its GDP, which was comparatively high compared to the previous 5 years where expenditure was below 2% (World Development Indicators). Sri Lanka adopts a need-based funding formula for primary and secondary education, providing more funds to poorer provinces which have worse education outcomes (Dundar et al. 2017). However, inequalities in funding still exist with National Schools receiving 35% of total general education spending and Provincial Schools receiving only 65% (ibid.), even though Provincial Schools account for 96.5% of the schools and provide education to 80.5% of the students in the country (MOE 2018a). Table 4.1 provided a snapshot of the inequity in education resource distributions (human, institutional and financial), with National Schools having a disproportionate amount of resources compared to the Provincial Schools. As education equity is a precondition to education equality (refer Section 2.1), education inequity can lead to systemic inequalities in learning outcomes.

There are a large number of small schools in the country (14.6% of government schools have less than 50 students) [MOE 2018a]. According to the School Census Survey 2017, 433 government schools had no new Grade 1 admissions - 323 of these schools were Type 2 and Type 3 schools (ibid.). In an interview, the General Secretary of the Ceylon Teachers Association stated that there are only 16 popular schools in the country and students enrol in these schools due to high facilities and adequate teachers (News First 2018). It should be noted, however, that while some schools are small they may be reaching the poorest of children and the remotest of areas. As such, it is important to explore the possibility of improving their facilities (and transport) to attract more children from the area and have a more equitable distribution of children among schools.

Figure 4.10: School congeniality by district, 2017



Source: Sarma 2018, based on MOE School Census 2017

In addition, there are still schools which lack even basic facilities, such as water, electricity and toilet facilities. Sixteen percent of the government schools in Sri Lanka have no water facilities

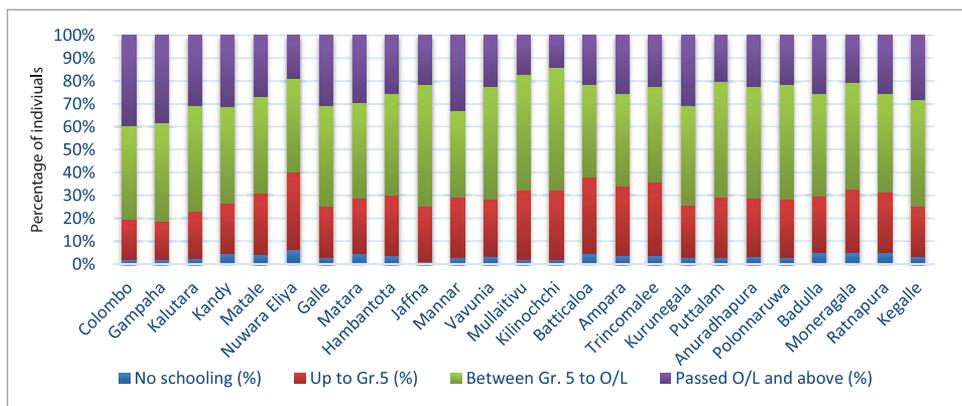
(uninterrupted water facilities), this includes approximately a quarter of the schools in the Central, North Western and Uva Provinces (MOE 2018a). Figure 4.10 depicts the congeniality of schools³¹ and clearly shows how in the former war-torn districts of Kilinochchi, Mannar, Mullaitivu and Vavuniya close to 50% of the schools are non-congenial, i.e. less accessible, and less conducive as a learning environment due to insufficient facilities (Sarma 2018). This is in sharp contrast to schools in Colombo where approximately 70% of the schools are congenial.

There is also a shortage of staff to manage schools adequately. In 2012 to serve approximately 9,000 schools there were only 1,000 sanitary workers and the number of librarians in the school system was 95 (Ranasinghe et al. 2016). Unfortunately, detailed data on congeniality based on schools types (national/provincial, Type 1AB/1C/2/3) as well as current data on resource distribution among schools is not publicly available. However, from the above it is apparent that the regional shortfalls in basic school facilities, infrastructure, and staff shortages are further widening the inequality gaps in Sri Lanka's education system.

4.3 Learning Outcomes

One way of assessing the extent of inequality in educational quality is by students' academic performance. This analysis is based on performance at the national exams (Grade 5, O-levels and A-levels) and the National Education Research and Evaluation Centre (NEREC) scores³². Sri Lanka does not currently undertake international student assessment tests, such as PISA, TIMMS and PIRLS referred to in Section 2.4.

Figure 4.11: School completion rates by district, 2016



Source: Sarma 2018, based on HIES 2016 data

³¹ Factors considered to measure congeniality include: the availability of basic resources (electricity, water, telephone, library facilities); the durability of existing equipment (such as photocopy 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 qualification composition (vocational and graduate); distance from school to nearest bus stop or train station and the number of trips available towards the school between 7–8am; and distance from the school to key education ministry offices, the nearest bank, post office, and government hospital (Sarma 2018).

³² NEREC conducts a National Assessment of Learning Outcomes for Grade 4 and Grade 8 students in the country, with instruments used to test cognitive skills in English and mathematics and (for Grade 8) science (NEREC 2017).

As shown in Figure 4.11, districts with better qualified teachers and types of schools (i.e. National Schools, Type 1AB) and in which the government and/or parents spend more on education, are more likely to have a population with national level educational qualification (O-level and above). In 2016, only 15.3% of the country's population had attained a maximum education of O-levels while 13.9% had attained their A-levels or above (DCS 2018). Therefore, more than 2/3rd of the country did not possess an O-level qualification. The estate sector had the highest percent with no schooling (10.1%) and lowest percent with O-level completion or above (8.5%) [ibid.]. O-level completion rate disparities also exist between districts, ranging from 40% in Colombo to only 14%, 17% and 19% in Killinochchi, Mullaitivu and Nuwara Eliya respectively (Sarma 2018). This in turn affects the employment opportunities and access to salaried employment in these areas.

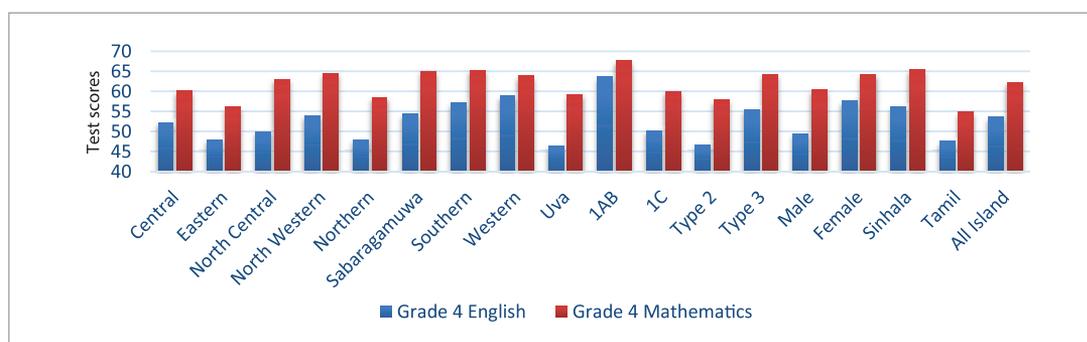
Table 4.2: Percentage pass rates according to school type, 2012

School type	Scholarship	O-level	A-level
National	19.42	71.96	57.44
Provincial	9.93	42.45	51.98
Government schools	11.40	49.98	54.65
Plantation schools	4.61	31.16	48.68

Source: extracted from Ranasinghe et al. 2016, Table 25, based on School Census 2012

Education performance disparities in Sri Lanka can be linked to the type of school attended and household income levels. As shown in Table 4.2, students in National Schools are outperforming students in Provincial schools, particularly at scholarship and O-level exams (Ranasinghe et. al. 2016). Government school students are also significantly outperforming students in plantation schools (i.e. schools located in plantations/estate sector) [ibid.]. In addition, the smaller schools and Type 1C and Type 2 schools have lower performance rates in the O-levels (IPS 2017). Students from higher income level households are likely to perform better at the Grade 5 Scholarship exams, possibly due to the parents' higher education level and more educational opportunities (DOE 2015d). Similar performance outcomes are seen at the O-levels, as depicted in Figure 5.2 (Chapter 5) showing the inverse relationship between poverty levels and O-level performance.

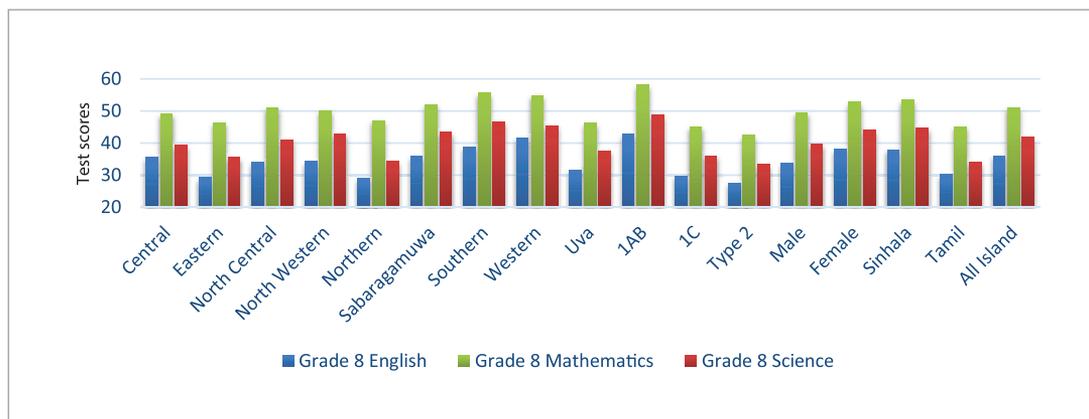
Figure 4.12: Scores on NEREC tests among Grade 4 students, 2015



Source: Sarma 2018, based on NEREC 2016

The NEREC's reports on the performance at Grade 4 and 8 showed differences in performance, particularly at secondary schooling. As shown in Figure 4.12, in the Uva, Northern and Eastern Provinces, Grade 4 students score the lowest in the English test, and also score poorly in Mathematics when compared to national averages. Tamil primary students also underperform compared to Sinhala students. At secondary school level these disparities are more pronounced with a Grade 8 national average score in English of only 36% and Uva, Northern and Eastern Provinces once again obtaining the lowest scores in the country for English, Mathematics and Science (refer Figure 4.13) [Sarma 2018]. Students that attended Type 1AB schools scored 25% to 35% higher than students from Type 1C schools. Tamil school students scored lower than Sinhala students by 9 to 10 percentage points and boys underperformed girls between 3 to 5 percentage points. In addition there is a poor overall national performance of Grade 8 students at English, Mathematics and Science (ibid.).

Figure 4.13: Scores on NEREC tests among Grade 8 students 2016

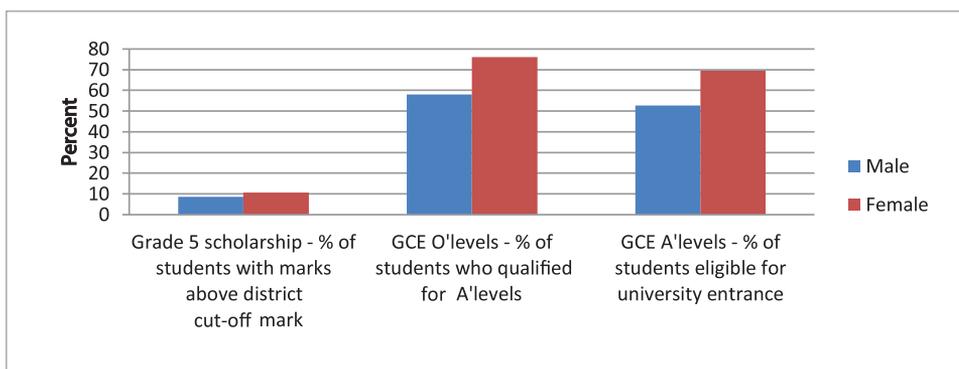


Source: Sarma 2018, based on NEREC 2017

In terms of gender, while female students' performance in school is on par or exceeds that of males in the education sector there exists disparities in subjects followed by the genders. Girls outperformed boys at the three main national exams in 2015 (Figure 4.14), with performance disparities increasing the higher the exam level.³³ (Similar performance disparities can be seen for the NEREC Grade 4 and Grade 8 exams - Figures 4.12 and 4.13). Boys constituted the majority of students who sat for the physical science and engineering technology A-level papers, while girls showed more of a preference for bio science, arts, and bio systems. With only 10% of government schools offering science A-levels this restricted subject availability leads to boys dropping out of school after the O-levels while girls continue primarily via the Arts stream (Neff & de Silva 2017 - interview with Prof. Siri Hettige 2017).

