



Key Factors Influencing Education Disparity in the Low-Grown Tea Cultivation Community of Sri Lanka

YUKO FUKUDA*

*Organization for the Strategic Coordination of Research and Intellectual Properties,
Meiji University, Ikuta, Japan
Email: yukotsu70@yahoo.co.jp*

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Abstract Education indicators in Sri Lanka compare well with other South Asian countries relative to economic standards. However, educational disparities between living sectors (urban, rural, individual farming, and estate) remain, and children in the estate sector face the greatest challenges in improving educational attainment. Tea is a prominent industry in the estate sector, with several common types of tea cultivation management, and the educational attainments of children whose parents work in this sector have been previously found to vary depending on the cultivation management type in which their parents are involved. This study aimed to investigate the factors that contribute to children's educational disparities, specifically by focusing on the different management types within the low-grown tea cultivation community. This study adopted a two-step mixed-method analysis. The first step examined children's educational disparity among four living sectors across 9 tea-growing districts, using data from the Child Activity Survey 2008/09. The second step investigated educational disparities within three management types (plantation companies, private estates, and individual farming) of the tea cultivation community. Quantitative analysis employed cross-tabulation, while qualitative analysis relied on questionnaires and interviews. Six indicators of the children's environment were considered key factors influencing educational disparities, with school enrollment status as an indicator of educational attainment. The quantitative analysis revealed that children in the estate sector had the lowest school enrollment rates, particularly those belonging to private estate communities. Contrary to the widely-held belief that household income is a significant factor in educational disparities, it was not found to be statistically significant within either the estate sector or the tea cultivation community. The qualitative analysis indicated that relocation is one of the factors contributing to the low enrollment status of private estate children. It also suggested that other indicators, such as household income, are interconnected factors contributing to educational disparities.

Keywords Sri Lanka, children, educational disparity, tea cultivation community

INTRODUCTION

Tea cultivation was introduced as an alternative to coffee during the colonial period in the 19th century. The laborer houses, known as "line houses," were originally built for seasonal workers migrating from South India for coffee harvesting. However, these houses continue to be used even after transitioning to tea cultivation, lacking adequate facilities and sanitation. This has raised concerns regarding children's development (SOMO 2006). In the 1970s, significant changes in the management structure of the tea cultivation community (referred to as "tea community") occurred due to land reforms, leading to a diversification of management types. Furthermore, economic reforms during the same period brought about overall economic and social development, which impacted the living conditions of those involved in tea cultivation¹.

Previous studies have focused on examining the impact of living environments on educational

¹ In the 1970s, the existing large-scale estates were nationalized and later bundled into 22 Regional Plantation Companies (RPC). In 1995, management was handed over to the private sector. Concurrently, Private Estates (PE) expanded the tea cultivation area and the number of Individual Farmers (IF) increased.

attainment in various fields, with household income considered a crucial factor influencing educational disparities. However, an interesting finding has been reported: despite a higher prevalence of low-income households among tea farmers, all children achieve good educational attainment within the tea community (Fukuda, 2023). This suggests that there may be additional factors beyond household income that are associated with educational disparities. Thus, based on the management types in the tea community, this study attempted to identify factors that affect education disparities among children and explored relations between “the living environments surrounding children” and “their educational attainment” by using quantitative and qualitative methods.

MATERIALS AND METHODS

Methods

This study employed a two-step mixed-method analysis to investigate factors contributing to educational disparities. In the first step, disparities among children in four living sectors across 9 tea-growing districts² were examined. The second step focused on disparities among three management types within the tea community. Quantitative and qualitative methods were employed. The quantitative analysis examined educational attainment differences among the living sectors and the tea community. The qualitative analysis was conducted to identify key factors contributing to education disparities and explore the relations between these factors, based on the different management types of tea cultivation in the low-grown tea areas. Six indicators of the living environment are “household income, house-head’s education level, housing condition, the safety of living space, and child economic and housework”, with “school enrollment” as an indicator of educational attainment.

Data Collection

In the first step, descriptive analysis was conducted using data from the Child Activity Survey 2008/09 (CAS 08/09), which represented all of Sri Lanka except the Northern Districts. For this study, 3,683 households and 6,119 children were extracted from the 9 districts where tea estates are concentrated. Three living sectors were originally defined: urban, rural, and estate. However, due to the significant increase in individual farming, the classification scheme was expanded to include urban, rural, individual farming, and estate. In the second step, questionnaires based on CAS 08/09 were distributed, and interviews were conducted between 2013 and 2015 in the Kotapola division of the Matara district. This area is known for tea cultivation conducted by regional plantation companies (referred to as “plantation companies” or “RPC”), private estates (referred to as “PE”), and individual farming (referred to as “farming” or “IF”). The sample included 302 housing units, with 103 from RPCs, 100 from PEs, and 99 from IFs across 11 villages. Additionally, interviews were conducted with school teachers, estate owners and managers, and local government officers.

RESULT AND DISCUSSION

Educational Disparity Among Living Sectors in Tea-Growing Districts

Despite Sri Lanka’s focus on social policies, the estate sector in the country struggles with low educational attainment and quality of education (UNICEF 2014). Sri Lanka, formerly Ceylon, is a geographically diverse and naturally abundant island. Within the nine targeted districts of the CAS 08/09, the sample distribution was as follows: 473 children (7.9%) in urban areas, 3,352 children (54.8%) in rural areas, 1,289 children (21.1%) in farming communities, and 1,005 children (16.4%) in the estate sector.

Table 1 presents the enrollment status and grade repetition/dropout experience of children. Out

² 9 districts include Kalutara, Kandy, Matale, Nuwara eliya, Galle, Matara, Badulla, Ratnapula and Kegalle.

of 6,119 children, 5,147 were attending school, 633 were not attending, and the status of 339 children was unknown. Notably, the estate sector had the highest percentage (15.5%) of children not attending school, compared to approximately 10% in other residential sectors.

Upon completing primary education, some students face challenges in continuing their education. When examining enrollment status based on the level of education, there were 4,562 children belonging to the compulsory education age group, 97% of whom attended school overall, while only 93% were in the estate sector. For children aged 15-17, 66% overall progressed to senior secondary education, but the rate dropped significantly to 27% in the estate sector.

Table 1 Enrollment status and grade repetition/dropout experience

Living sectors	Enrollment status			Grade repetition / Dropout experience		
	Attend	Non