³³ This does not portray overall pass rate numbers but those who performed well enough to qualify for access to the next level (be it for the scholarship or university entry).

Figure 4.14: Student performance at examinations, 2015



* Based on total number of students in each sub-category** Figures are affected by district cut-off rates
 Source: DOE 2015a, DOE 2015b, DOE 2015c

Box 1: Private Tuition in Sri Lanka

Private tuition is a shadow education system in Sri Lanka to which parents send their children in the hopes of increasing their performance at national exams and overcoming any perceived shortfalls in their schooling education. The increased importance given to private tuition changed it from being a luxury good in the mid 1990s to a necessity good, with households spending more on tuition over the years (Pallegedara 2011). Household spending on education has been increasing over the years and tuition has become an increasingly large component, constituting 48% of the household's average monthly education expenditure in 2016 (DCS 2018). Damayanthi's (2018) study on the effect of private tutoring on academic performance found that the effect private tuition has on performance can be reduced in magnitude based on parental education, economic status and self learning hours (Damayanthi 2018).

Access to private tuition is largely determined by the child's place of residence, household income levels and parental education levels. Children from urban areas have more access and choice of private tuition classes than children from rural and estate sectors. Many students from rural and poor backgrounds attend *tuition centres*, which can vary from 50 to 1,000 students (Pallegedara 2011). When not available in their area they travel to Colombo or urban areas to attend private tuition classes. Pallegedara (2011) found that more urban households send their children for private tuition than rural or estate households. However, expenditure on private tuition among the rural and estate households has also been rising with 64.38% of rural households and 58.19% of estate households spending money on private tuition in 2006 compared to 10 years earlier when the figures were 19.19% and 14.85%

respectively (ibid.). There was also a positive link between a child going for private tuition and their parent's income level and level of education (ibid.). With wealthier parents being able to afford more, or quality, one-on-one tuition for their children this perpetuates the education disparity between the economic tiers in society.

Concerns for the country's education system with regard to the fast growing private tuition industry in the country are reflected in the Northern Education System Review (NESR) report 2014. The number of private tuition classes in the North have increased substantially, especially in Jaffna, with some classes ranging from 200 to 500 students (Northern Province Ministry of Education 2014). The report states that many school teachers and some Zonal staff are conducting tuition classes, which poses the question of conflict of interest and opens up avenues for corruption and insider knowledge of exam questions as teachers are invited to mark the exam papers. Other issues include teachers deliberately not teaching well in class or not completing the syllabus to compel students to attend their tuition classes, which negatively impacts school education quality. In addition, some students attend private tuition classes during school hours with the knowledge and implicit consent of their parents, principals, teachers, and education administrators (ibid). For instance, Year 13 students have been known not to attend school between January and July, having taken 'study leave' (which does not officially exist) to attend tutories in preparation for their A-level examinations. (Northern Province Ministry of Education 2014).

Thus private tuition classes, while unregulated, have become a widespread phenomenon in the education system. As such unequal household investment in, and access to, private tuition is a form of inequality in education access. The impact that private tuition has on the school education system and student performance deserves further research.

4.4 Conclusion

Sri Lanka's free education policies have made it one of the most literate countries in South Asia with almost all children attending primary school. However, there remain disparities in access to education, particularly with regard to accessing quality education. These disparities while not marked at primary level become more significant at secondary and tertiary levels. This chapter highlighted the fact that the individual circumstances of a child at birth (in terms of a child's gender, learner preparedness, ethnicity, place of residence and their parents' education and income levels³⁴), continue to play a role in his/her educational experience.

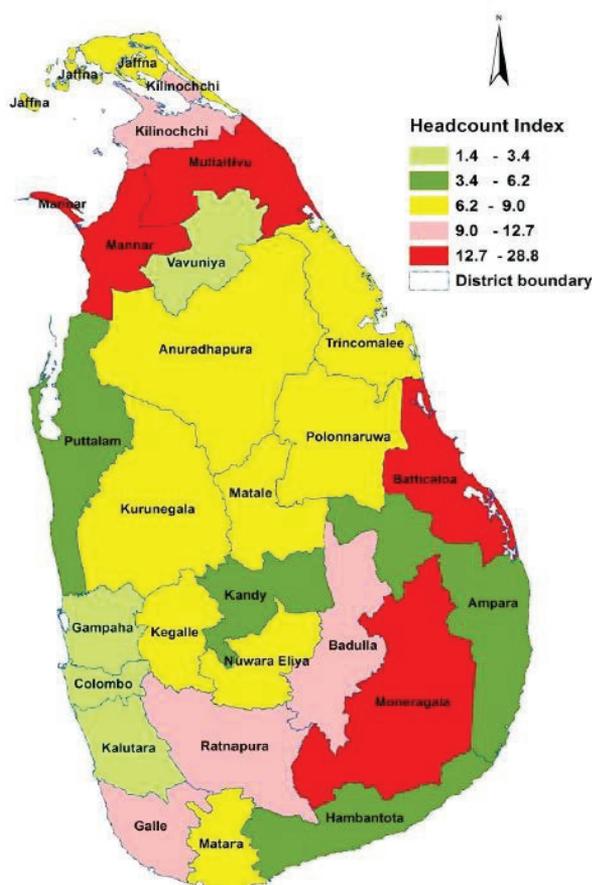
In Sri Lanka, educational disparities exist among sections of disadvantaged communities - low income and rural/estate households. A family's income level remains a factor in a child's ability to access a quality education and his/her continued education. With fewer rural and estate students in National Schools than in Provincial Schools and students from the former outperforming the latter at national exams, this indicates that a quality education is not equally accessible to the poor. For children from the estate sector (mainly of Tamil ethnicity) the educational inequalities are more pronounced, with government schools outperforming plantation schools. Overall, Sinhala school students tend to outperform Tamil students and females outperform males.

Differences in student performance between districts and provinces highlight the geographical educational disparities that exist. Students from the Uva, Northern and Eastern Provinces³⁵ score poorly in primary and secondary national English and Mathematics assessments. These provinces have the highest proportion of schools in the country ranked as 'very difficult' in terms of congeniality, have a comparatively low proportion of graduate teachers, and (in the case of the North and East) being former war-torn provinces their students face associated health and socio-economic issues. In terms of districts, the Nuwara-Eliya, Kilinochchi and Mullaitivu Districts have the lowest proportion of people with an education level of O-level and above. Children in Mullaitivu and Nuwara-Eliya experience early health challenges while Nuwara-Eliya District also has the lowest enrolment rate in National Schools and Type 1AB schools. Mullaitivu and Kilinochchi districts also have the highest proportion of 'very difficult' non-congenial schools in the country. Anuradhapura, Polonnaruwa, Puttalam, Vavuniya, and Monaragala Districts also have low levels of educational achievement and deal with educational access and quality issues. The degree to which factors impacting learner preparedness, learning process and an individual's circumstances at birth can affect their access to quality education can only be assessed via an empirical analysis. An analysis of some of these key factors was carried out for the Districts of Batticaloa, Mullaitivu and Monaragala, the results of which are explored in the next chapter.

³⁴ It is assumed that religion is also a factor, however further research is recommended to ascertain this link.

³⁵ The Northern Province consists of Jaffna, Kilinochchi, Mannar, Mullaitivu and Vavuniya Districts. The Eastern Province consists of Batticaloa, Ampara and Trincomalee districts. The Uva Province consists of Badulla and Monaragala Districts.

Figure 5.1: The spatial distribution of poverty in Sri Lanka



Adopted from: HIES (2015)³⁶

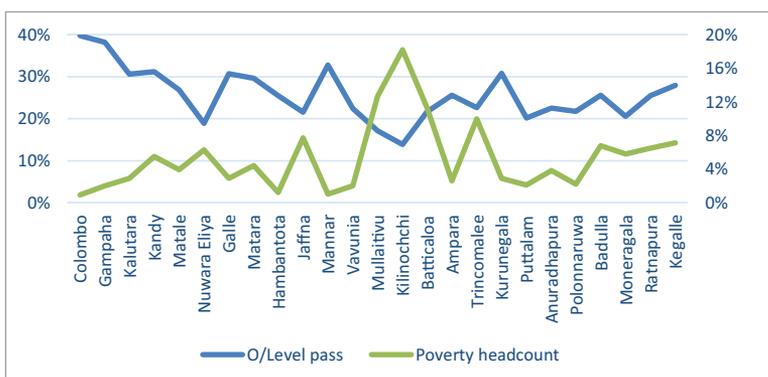
As evident from Figure 5.1, only these three districts and Mannar had a poverty headcount index value of above 12.7. The Mannar District is not part of this study to ensure a better geographical spread of the focal regions.

- b) The Northern, Eastern, Uva (and North Central) Provinces are three of the most educationally backward provinces in terms of education access, quality and learning outcomes (as discussed in the previous chapter).

Focusing on these districts allows us to explore the strong inverse relationship between poverty and educational outcomes, especially at the secondary school level (see Figure 5.2 below).

³⁶ The study is available here: http://www.statistics.gov.lk/poverty/SpatialDistributionOfPoverty2012_13.pdf

Figure 5.2: Poverty headcount and O-level pass rates by district

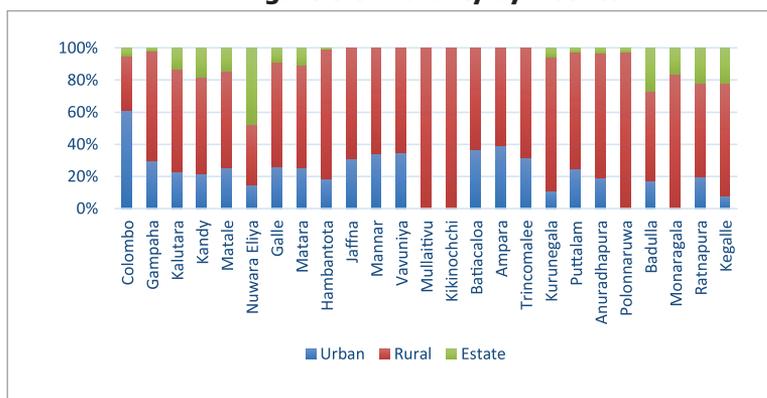


Source: HIES (2016)

Note: The O-level pass rate is read on the y-axis on the left and the poverty headcount on the right.

- c) The three districts provide a good geographical coverage, and cover 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 5.3). There is also a higher concentration of poverty in rural and estate sectors compared to the urban sector (CEPA 2017)³⁷. Almost all the households in Mullaitivu and Moneragala belong to the rural or estate sector, and in Batticaloa almost 2/3rds of the households belong to the rural sector.

Figure 5.3: Rurality by district

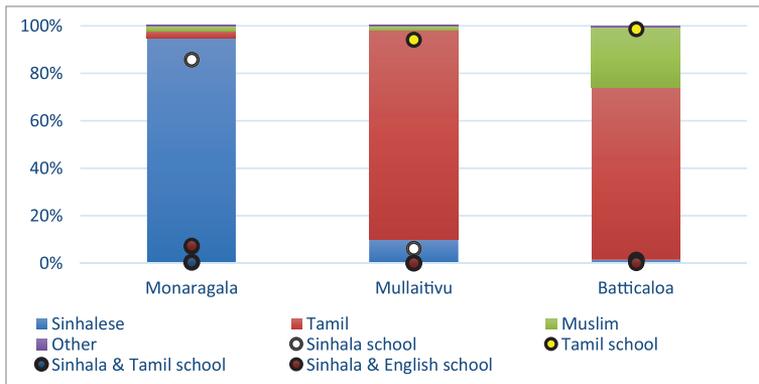


Source: HIES (2016)

- d) There is a good mixture of ethnic groups and Sinhala & Tamil medium schools in the three districts (see Figure 4.4). Moneragala is predominantly Sinhalese and Mullaitivu predominantly Tamil while Batticaloa has a mixture of Tamils and Muslims. Further, as discussed in section 5.2.1, the choice of zones within those districts allows a mix of Sinhalese, Tamil and Muslim representation in the aggregate district level analysis.

³⁷ See the graph available here: http://www.cepa.lk/content_images/upload/images/povertyhead-count-sector.jpg

Figure 5.4: Ethnic composition and schools by medium of instruction in the three key focal districts



Source: CPH (2012) and MoE (2018a)

In the next section, the chapter outlines the data and methodology employed to understand the provision of education in these three districts.

5.2 Data

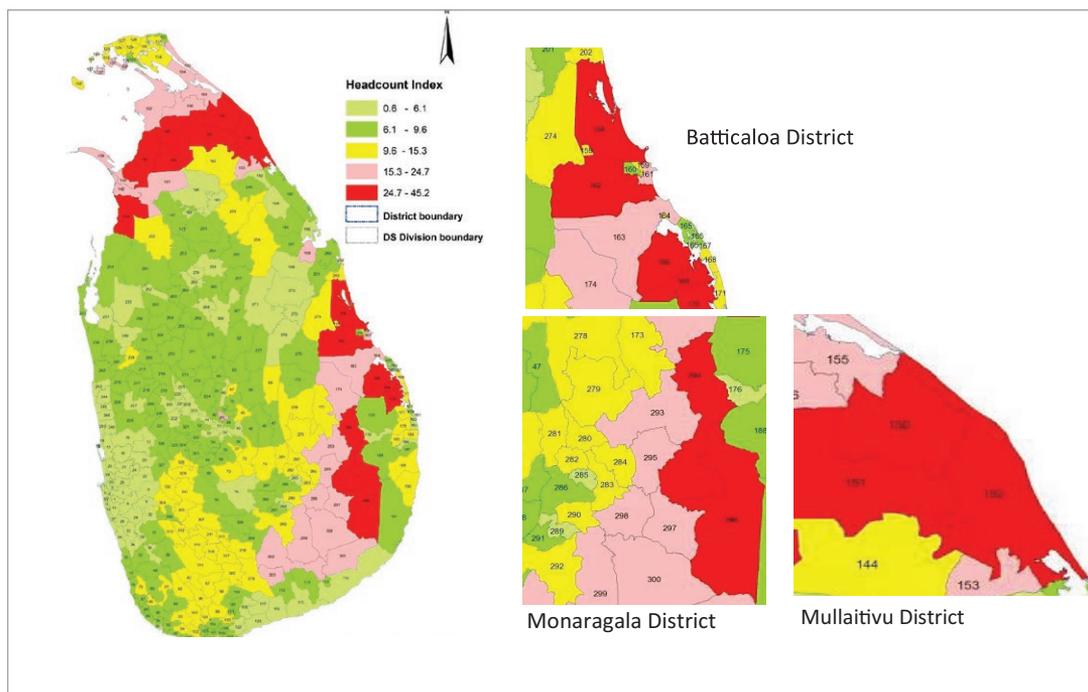
The data used in the analysis come from four sources:

- 1) The ACTED-CEPA CRC (Citizen’s 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) The HIES 2016 dataset. HIES is a nationally representative household survey generally conducted every 5 years by the DCS. The DCS uses a two-stage stratified random sampling where the primary sampling units are the 2,500 census blocks that are proportionate to the number of housing units. The secondary sampling units are housing units and 10 housing units are selected from every 2,500 primary sampling units. The HIES adjusts the nonresponse households for unit nonresponse using block weights. Summary of the key outcome variables from the HIES data is presented in Appendix A1.
- 3) Secondary data available from the zonal education offices within the three focal districts. This data is in particular used to understand outcomes-especially Grade 5, GCE O-level and GCE A-level examination pass rates. Where available, the data is also used to identify the quality of schooling provision in those zones.
- 4) Interviews with zonal directors of education and seven randomly sampled parents of secondary school children.

5.2.1 Sampling and summary statistics of the CRC project

The CRC project covered 60 Grama Niladari Divisions (GNDs) in the Batticaloa, Monaragala and Mullaitivu districts (survey locations are indicated in Appendix A2). 20 GNDs were selected from each.³⁸ These GNDs are part of 10 District Secretariat Divisions (DSDs) in these districts. For illustration of the geographical spread of these DSDs and their poverty incidence, please see Figure 5.5. In Batticaloa, the DSDs are: Eravur Town (164 on map), Koralaipattu South (162), Manmunai Southwest (169) and Poraitivupattu (170); in Monaragala the DSDs are: Badalkumbura (298), Madagama (295) and Madulla (294); in Mullaitivu the DSDs are: Oddusuddan (151), Welioya (153) and Maritimepattu (152). The choice of GNDs were based on poverty and ethnic composition (so as to create a more balanced study). 20 (+5%) households were chosen at random within each GND. Thus, 400 (+5%) households were 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 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 of the CRC data is presented in Appendix A3-A to A3-C.

Figure 5.5: DSDs focused in this study and their poverty incidence



Adapted from: Inadeen (2018a, 2018b and 2018c)

³⁸ In Sri Lanka, the highest administrative division is the province followed by district. The districts are then divided into DSDs which are then in turn subdivided into GNDs.

The Batticaloa District in the Eastern Province of the country has a population of over 520,000, 72.6% of whom are Tamils, 25.5% Muslims and 1.17% Sinhalese (CPH, 2012). The district was affected by the three-decade long civil war and is home to some of the poorest DSDs as illustrated in Figure 5.5. Based on CRC and HIES data, households in Eravur are the wealthiest in the district (and even compared to other DSDs in other districts) and have a larger concentration of Muslims (more than 80%) compared to other DSDs in the district. Households in Koralaipattu South are the poorest in the sample—and the DSD ranks as the second poorest in the island (HIES, 2015). Households in Poraithivipattu, Manmunai Southwest and Koralaipattu South shared similar demographic and geographic characteristics. Households in these three DSDs also tend to be more spatially distributed, with the average household being about 5km away from the nearest town; whereas households in Eravur were on average only 2km away from the town due to more geographically concentrated households.



Image courtesy: Anton Croos: Fishing boats in Batticaloa lagoon, Sri Lanka, CC BY-SA 4.0, <https://commons.wikimedia.org/w/index.php?curid=17403523>

The Monaragala District in the Uva Province of the country has a population of over 440,000, 94.5% of whom are Sinhalese, 3.3% Tamils and 2% Muslims (CPH, 2012). The district is one of the driest regions in the country and is popular for its agricultural industry including grains, legumes and vegetables. The district has historically had large incidences of poverty but is on the path to reducing the poverty rate as HIES 2016 data illustrate (not shown here for brevity). Households in Madagama are wealthier than those in the other two DSDs (based on ACTED data) and were also closer to the town (6km on average) compared to households in the other two DSDs which were about 8-9km away from the town. In general, households in Monaragala were more geographically distributed than households in the Batticaloa and Mullaitivu districts.



Image courtesy: L Manju: The bell at kotaveheragala temple, CC BY-SA 4.0 <https://creativecommons.org/licenses/by-sa/4.0/>], from Wikimedia Commons

The Mullaitivu District in the Northern Province of the country has a population of just under 100,000, 88.4% of whom are Tamils, 9.6% Sinhalese and 2% Muslims (CPH, 2012). The district was among those that was severely affected by the three decade long civil war and based on CRC data, households in Maritimpattu are the wealthiest among the three divisions and are closer to the town compared to other DSDs. Households in WeliOya (which has a predominantly Sinhala population) is the furthest away from the town. Households in WeliOya on average have to travel about 7km to the nearest town whereas those in Oddusuddan and Maritimpattu have to only travel 3-4km to the nearest town.



Image courtesy: Mahimsan: Mullaitivu Fort in Sri Lanka, CC BY-SA 4.0, <https://commons.wikimedia.org/w/index.php?curid=53972517>

5.3 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 three 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 in CRC data, and proxied by household spending in HIES data, among other covariates), (2) rurality (proxied by distance to town) and (3) demographic factors (head of household's education, age of child, gender of child, ethnicity etc.).

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 outcomes variables that measure access, provision and outcomes of education, for individual i in household j in district l (these outcome variables include whether the child goes to school, whether the child goes to a school in the same GND, receipt of private tuition, spending on private tuition per child, 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); 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 affects educational access and outcomes is wealth. As established in the previous chapter, wealthier households can afford better educational opportunities (especially private tuition and national schools). A key challenge is to measure wealth, effectively. In parts of the analysis where the CRC data is used, the Morris Score Index (MSI) (Morris et al. 2000) is used to proxy for the household's wealth position. The use of MSI in this study is further explained in Appendix A4.

In the next section, the chapter explores results estimated from the HIES and CRC data.

5.4 Results

Results are presented along the three main thematic areas discussed in the previous chapter: access, quality and outcomes. The HIES analysis is done at the district level and the CRC analysis is done by zones to further explore the disparities within the districts.

5.4.1 Access

Drawing on the theoretical framework discussed in chapter 2, this section first evaluates whether poverty and demographic factors affect a child's enrolment in school. Table 5.1 estimates the probability of a child being out of school on being poor and a set of household covariates. The

analysis uses a binary variable to identify whether a family is poor or otherwise by using the DCS poverty line of LKR 4,166 per person per month. If the per capita income for the household is below LKR 4,166, the binary variable poor takes a value of one and zero otherwise. The only variable that is statistically significant is poor. This indicates that poverty is a strong predictor of a child's education attainment; junior secondary school children from households below the poverty line were 3 percentage points less likely to be enrolled in school.³⁹ The district, the sector of the economy, ethnicity and gender had no statistically significant effect.⁴⁰

Table 5.1: OLS estimates of whether a child is out of school and whether the child receives private tuition

	Child does not go to school	Child receives private tuition
Mullaitivu	0.020 (0.014)	0.024 (0.013)
Batticaloa	0.015 (0.012)	0.023* (0.011)
Monaragala	-0.001 (0.011)	-0.000 (0.010)
Rural sector	-0.000 (0.008)	-0.007 (0.008)
Estate sector	-0.003 (0.036)	-0.004 (0.038)
Age	0.001 (0.002)	-0.001 (0.001)
No of children in household	0.003 (0.003)	-0.000 (0.003)
Education of head of household (in years of schooling)	-0.001 (0.001)	0.000 (0.0008)
Poor (=1 if poor, =0 otherwise)	0.032** (0.012)	0.006 (0.011)
Gender (=1 if female, =0 if male)	-0.007 (0.006)	-0.005 (0.005)
Sri Lankan Tamil	-0.013 (0.011)	-0.0200* (0.010)
Indian Tamil	-0.026 (0.024)	-0.031 (0.022)
Sri Lankan Moor	-0.013 (0.010)	-0.013 (0.009)
Constant	-0.004 (0.036)	0.026 (0.017)

³⁹ Similar results are obtained if the per capita household expenditure is used instead of poor. However, the magnitude of the effect is smaller—a 10% increase in per capital expenditure lowers the probability of a child dropping out of school by 0.6%.

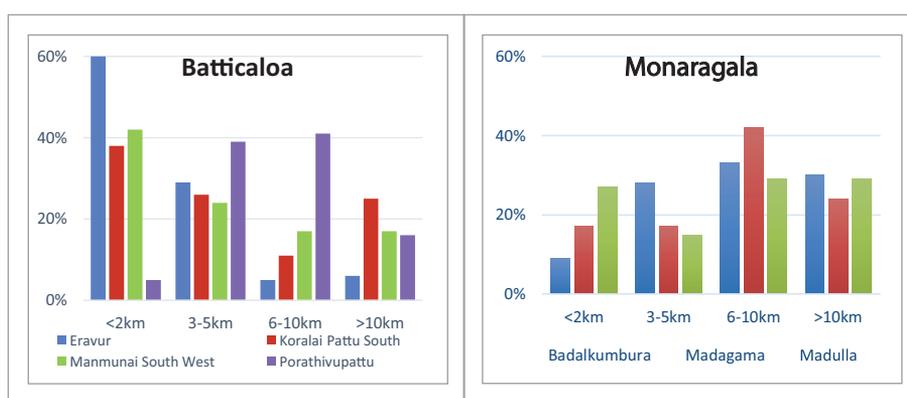
⁴⁰ Appendix A5 illustrates the same analysis for all districts. In this analysis, age is also found to have a positive statistically significant effect of dropping out school. Children from Mannar, Puttalam and the estate sector are more likely to be out of school compared to children from other geographical locations.

Observations	922	2,143
R-squared	0.023	0.004

Note: Robust standard errors in parentheses, *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$. The analysis uses data from the HIES 2016 and the sample includes children aged between 10-14 (those still in the compulsory school age). The comparison district is Colombo.

Geographical distance is another key determinant of access to schools in Sri Lanka, this is particularly the case for secondary schools⁴¹ in the three focal districts. Figure 5.6 affirms these assertions. More than 50% of the students living 5km away from the town have to travel out of their GND to access secondary schools. This indicates structural issues in the provision of education that makes access to secondary education difficult for 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% - in the Madulla DSD, in particular, the figure was 70%).⁴² However, the correlation between the two variables is not sufficiently strong (due to outliers such as Porathivupattu (Batticaloa), Badalkumbura (Monaragala) and Welioya (Mullaitivu) where the wider availability of the schools make it possible for children to easily access them within the same GND). The effect of geographical remoteness is more prominent in access to private tuition. More than a third of the students living at least 5km away from the city do not access private tuition⁴³ [again, Porathivupattu, Badalkumbura and Welioya are exceptions]. Issues with transport affecting children's and teachers' school attendance were highlighted by parents from Batticaloa who had only one bus service in their area. As one parent pointed out "*Most of the students come from family backgrounds with financial hardships. So, they do not have enough money to send them in three wheelers and all families cannot afford buying bicycles for children to attend school daily. As there is a jungle to pass by and it is a less populated area there is a risk when walking alone.*"

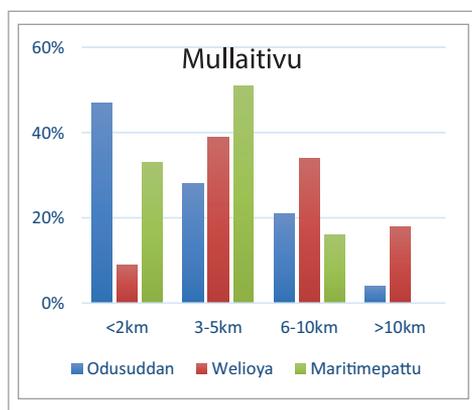
Figure 5.6(a-c): Distance to town and access to secondary school in the same GN in the districts of Batticaloa, Monaragala and Mullaitivu, respectively.



⁴¹ The cut-off is designed based on data available in the survey.

⁴² Access to schools from places further away 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.

⁴³ Sarma and Parinduri (2016) describe the tuition industry in Sri Lanka as a shadow education system that is perceived as providing parallel and superior education.



Source: CRC data

Table 5.2 presents the OLS estimates of a secondary school child going to a school in the GND and accessing private 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 (the detailed results are not presented here for brevity, but are available in Appendix A6). Students from the Monaragala and Mullaitivu districts were less likely to go to a school in their GND compared to those from the Batticaloa District. The clustering of houses in areas such as Eravur Town and Koralaipattu Division (in Batticaloa) ensure that students in the GND have a school nearby to attend, this is not the case for 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 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%. ⁴⁴This implies that wealthier households can send kids to schools within their same GN. ⁴⁵

Interactions of the gender of the child with distance to town and ethnicity are not statistically significant. This means that girls (or boys) are no less likely to attend a school in their same GN or go for private tuition purely because of their gender or because they are a girl (or boy) living further away from the city.

Table 5.2: OLS estimates of access to formal and shadow schooling

VARIABLES	Child does not go to school	Child receives private tuition
Distance to town	0.007 (0.006)	-0.008 (0.007)

⁴⁴ It should also be noted that, the deed for residence (or proof of residence) is a pre-requisite in certain schools to gain admission to the nearest school (especially national schools) (based on key person interviews). Therefore, possession of the deed to the residential plot allows children better access to a school within their GND.

⁴⁵ Part of the reason could also be how parents have to provide proof of residence. To access schools in Sri Lanka, one of the main drivers is the location of the parents within a defined radius of the school. Parents with deeds are able to more easily prove this and are therefore able to access schools within the same GND.

Female child	0.031	0.098
	(0.095)	(0.102)
Own dwelling without deeds	0.471***	-0.070
	(0.096)	(0.150)
Own dwelling with deeds	0.476***	-0.059
	(0.093)	(0.147)
Tamil	-0.085	-0.386**
	(0.144)	(0.136)
Muslim	-0.385*	-0.430*
	(0.185)	(0.170)
Wealth class	-0.014	0.059***
	(0.011)	(0.011)
Teacher available for all subjects		0.101**
		(0.037)
Constant	0.521	0.740**
	(0.266)	(0.279)
Observations	1,161	1,086
R-squared	0.116	0.103

Note: Robust standard errors in parentheses, *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$. The analysis uses data from the CRC dataset and other covariates include the DSDs, household size, number of children in the household, residential plot type and interactions of gender of the child with distance to town, wealth and ethnicity.

Qualitative interviews with zonal directors of education (ZDE) shed further light on access to secondary schools in the 10 focal DSDs. In Monaragala, the zonal directors mentioned that students in areas further away from the city report more absenteeism during the harvest season due to many of their parents engaging in agriculture. In discussion with parents, it was also revealed absenteeism is also fuelled by poverty. As one parent mentioned *"There aren't enough preschools in our village and some families do not have [the financial means] to provide their children preschool education. Teachers blame students who are weak in studies and this has resulted [in] students being absent [from] school. Some are so poor, and they do not have money to buy [note]books. When their [note]books are over, they don't attend school daily as they do not have enough money to buy new books."*

Part of the reason for students in these districts to have poor attendance is the parent's outlook according to the ZDE in all three districts. One parent from Monaragala echoed similar sentiments. The parent stated, *"In order to enhance the regular attendance of students the importance and the value of education should be explained to parents and students who aren't well aware of the positives of education due to low family backgrounds. As they come from households where the parents engage in low skilled professions, children from those households do not have the interest to continue their studies. The low income of families has led them to halt education abruptly. The value of education should be explained to parents and students. Since children only see the poor family circumstances and professions their parents engage in, their vision and outlook need to be moulded by the school system."* In some zones in Batticaloa (especially Padiruppu), ZDE also report that migration of mothers to the Middle-East and North-African (MENA) region adversely

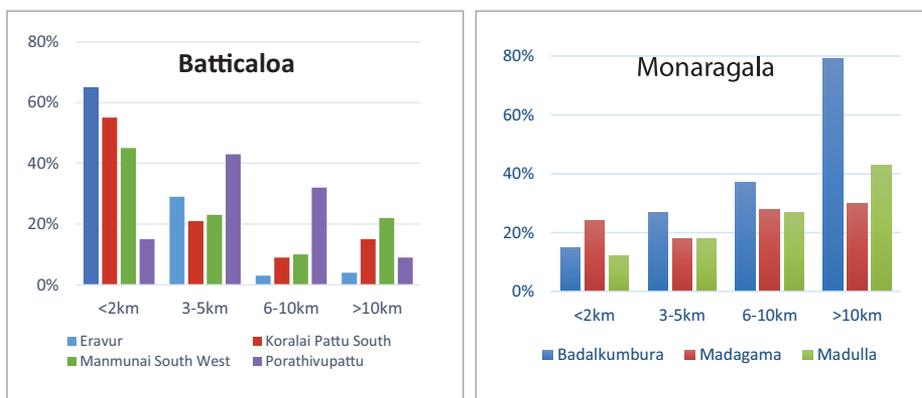
affects the children’s attendance to school. This is because the father, grandparents or older siblings who are responsible for the children’s education are sometimes lax (similar views are reported in Sarma and Parinduri, 2016).

Poverty also indirectly affects the access to education in rural areas as children from poorer households tend to be malnourished and this affects their cognitive skills. As one teacher (who is a parent of a secondary school child) in Monaragala explained, *“There are students coming from low income families and some students faint during morning school assembly. When inquired whether they have had breakfast they reveal that they couldn’t have breakfast as there are financial difficulties at home. They do not have the needed nutritious and healthy food to study well.”*

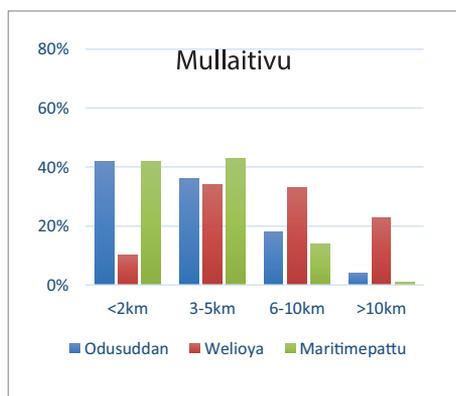
The shadow education system discussed in Chapter 4 is the private tuition sector. While private tuition is a contentious topic around the world, given the inconclusive evidence of the impact of private tuition on student performance, many Sri Lankan households place significant importance in providing their children private tuition. Among households that do spend for private tuition, about 74% of their education budget is devoted to paying for private tuition (see Appendix A1). Table 5.1 shows that being *poor* is not a strong predictor of access to private tuition based on the HIES data.⁴⁶ Children from Batticaloa were more likely to access private tuition and Tamil children were less likely to go for private tuition (further discussion on this is presented below using results obtained from analysing the CRC data).

Figure 5.7 plotted using CRC data shows that students who live further away from towns are less likely to access private tuition. In Odusuddan, Maritim Pattu (both are in Mullaitivu), Eravur, Manmunai and Koralaipattu (all three in Batticaloa) less than 20% of the students living 5km or further from the city access private tuition (despite national averages for access to private tuition hovering around 60-80%; see Suraweera, 2011). In DSDs in Monaragala, access to private tuition is slightly higher partly due to better access to public transport.

Figure 5.7 (a-c): Distance to town and access to private tuition in the districts of Batticaloa, Monaragala and Mullaitivu, respectively.



⁴⁶ In specifications with per capita household expenditure instead of poor, there is a statistically significant effect of per capita expenditure on access to tuition, but the magnitude is small—a 10% increase in per capita expenditure leads to a 0.4% increase in access to tuition.



Source: CRC data

The CRC data contradicts the HIES data and shows that access to private tuition is 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 private tuition access for an increase in wealth quintile). The difference in the statistical significance of the wealth indicator on access to tuition between the datasets is likely to be driven by intra district differences that are less likely to be absorbed in the HIES dataset. They are also likely to be driven by the crudeness of the MSI construct. In the CRC data, there is evidence that children who go for private tuition come from congenial schools. In other words, children from schools where they had teachers for all subjects, were about 11% more likely to enrol in private tuition, inferring that private tuition is not a substitute for formal schooling but rather supplements formal education.⁴⁷ 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 private tuition compared to Sinhala children. This may be partly explained by the deficiency of teachers in Tamil medium schools (and thus the lack of Tamil conversant private tuition teachers).⁴⁸ The gender of the child, or even his/her distance to town, wealth or ethnicity have no statistically significant effect on access to private tuition (the results are not reported here for brevity but are available in Appendix A6).

ZDE mention that in Thunukkai (Mullaitivu District) and Porathivupattu (Batticaloa District) lack of private tuition facilities within the zones and DSDs result in lower access to private tuition for the students. In Porathivupattu, the Zonal Education Office (ZEO) is working with NGOs to provide evening classes to students as a measure of education support (in the absence of private tuition), especially for Grade 5, GCE O-level and GCE A-level exam students.

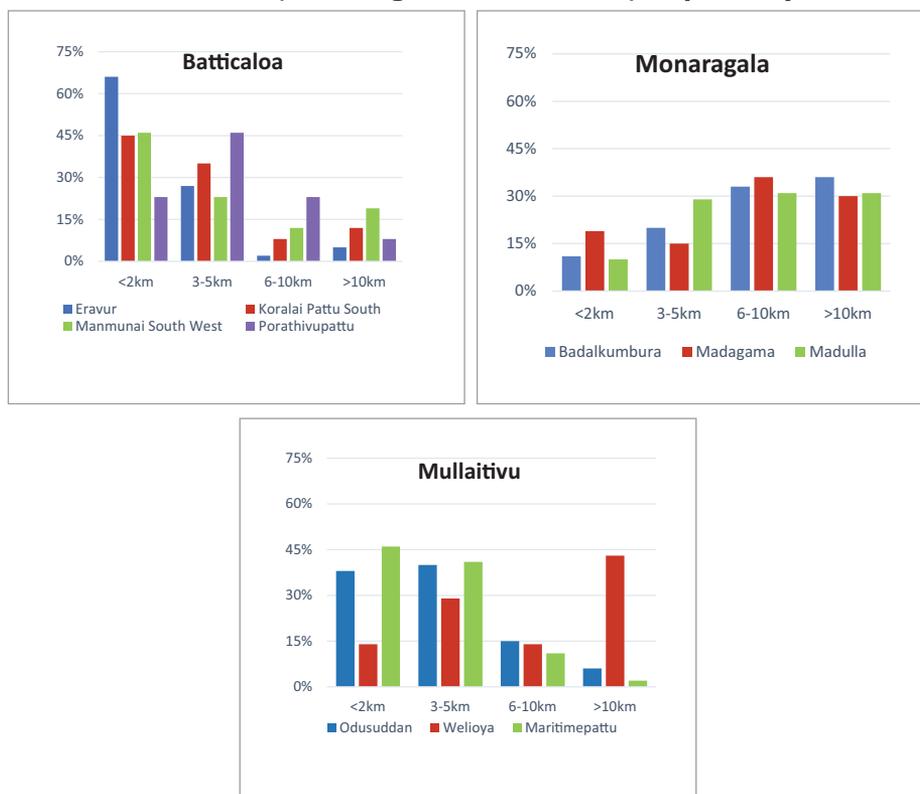
These results indicate that poverty, remoteness, and parental absence affect access to schools (especially in the same GND) and they also affect access to private tuition. Gender seems to have no statistically significant effect on access to schools in the same GND or private tuition.

⁴⁷ In most instances, private tuitions are provisioned by the schoolteachers themselves (based on discussion with ZDE).

⁴⁸ Based on discussions with Zonal Directors of Education.

5.4.2 Quality of education

Figure 5.8 (a-c): Distance to town and perceived quality of education in the districts of Batticaloa, Monaragala and Mullaitivu, respectively.



Source: CRC data

This study uses perceived quality of schools as reported by secondary school students from the three focal districts (a discussion on perception-based measures was presented in section 2.4). Figure 5.8 indicates that students from more remote areas are happier with their current schools in the Monaragala District and in Welioya (Mullaitivu). A key reason for this is the benchmarking - rural students are likely to compare schools in their own GNDs and be content with the provision of education. In general, perceived quality is not an objective measure of school quality but serves as an important user feedback evaluation tool.

Table 5.3 presents the OLS estimates of the perceived satisfaction of quality of education. 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. 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. More congenial schools (proxied by teacher availability for all subjects) result in higher student satisfaction.

Wealth, whether measured by MSI or indebtedness for consumption had no statistically significant effect on perceived quality of the education received in schools. (For brevity, only the estimates

for selected covariates are reported in Table 5.3, the complete Table is available in Appendix A7). Availability of teachers for all subjects positively affected the satisfaction of students. Interviewees were also asked about sanitation facilities in the school as this was highlighted as a key problem by ZDEs and parents during interviews. The largest contributor to school dissatisfaction with regards to sanitation seems to be the DSDs in which they are located—confirming location and rurality specific factors that contribute to quality sanitation facilities (or lack of thereof). Students from Koralaipattu South and Poraitivupattu (in Batticaloa), Oddusuddan and Maritiméattu (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) based on the distribution of poverty report produced by DCS (2015).⁴⁹

Table 5.3: 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*** (0.037)	-0.148*** (0.036)	0.001 (0.036)	-0.109** (0.039)
Distance to school	0.006 (0.008)	0.007 (0.008)	0.014 (0.008)	0.0129 (0.009)
Teachers available for all subjects	0.152*** (0.045)	0.158*** (0.045)	0.271*** (0.0421)	0.152** (0.048)
Koralaipattu South	-0.236 (0.144)	-0.269 (0.143)	-0.301 (0.169)	-0.384** (0.139)
Manmunai South West	0.014 (0.147)	-0.021 (0.143)	-0.177 (0.172)	-0.286 (0.152)
Poraitivupattu	-0.131 (0.152)	-0.160 (0.150)	-0.125 (0.170)	-0.366* (0.144)
Badalkumbura	0.002 (0.202)	-0.043 (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	-0.092 (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)
Maritiméattu	-0.060 (0.142)	-0.103 (0.139)	-0.121 (0.166)	-0.352* (0.139)

⁴⁹ The study is available here: http://www.statistics.gov.lk/poverty/SpatialDistributionOfPoverty2012_13.pdf

Male child	-0.002	0.001	0.029	-0.039
	(0.036)	(0.036)	(0.035)	(0.037)
Wealth index	0.001		0.002	0.001
	(0.001)		(0.001)	(0.001)
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
<i>R-squared</i>	0.086	0.088	0.146	0.136

Note: Robust standard errors in parentheses, *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$. The analysis uses data from the CRC dataset and other covariates include the DSDs, include, gender and ethnicity of the child, number of household members, number of children in the household, type of toilet, type of dwelling and whether the household borrowed for consumption.

Another tool to evaluate the quality of education is the student-teacher ratio and the type of schools (for explanatory notes on the classification of schools in Sri Lanka as type 1, 2 and 3, please refer section 3.2). Unfortunately, the student-teacher ratio is not a good measure of school quality in Sri Lanka. In the Medagama zonal division in the Monaragala District for example, the student-teacher ratio is approximately 9:1. In the Monaragala zonal division of the Monaragala District, however, the ratio is about 17:1. This difference would imply that students in Medagama receive a far better quality of education because there are more teachers per student. What this statistic masks, is the fact that, there are very small schools in Medagama with fewer than 50 students. Therefore, an alternative would be to focus on the number of national schools and Type 1AB schools in the zones. These schools are more likely to be congenial, and are more likely to have teachers for all subjects (based on statistics in the annual MoE school census reports) and their students perform better in national examinations.⁵⁰ In the Monaragala zonal division, there are three national schools (where the student-teacher ratios are in fact high), which constitute 3% of all schools in the zone, whereas in Thunukkai (Mullaitivu) only 1.6% of the schools are national schools. Further, in Thunukkai only 16% of all 65 schools in the zone are Type 1 schools (both Type 1AB and Type 1C). Therefore, we could deduce that children in Monaragala have better access to quality education than those in Thunukkai. Further, since type of schools are a proxy for availability for GCE A-levels and the streams of subjects taught in A-levels, this would also imply that, there are only 16% schools in the entire Thunukkai zone that offer GCE A-levels. These disparities (in the type of school) affect both the access to and quality of education the children receive as the type of school dictates the availability of higher grades and specific streams for A-levels and also correlates with school congeniality and student performance in national examinations.⁵¹

Another factor that affects the quality of education the children receive is the experience of discrimination and/or abuse they sometimes face in school. Experience of discrimination or abuse is detrimental to their wellbeing and also affects their learning. Summary statistics in Appendices A3A-C identify that about 6% of the children report instances of abuse and discrimination. The instances of discrimination and abuse are highest in Eravur (Batticaloa District) and Odusuddan

⁵⁰ Based on MoE reports on student performance in national examinations, there is a strong positive correlation between better examination scores and being enrolled in national and Type 1AB schools.

⁵¹ The student teacher ratio and type of schools were not readily available for the Batticaloa District.

(Mullaitivu District), with generally much lower discrimination and abuse in DSDs within the Monaragala District. Qualitative interviews indicate two key factors that contribute to discrimination in the classroom are caste/income level of the students and the non-payment of fees requested by school authorities. These indicate that children from poorer backgrounds are more likely to be discriminated. On further probing, the ZDE stated that the schools can request for up to LKR 600 per year per family for school activities. When parents are not able to provide these fees, teachers have apparently prevented students from taking part in activities in schools or taking up leadership roles (such as being a class monitor or prefect). This is re-iterated in interviews with parents. One parent in Batticaloa stated, *"Collection of money for school activities is also a reason for students being absent. Recently they collected Rs.1000/= each and if students do not give money at the proper time they will be blamed. School administration should be aware that there are students coming from various family backgrounds. All cannot bear the expenses. Due to [this] reason, students do not go to school if they were unable to give money."*

Further discussion with the ZDE indicates that schools in more remote locations also suffer from teacher quality, as teachers prefer to live and work in urban areas. In the Batticaloa and Monaragala districts, for example, many schools are staffed by teachers who commute from the urban areas. This leads to higher absenteeism amongst staff and staff tend to generally be in a hurry to leave after school. The ZDE also indicates that despite many schools having provision for staff quarters, these facilities are under-utilised. As one parent in the Monaragala District, who is himself a teacher, explained *"Due to transportation issues female teachers leave school by 12o'clock in the afternoon. There aren't proper hostel facilities for teachers. This has led them to spending hours for travelling. Pregnant teachers face more difficulty in travelling as there are not enough and comfortable transport services. This has resulted in them to applying for transfers. Thus, leading [to] teachers staying in the school for a very limited time period."* A parent from Batticaloa added to this narrative and stated *"There's a deficiency of teachers for each subject. There are no teachers for English and Mathematics. There are limited number of teachers and one teacher, teaches several subjects. This has resulted in reducing the quality of education. There aren't much teachers in school as the school is located in a rural area. Though there are quarters for teachers they do not reside in quarters as the school is located in a remote area. So, the teachers who are transferred [here] do not stay in the school for a very long-time period. There's only one bus service and it starts at 8.00 a.m. and when teachers reach school it is about 8.30 a.m. in the morning where one period is over. Again the bus returns around 12.30 in the afternoon and the school finishes at 1.30 and teachers leave school at 12.30 due to the transport issue."*

In Thunukkai (Mullaitivu), teachers from Jaffna, board in staff quarters and are able to attend to children even after the school day ends. The ZDE informs us that the lack of proper transportation from Jaffna to some of the rural schools has helped in a way to ensure teachers use the staff boarding facilities and attend to school needs.

While the above focus on school education, another determinant of the quality of education a child receives in Sri Lanka, is likely to be the amount spent on a child's education-although the causal relationship is contentious, money spent on education is a source of stratification of the quality of education (Cole 2017). The HIES data indicates that children in the rural sector and those from families below the poverty line receive a lower allocation of money for their education from their families. There is also a strong and positive relationship between the education of the

head of the household and how much a family spends on their child's education—each extra year of schooling of the head of the household leads to approximately LKR 175 more per month being allocated per child on educational expenses. These effects are statistically significant at least at the 1% level.

Table 5.4: OLS estimates of per child private tuition expenditure.

	Per child education expenditure (LKR/month)	Per child private tuition expenditure (LKR/month)
Rural sector	-404.7*** (100.2)	-135.7 (190.2)
Estate sector	-446.4 (232.2)	
Age	110.7*** (11.70)	74.22*** (21.29)
No of children in household	-401.7*** (33.62)	-235.2*** (64.67)
Education of head of household (in years of schooling)	175.1*** (9.129)	34.23 w(18.90)
Poor (=1 if poor, =0 otherwise)	-366.9** (133.6)	-289.0 (261.7)
Gender (=1 if female, =0 if male)	-29.10 (63.53)	269.3* (111.1)
Sri Lankan Tamil	7.582 (144.8)	-487.4 (330.8)
Indian Tamil	5.480 (232.6)	-342.4 (601.8)
Sri Lankan Moor	126.5 (147.4)	-762.0*** (216.3)
Constant	1,224*** (206.2)	1,306** (426.8)
Observations	13,189	269
<i>R-squared</i>	0.108	0.389

*Note: Robust standard errors in parentheses, *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$. The analysis uses data from the HIES 2016 and the sample includes children aged between 10-14 from all districts. The estimates also include dummies for each district but are not presented here for brevity.*

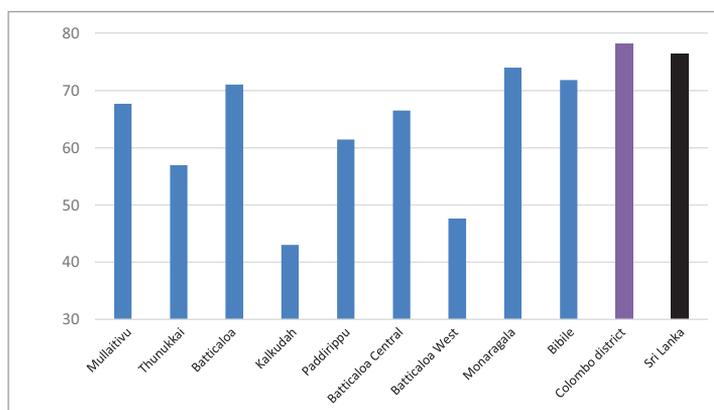
While not part of the formal education system, the quality of private tuition the children receive (if they receive any at all) may also likely affect their learning (although the impact of private tuition on performance is still debatable; see Cole 2017). Using the HIES data, the factors that contribute to the private tuition expenditure per child was estimated, as reported in Table 5.4. The estimates show that older children and girls were allocated more money for private tuition. The number of siblings a child had reduced the amount of money spent on private tuition for that child. There is also some evidence to indicate that Muslim children received a significantly lower allocation per month for private tuition (interactions of ethnicity with gender are not statistically significant and are not reported here for brevity).

These results indicate that subjective satisfaction of educational quality is not affected by individual or household factors. This may partly be due to the perceived quality measure that is used in the analysis; it may also be partly attributed to the high correlation of DSDs with wealth levels and ethnic identifiers. One key factor that affects satisfaction is how poor the DSD is and the concentration of rural households in the DSD. Since the focus of this study tends to be on the relatively poorest areas of the country, the heterogeneity between zones in these 3 districts is narrower than the heterogeneities that lie between zones in these districts and those in Colombo, for example (see previous chapter for school congeniality by district). Household affluence also does not seem to affect the spending on private tuition per child (although admittedly, there are district differences which reflect private tuition availability in those districts and DSDs), but there is evidence to suggest that junior secondary school girls received larger sums of money devoted for private tuition than boys—this is also likely to be driven by more girls in secondary schools than boys (see the previous chapter for statistics relating to this).

5.4.3 Learning outcomes

As discussed in the previous chapter, students from these three districts perform poorly in national examinations and are also less likely to complete tertiary education. The pass rates for Grade 5 examinations are presented in Figure 5.9 by zone to illustrate the disparities in educational outcomes. For the Mullaitivu District, information by income levels is also reported due to its availability from the Zonal Education Office (Figure 5.10).

Figure 5.9: Percentage of students who passed the Grade 5 examinations in 2017

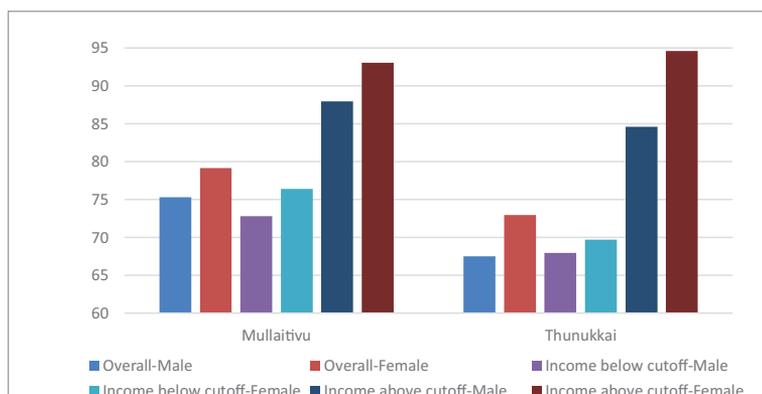


Source: Department of Education (2016)

Figure 5.9 shows the percentage of the students who passed the grade 5 scholarship examination (received more than 70 marks out of 200), in 2017, by zone. Students in all the zones underperformed, scoring less than the national average and certainly the Colombo District. Despite this, even within the districts, there are significant disparities. This is most evident in the Batticaloa District, where the more rural Kalkudah zone had only 43% of the students who passed the Grade 5 national examination whereas in the urban Batticaloa zone 71% of the students passed the examination.

Similarly, in the Mullaitivu District, the more rural Thunukkai zone underperformed the more urban Mullaitivu zone by 11 percentage points.

Figure 5.10: Percentage of students in the Mullaitivu district who passed the Grade 5 scholarship examinations in 2017 by gender and income



Source: Department of Education, Northern Province. Available here: <http://edudept.np.gov.lk/>

A breakdown of the results by gender and income is reported in Figure 5.10 for the Mullaitivu District.⁵² The graph shows that girls outperform boys in both zones. Income plays a larger role in student performance. In the Thunukkai zone, only about 68% of the poor students⁵³ pass the scholarship examination, i.e. score at least 35%. The division between those that are below and above the income threshold is stark as evident in Figure 5.10. Therefore, while the nation prides itself on the almost universal enrolment achieved in primary schooling, introspection is required to address the income driven outcomes in education. The grade 5 examinations, for example, were initially introduced as an aid to poor well-performing students to receive bursaries from the state, but in rural zones such as Thunukkai, less than 7% of the students qualify for a bursary or request for entry into a more prestigious school.

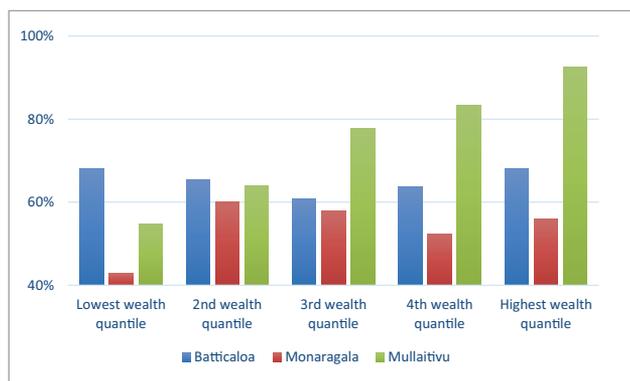
For the empirical analysis, this chapter uses a student's rank in his/her class (a self-reported measure contained in the CRC dataset) as a proxy for educational outcomes.⁵⁴ While this is a very rudimentary measure and does not make comparisons easier, for example, comparing being first in a remote Type 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 5.11) of rank and the wealth 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 Mullaitivu, there is a strong relationship between wealth and the child's ability to be within the top10 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 5.5.

⁵² Similar statistics for the other two districts were not readily available.

⁵³ Proxied by qualification for Samurdhi.

⁵⁴ Due to concerns of non-anonymity, the study cannot use performance at national examinations and identify the individual's personal and household circumstances.

Figure 5.11: Wealth class and school class position/rank within top10



Source: CRC data

OLS Results from Table 5.5 indicate that children who come from more distant areas had poorer ranks (proxied by whether the child went to the same GN school).⁵⁵ There is also indication that girls on average ranked 1.5 positions better than boys and students who were satisfied with the overall quality of education in the school ranked 1.5 positions better than those were not satisfied. The most statistically significant covariate with the largest coefficient is private tuition enrolment. On average, students who went for private tuition ranked three positions better than students who did not go for private tuition. While wealth does not directly affect a student's rank in school, it manifests through private tuition. Interactions of gender with distance to town, the wealth index and access to private tuition are not statistically significant (result not presented here for brevity but available in Appendix A8).

Table 5.5: Estimates of class-rank.

	Rank
Same GN school	-1.753** (0.613)
Satisfied with educational quality	-1.469*** (0.530)
Female child	-1.538** (0.554)
Wealth index	-0.0151 (0.0218)
Private tuition	-3.050*** (0.631)
Constant	13.41 (7.909)
Observations	516
R-squared	0.152

⁵⁵ 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.

*Note: Robust standard errors in parentheses, *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$. Other covariates include, DSDS, ethnicity of the child, number of household members, number of children in the household, type of toilet, type of dwelling and interactions of gender with distance to town, wealth index and private tuition.*

During interviews, parents also iterate the perceived importance of private tuition. A parent from Batticaloa (who is a primary school teacher herself) stated, "*Children should be interested in studies and they should attend for private classes as they can learn a lot of new things. They can gain extra knowledge and in private classes test papers are given to check the knowledge of the students. At school there's less time to teach and check student's home work. When teachers finish checking homework the period is over. So, it's better if children can be sent to private classes.*" Some other parents while underscoring the perceived importance of private tuition, indicated that this was impactful only because teachers purposely teach subpar in schools. Another parent, also from Batticaloa, denounced, "*Teachers spend their time in the canteens without going to the classrooms in the proper time periods. They are hardly concerned about teaching at school. But they earn much more from their private classes and they teach very well in private classes. Why can't they teach well in schools then? Students with a [affluent] family background have access to private tuition classes and they are capable of learning the missed lessons at school. The poor students, however, do not have that ability.*"

Qualitative interviews with the ZDE reveal a lack of opportunities for students to further education beyond high school. Statistics from the ZDE indicate that only about half of the students sitting for their GCE O-level exam in the Mullaitivu and Batticaloa districts qualify to do GCE A-level, the corresponding figure in the Monaragala District is 60%. Those who are not able to progress to the GCE A-level find no alternative opportunities to advance, especially girls. Boys engage in odd jobs, move to urban areas or move to Colombo. Sometimes, even if they qualify for A-levels, students think of the Arts stream (especially boys) as yielding little marginal gain, due to the prevailing job market (with an abundance of arts graduates).

Even a majority of those who do their GCE A-level have a bleak future according to the ZDE, because very few of the A-level students get admitted into universities. The ZDE highlights that while external degrees and TVETs are now popular in the Monaragala District, such opportunities are not as prevalent in Batticaloa and Mullaitivu. The ZDE indicates that the parents and the students sometimes worry about what happens to them after the GCE O-level and/or GCE A-level examination, as the pathway to enhance one's education and skills is not as clear-cut.

The main results discussed in this section conform to patterns evident in the previous chapter. Dropping out from school is primarily driven by poverty. Access to secondary schools within ones GND is primarily driven by location (specifically the DSDs). Access to private tuition, however, is dependent both on income and location. Quality of schools vary by location, specifically the DSDs, but there are no statistically significant differences in the perceived quality of education by income quantiles. Qualitative interviews however indicate that schools in more remote areas (attended by children of households from poorer income strata) provide a lower quality of education. The learning outcomes of education, in particular, the rank a child holds in his/her class depends on income (which manifests through access to private tuition). These results indicate that the two key variables of interest—income and location, are strong predictors of access, quality and outcome of education.

5.5 Conclusion

This chapter focused on a micro perspective based on three case studies. The main results indicate that children from poorer and rural backgrounds are disadvantaged in their access to and learning outcomes from education. Poorer children in rural households are the worst affected. The main results reiterate findings in the previous chapters that income inequality contributes to widening educational inequality. Given the strong link between income and geography (and even ethnicity and geography), geographical disparities may act as a proxy for poorer children being disadvantaged in their education. Addressing income inequality and educational inequality is pertinent to ensuring that a vicious cycle of widening these inequalities is curbed.

CHAPTER 6: CONCLUSION

Various forms of inequalities are an inevitable part of every society, with an on-going global debate regarding the relevance, extent, and effects of this multi-dimensional phenomenon. The United Nations Sustainable Development Goals (SDGs) address the potential negative consequences of rising global inequality through a specific goal (SDG 10 – Reducing Inequalities) and reflect on its intersecting nature by addressing the topic as a crosscutting issue in several other goals. For example, the SDG 4 on Quality Education has equitable and inclusive education for all at its core.

Sri Lanka has had a history of educational policies driven towards providing universal access to education. A network of free public schools, student social welfare measures and making schooling compulsory for children from the ages of 5 to 16 has meant that the country has achieved high primary and junior secondary school enrolment rates, literacy rates and related social indicators. As mentioned in Chapter 1, according to the World Bank Human Capital Index, a child in Sri Lanka experiences a learning gap of 4.7 years during their 13 years of schooling (World Bank 2018b). Evidently, schooling is not the same as learning for the children in Sri Lanka. Hence, assessing the functionality and inequality of the Sri Lankan education system mainly through indicators focusing on access and enrolment overlooks hidden quality differences that impede learning and performance.

The objective of this study was to explore the extent of unequal access to quality education in Sri Lanka. The research questions are:

- (a) How equal is access to quality education in Sri Lanka?
- (b) What factors contribute to educational inequality in Sri Lanka?

Educational inequality was scrutinised using a framework that distinguishes between equality of opportunities and outcomes. Unequal educational opportunities manifest themselves in unequal access to education (physical access and learner’s preparedness) and the quality of education (teacher quality, school management, and resource input), leading to unequal learning outcomes across different groups. While this work, due to missing data, does not assess the overall quality of education provided in Sri Lanka, it provides an insight into the disparities in access and quality to education within the country and identifies research gaps.

While specific individual circumstances, which limit access to education have been highlighted in this analysis (gender, parent education level, location, the urban-rural divide, and poverty), it is important to remember that these factors are contextual by nature and are not an exclusive list of universal factors.

Concerning the first research question, the analysis shows that enrolment gaps within the education system are closing. Sri Lanka has reached near universal primary enrolment for boys and girls, with 99% of all primary-age children enrolled in 2016 (Dundar et al. 2017). In addition, gross secondary enrolment rates jumped from 46% in 1970 to 96% in 2016 (World Bank 2018c). Considering tertiary education, presently, two out of ten students of the relevant age group are

enrolled compared to one out of 100 students in 1970 (ibid.). Yet, disparities in enrolment exist and widen from junior secondary onwards, becoming more marked at senior secondary and tertiary levels. Similarly, while near gender parity has been achieved at primary level, gender disparities widen across higher education levels, overall in favour of girls. In addition, there exists inequitable access to early childhood development, the impact of which is difficult to analyse due to data limitations. However, it is also apparent, even with limited data, that there are educational quality gaps, which are distinct, especially between rural and urban areas and school types. This inequality of learning opportunities for the rural and poor translates into disparities in learning outcomes for these groups, visible in national examinations.

Regarding the second research question, in Sri Lanka a child's individual circumstances at birth affect his/her *access* to education and the learning experience the student encounters. Children from low-income families are generally performing worse (academically) than those from wealthy families, and urban students generally outperform rural students. Overall, Sinhala school students tend to outperform Tamil students and females outperform males at the national examinations and NEREC learning outcome assessments. In addition, the heterogeneous characteristics of Sri Lanka's education system - in terms of grades taught, subjects covered, financing, facilities and teacher quality - perpetuate educational *quality* disparities. As a result, districts such as Mullaitivu, Kilinochchi, and Nuwara-Eliya have populations with the lowest education attainment rates (for O-levels and above). These districts face many challenges in terms of non-congenial schools, lagging early child development, and fewer high quality schools (Type 1AB and National Schools). Data indicates that disparities start during pre-primary time, with the high numbers of stunting and wasting, impeding a proper early childhood development and therefore learning preparedness of the most marginalised (low income, estate sector, rural areas). With private tuition having an increasing presence in the education system, the existing inequalities in the schooling education system may widen due to the geographic and income considerations affecting students' access to private tuition.

The marginalised families who have insufficient access to a quality education are at a higher risk of being caught in a poverty cycle across generations. High educational inequality has strong positive correlations with high economic inequality, which, in turn promotes inequality in social mobility. This leads to a self-perpetuating cycle of poverty. The link between income inequality, educational inequality and life opportunities is highlighted in the case studies on Batticaloa, Monaragala and Mullaitivu districts presented in this work. Perception of inequality is often determined by exposure, and with rural children's exposure to better education systems limited, they often perceive no quality issues in their existing education system. However, the learning outcomes of students from these districts present a different picture. Poor performance rates at O-levels, challenges to physical access to secondary school in larger districts, limited access to university education after passing A-Levels, and restrictions on the subjects that students can pursue, limit employability⁵⁶. This has meant that more children from these poor districts drop out of the education system at secondary level.

⁵⁶ Rigidity of subject streams from secondary to university education, and a limited subject choice provided by the majority of secondary schools, means that students are forced to make decisions at an early age on what courses and employment opportunities they want to pursue with some provided little choice as to what to follow.

In the past, these inequalities in education have led to inequalities in life opportunities, resulting in severe economic, social and political consequences for the country. The lack of employability of university graduates has often been attributed to the poor quality of education they receive. In addition, the skew of students and graduates in favour of the arts compared to the sciences has also translated to an oversupply of graduates in some fields and shortages in others, affecting their employment opportunities.

Recommendations

The study results indicate the need for further reflection on the congeniality report of the Ministry of Education. While the disparities have reduced over the years, the fact that there are still schools without basic facilities despite annual identification is a point of concern. While homogeneity in schools is difficult to achieve, it is important to bridge the inequalities and improve the overall standard of schools.

The existing structural inequalities in Sri Lanka's schooling system could be reduced with equitable funding between Provincial and National Schools and the improvement of school facilities in rural and estate areas as well as an increase in the number of schools providing A-level classes, including science A-level classes.

In terms of disparities in access, it is recommended that authorities consider distance and the time taken to access secondary schools in their assessments. It is recommended that authorities consider undertaking periodic evaluations on the adequacy of schools within zones to evaluate if children in the zones have acceptable levels of easy access (distance and time taken into consideration) to secondary schools.

International research finds, that inequalities are so entrenched by secondary schooling that policies at this stage have had limited impact (Rose 2014). In order to effectively reduce educational inequality in Sri Lanka, it is essential to address structural disparities as early as possible in a child's learning process, preferably during pre-primary age.

Recommendations for further study

Generally, the study found that reliable data regarding education quality and student performances is scarce in Sri Lanka, limiting the empirical insights into the full extent of educational inequalities. The country is not participating in any international student's achievement tests, like PISA or TIMSS, which are skill and performance based and would allow for a detailed comparison of student learning outcomes across the island. Moreover, there is nearly no data assessing education quality by scrutinising teacher quality, efficient resource input or effective, learner-focused school management. While the Ministry of Education collects and compares data on school congeniality and quality assessment, it would facilitate further research if the data collected was made available publicly for research. In addition, data on education quality and learning outcomes has to be collected and explored more thoroughly to understand the dynamics and consequences of structural quality differences in education across the country.

Moreover, there is a need for more nuanced data that can identify causal effects of income and geography on educational access and outcomes. Studies, which delve further into the individual circumstances that affect educational access, particularly in terms of religion and ethnicity and

the impact of school entry requirements on access to a quality education would further enrich the understanding of inequalities that exist in the education sector.

Lastly, further research is needed to understand the impact of the unregulated private tuition system on the public education sector. Anecdotal evidence suggests a lack of formal separation between the public education system and the private tuition sector, with teachers and education administrators working in both sectors simultaneously (Northern Province Ministry of Education 2014; qualitative interviews 2018). Arising conflicts of interests can impede the quality of the public education system further, thus undermining the equity focus of former education policies.

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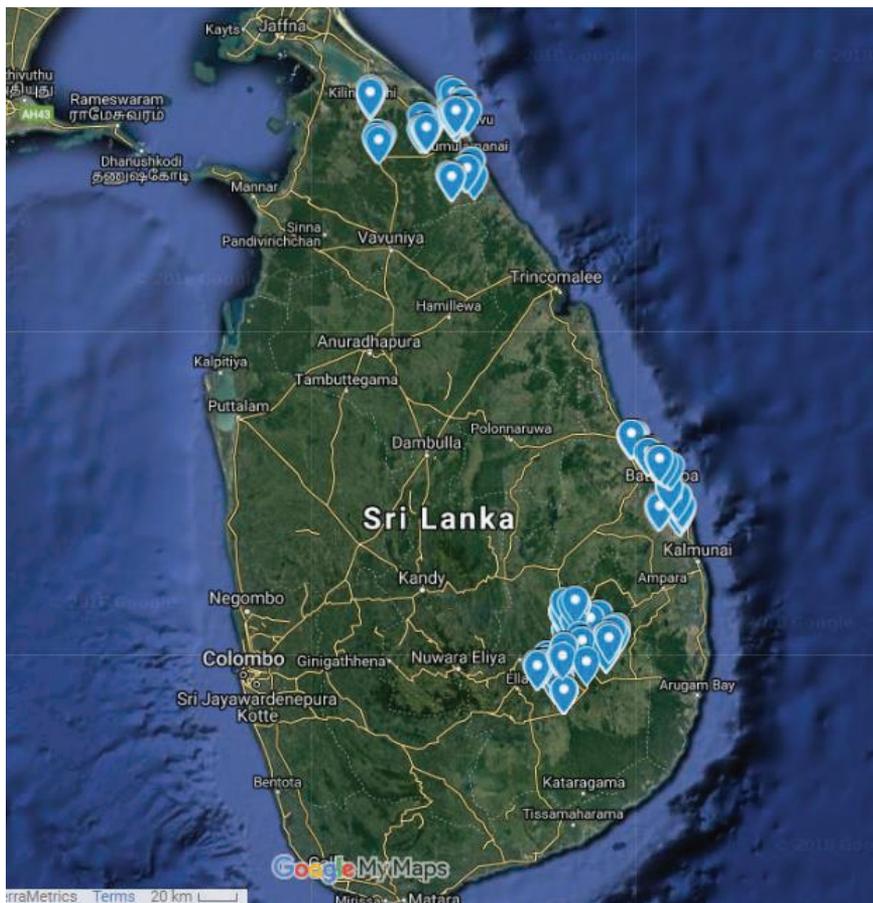
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Appendices

Appendix A1. Means of key outcome variables from HIES 2016 data

District	Non-food expenditure (LKR/month)	Education expenditure (LKR/month)	Education as share of non-food spending	Private tuition expenditure (LKR/month)	Private tuition as share of education budget
Batticaloa	14,413	957	6.67%	1,451	80.22%
Monaragala	21,259	1,360	7.01%	1,053	54.44%
Mullaitivu	18,290	1,070	7.43%	909	74.99%
Colombo	65,803	4,855	7.29%	6,054	77.96%
Sri Lanka	35,988	2,317	6.80%	3,609	73.88%

Appendix A2. Survey locations of the CRC dataset



Adapted from: Inadeen (2018a, 2018b and 2018c)

Appendix A3-A. Descriptive Statistics for DSDs in Batticaloa District

	Eravur Town		Koralaipattu South		Manmunai Southwest		Poraitivupattu	
	mean	sd	mean	sd	mean	sd	mean	sd
Observations	139		121		85		76	
Father Respondent	0.079	0.271	0.132	0.340	0.082	0.277	0.079	0.271
Age of respondent parent	41.850	8.837	40.430	9.300	39.730	9.012	38.130	7.491
Sinhalese	0.000	0.000	0.000	0.000	0.000	0.000	0.040	0.196
Tamil	0.129	0.337	0.983	0.128	1.000	0.000	0.961	0.196
Muslim	0.871	0.337	0.017	0.128	0.000	0.000	0.000	0.000
Female child	0.590	0.494	0.678	0.469	0.647	0.481	0.711	0.457
Samurdhi receiptent	0.536	0.501	0.545	0.500	0.576	0.497	0.658	0.478
distancetown (km)	2.676	2.814	4.736	4.254	5.035	4.398	5.789	3.411
Household Size	5.173	1.414	4.818	1.252	4.635	1.290	4.711	1.273
Number of children in household	2.345	1.134	2.140	0.820	1.941	0.713	1.961	0.855
Borrowed money for consumption	0.438	0.498	0.403	0.493	0.388	0.490	0.303	0.462
Borrowed money to pay other debt	0.197	0.399	0.248	0.434	0.400	0.493	0.197	0.401
Distance to School (km)	1.541	0.917	2.368	2.310	1.821	1.592	1.831	1.483
Child goes to school in GN	0.632	0.484	0.736	0.443	0.702	0.460	0.513	0.503
Child receives tuition	0.555	0.499	0.661	0.475	0.706	0.458	0.697	0.462
Satisfaction of educational quality (1-3)	1.647	0.565	1.383	0.537	1.585	0.496	1.467	0.600
Teachers available for all subjects	0.947	0.224	0.972	0.165	0.827	0.380	0.827	0.381
Discrimination	0.107	0.310	0.052	0.222	0.048	0.215	0.013	0.115
Abuse	0.092	0.291	0.070	0.257	0.036	0.188	0.067	0.251
Wealth index sore	21.030	14.070	9.767	11.070	11.220	9.564	11.950	8.929
Wealth Class Classification (1-5)	3.897	1.290	2.632	1.206	3.000	1.233	3.101	1.274
Child was within top 10 of class	0.613	0.489	0.671	0.473	0.692	0.465	0.594	0.499

A3-B. Descriptive Statistics for DSDs in Monaragala District

	Badalkumbura		Madagama		Madulla	
	mean	sd	mean	sd	mean	sd
Observations	160		141		116	
Father respondent	0.375	0.486	0.298	0.459	0.319	0.468
Age of respondent parent	43.610	8.183	41.540	9.507	41.900	8.398
Sinhalese	0.950	0.219	0.986	0.119	1.000	0.000
Tamil	0.044	0.205	0.014	0.119	0.000	0.000
Muslim	0.006	0.079	0.000	0.000	0.000	0.000
Female child	0.688	0.465	0.610	0.490	0.647	0.480
Samurdhi recipient	0.428	0.496	0.414	0.494	0.431	0.497
Distance to town (km)	7.694	3.888	6.660	4.214	8.224	4.009

Household Size	4.612	1.003	4.816	2.425	4.733	3.530
Number of children in household	1.906	0.734	1.922	1.076	1.862	0.709
Borrowed money for consumption	0.537	0.500	0.221	0.417	0.379	0.487
Borrowed money to pay other debt	0.131	0.339	0.085	0.280	0.017	0.131
Distance to school (km)	3.000	2.397	3.886	3.110	3.000	2.267
Child goes to school in GN	0.556	0.498	0.206	0.406	0.391	0.490
Child receives private tuition	0.506	0.502	0.801	0.400	0.767	0.424
Quality of education satisfaction level (1-3)	1.440	0.498	1.357	0.601	1.336	0.527
Teachers available for all subjects	0.547	0.499	0.600	0.492	0.362	0.483
Discrimination	0.019	0.137	0.000	0.000	0.026	0.160
Abuse	0.013	0.113	0.000	0.000	0.000	0.000
Wealth index score	10.420	9.983	17.210	15.120	11.760	11.520
Wealth class classification (1-5)	2.759	1.384	3.551	1.360	2.927	1.359
Child was within top 10 of class	0.688	0.471	0.500	0.504	0.583	0.500

Appendix A3-C. Descriptive Statistics for DSDs in Mullaitivu District

	Oddusuddan		Welioya		Maritimepattu	
	mean	sd	mean	sd	mean	sd
Observations	136		78		193	
Father respondent	0.110	0.314	0.423	0.497	0.135	0.342
Age of respondent parent	40.590	7.889	41.870	9.672	42.580	7.678
Sinhalese	0.007	0.085	1.000	0.000	0.000	0.000
Tamil	0.985	0.120	0.000	0.000	1.000	0.000
Muslim	0.007	0.085	0.000	0.000	0.000	0.000
Female child	0.628	0.485	0.628	0.486	0.682	0.467
Samurdhi recipient	0.628	0.485	0.295	0.459	0.593	0.493
Distance to town (km)	3.927	3.074	7.192	3.770	3.395	2.444
Household Size	5.263	2.140	4.577	1.391	4.708	1.180
Number of children in household	2.832	2.678	1.833	0.959	2.349	1.802
Borrowed money for consumption	0.511	0.502	0.577	0.497	0.454	0.499
Borrowed money to pay other debt	0.394	0.490	0.103	0.305	0.356	0.480
Distance to school (km)	2.369	1.930	4.182	3.276	2.073	1.471
Child goes to school in GN	0.630	0.485	0.423	0.497	0.435	0.497
Child receives private tuition	0.669	0.472	0.500	0.503	0.777	0.417
Quality of education satisfaction level (1-3)	1.449	0.555	1.276	0.450	1.594	0.523
Teachers available for all subjects	0.921	0.271	0.400	0.493	0.877	0.330
Discrimination	0.068	0.252	0.065	0.248	0.058	0.235
Abuse	0.099	0.299	0.040	0.196	0.048	0.214

Wealth index score	8.894	11.340	9.787	9.804	10.730	11.730
Wealth class classification (1-5)	2.576	1.127	2.720	1.466	2.761	1.269
Child was within top 10 of class	0.626	0.486	0.800	0.422	0.766	0.425

Appendix A4. The Morrisons Score Index

The MSI is a weighted asset indicator that weights 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 in the table below.

	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. $12.87 + 3 \times 1.82$).

Appendix A5. OLS estimates of whether a child is out of school and whether the child receives private tuition(all districts).

	Child not being in school	Child receives private tuition
Gampaha	0.00343	0.00743
	(0.00619)	(0.00662)
Kalutara	0.00561	-0.00226
	(0.00689)	(0.00744)
Kandy	0.00323	0.00967
	(0.00660)	(0.00720)
Matale	-0.000822	0.0148
	(0.00794)	(0.00868)

NuwaraEliya	-0.0146	0.00386
	(0.00826)	(0.00886)
Galle	0.00796	0.0182*
	(0.00670)	(0.00726)
Matara	0.00924	0.00720
	(0.00703)	(0.00751)
Hambantota	0.0146	0.00743
	(0.00769)	(0.00815)
Jaffna	0.00487	0.0196*
	(0.00916)	(0.00996)
Mannar	0.0265**	-0.00562
	(0.0100)	(0.0109)
Vavuniya	0.0114	-0.00256
	(0.0109)	(0.0117)
Mullaitivu	0.0204	0.00766
	(0.0112)	(0.0121)
Kilinochchi	-0.00261	0.0125
	(0.0105)	(0.0112)
Batticaloa	0.0111	0.00600
	(0.00858)	(0.00908)
Ampara	0.0131	0.0197*
	(0.00773)	(0.00810)
Trincomalee	0.00726	-0.00425
	(0.00855)	(0.00905)
Kurunegala	0.00747	-0.00390
	(0.00676)	(0.00726)
Puttalam	0.0316***	-0.00190
	(0.00790)	(0.00849)
Anuradhapura	0.000248	0.0173*
	(0.00781)	(0.00811)
Polonnaruwa	0.000614	-0.00121
	(0.00845)	(0.00913)
Badulla	-0.00240	0.00433
	(0.00774)	(0.00841)
Monaragala	0.00651	-0.00244
	(0.00899)	(0.00947)
Ratnapura	0.00450	-0.00102
	(0.00750)	(0.00791)
Kegalle	0.00243	0.0171*
	(0.00740)	(0.00806)
Rural sector	-0.00470	0.00207
	(0.00384)	(0.00413)

Estate sector	0.0193*	0.000955
	(0.00874)	(0.00958)
Age	0.00333**	0.000534
	(0.00103)	(0.000483)
No. of children in household	0.00289*	0.00108
	(0.00126)	(0.00139)
Education of head of household (in years of schooling)	-0.000582	0.000513
	(0.000352)	(0.000377)
Poor (=1 if poor, =0 otherwise)	0.0198***	0.00429
	(0.00507)	(0.00551)
Gender (=1 if female, =0 if male)	-0.00189	0.00129
	(0.00230)	(0.00246)
Sri Lankan Tamil	-0.00346	-0.00415
	(0.00557)	(0.00597)
Indian Tamil	0.00218	-0.0101
	(0.00871)	(0.00960)
Sri Lankan Moor	0.000491	0.00670
	(0.00440)	(0.00463)
Constant	-0.0384**	-0.000172
	(0.0145)	(0.00850)
Observations	5,726	13,189
R-squared	0.017	0.004

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

Appendix A6. OLS estimates of access to formal and shadow schooling.

VARIABLES	(1) Samegnschool	(2) Samegnschool	(3) private tuition	(4) private tuition
Distance to town	-0.00197 (0.00385)	0.00674 (0.00631)	-0.00972* (0.00386)	-0.00828 (0.00676)
KoralaiPattu South	-0.158 (0.0877)	-0.160 (0.0883)	0.132 (0.127)	0.139 (0.129)
Manmunai South West	-0.216* (0.0940)	-0.231* (0.0950)	0.218 (0.129)	0.224 (0.129)
Poraittivupattu	-0.423*** (0.0995)	-0.433*** (0.100)	0.173 (0.131)	0.178 (0.132)
Badalkumbura	-0.397* (0.171)	-0.418* (0.172)	-0.266 (0.162)	-0.253 (0.163)
Madagama	-0.750*** (0.170)	-0.775*** (0.171)	-0.0470 (0.164)	-0.0372 (0.165)
Madulla	-0.568** (0.177)	-0.591*** (0.178)	-0.0147 (0.168)	-0.00424 (0.169)

Oddusudan	-0.271**	-0.278**	0.178	0.185
	(0.0891)	(0.0895)	(0.126)	(0.127)
Welioya	-0.528**	-0.553**	-0.266	-0.257
	(0.180)	(0.180)	(0.173)	(0.174)
Maritimepattu	-0.498***	-0.508***	0.240	0.245*
	(0.0859)	(0.0867)	(0.123)	(0.124)
Female child	-0.0222	0.0309	0.0398	0.0976
	(0.0298)	(0.0951)	(0.0302)	(0.102)
Female child * distance to town		-0.0131		-0.00232
		(0.00771)		(0.00806)
Sinhala_female child		0.0115		-0.0781
		(0.110)		(0.115)
Tamil_female child		0.0259		-0.0238
		(0.103)		(0.110)
Household size	0.00467	0.00426	-0.0106	-0.0110
	(0.00930)	(0.00936)	(0.00904)	(0.00901)
Number of children	-0.00189	-0.00174	-0.00172	-0.00177
	(0.00977)	(0.00983)	(0.00881)	(0.00875)
Undocumented dwelling	0.501***	0.491***	0.0409	0.0371
	(0.143)	(0.144)	(0.179)	(0.180)
Rental dwelling	0.132	0.128	-0.0677	-0.0581
	(0.297)	(0.298)	(0.228)	(0.222)
Live for free	0.552***	0.548***	-0.0574	-0.0565
	(0.134)	(0.133)	(0.169)	(0.171)
Own without deeds	0.475***	0.471***	-0.0732	-0.0696
	(0.0963)	(0.0956)	(0.148)	(0.150)
Own Dwelling with deeds	0.479***	0.476***	-0.0617	-0.0591
	(0.0935)	(0.0928)	(0.144)	(0.147)
Tamil	-0.0605	-0.0848	-0.355**	-0.386**
	(0.141)	(0.144)	(0.131)	(0.136)
Muslim	-0.375*	-0.385*	-0.395*	-0.430*
	(0.173)	(0.185)	(0.164)	(0.170)
Wealth class	-0.0134	-0.0143	0.0598***	0.0590***
	(0.0110)	(0.0110)	(0.0106)	(0.0106)
Teacher available for all subjects			0.102**	0.101**
			(0.0365)	(0.0366)
Constant	0.535*	0.521	0.735**	0.740**
	(0.265)	(0.266)	(0.277)	(0.279)
Observations				
	1,161	1,161	1,086	1,086
R-squared	0.114	0.116	0.102	0.103

Note: Robust standard errors in parentheses, *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$. Columns 2 and 4 report interaction terms of gender of the child with distance to town and ethnicity, while columns 1 and 3 do not.

Appendix A7. 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***	-0.148***	0.000623	-0.109**
	(0.0370)	(0.0364)	(0.0363)	(0.0389)
Distance to school	0.00587	0.00739	0.0140	0.0129
	(0.00794)	(0.00784)	(0.00755)	(0.00855)
Teachers available for all subjects	0.152***	0.158***	0.271***	0.152**
	(0.0452)	(0.0450)	(0.0421)	(0.0481)
KoralaiPattu South	-0.236	-0.269	-0.301	-0.384**
	(0.144)	(0.143)	(0.169)	(0.139)
Manmunai South West	0.0144	-0.0214	-0.177	-0.286
	(0.147)	(0.143)	(0.172)	(0.152)
Poraittivupattu	-0.131	-0.160	-0.125	-0.366*
	(0.152)	(0.150)	(0.170)	(0.144)
Badalkumbura	0.00177	-0.0429	-0.232	-0.476**
	(0.202)	(0.195)	(0.214)	(0.171)
Madagama	-0.146	-0.174	-0.244	-0.573***
	(0.208)	(0.202)	(0.218)	(0.173)
Madulla	-0.0924	-0.143	-0.156	-0.284
	(0.209)	(0.203)	(0.224)	(0.181)
Oddusudan	-0.185	-0.232	-0.270	-0.365**
	(0.144)	(0.141)	(0.168)	(0.139)
Welioya	-0.167	-0.207	-0.273	-0.233
	(0.212)	(0.206)	(0.223)	(0.187)
Maritimepattu	-0.0602	-0.103	-0.121	-0.352*
	(0.142)	(0.139)	(0.166)	(0.139)
Male child	-0.00241	0.00252	0.0290	-0.0393
	(0.0366)	(0.0357)	(0.0348)	(0.0371)
Household size	-0.0177	-0.0180	0.000869	-0.0120
	(0.00929)	(0.00954)	(0.00699)	(0.00833)
Number of children	0.0162	0.0188	0.00638	0.0349***
	(0.0107)	(0.0109)	(0.0127)	(0.00855)
Undocumented dwelling	-0.0325	-0.0134	0.00288	0.273
	(0.264)	(0.266)	(0.267)	(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	0.114	0.116	0.102	0.103

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

Appendix A8. 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)

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

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



Sri Lanka has a history of educational policies driven towards providing universal access to education. However, universal access to a quality education remains a challenge. Recognising that schooling is not necessarily the same as learning, this study analyses the extent of educational inequality in Sri Lanka in terms of access, quality and learning outcomes and investigates contributing factors. Focusing on secondary education in the public schooling system, the study presents a national overview on educational inequalities, as well as an empirical analysis of the local dynamics and interdependencies in three district case studies of Batticaloa, Monaragala, and Mullaitivu. The study is based on a discussion of the available literature, primary data from the ACTED-CEPA (Citizen Report Card) studies, qualitative interviews with key stakeholders and the Household Income and Expenditure Survey 2016.

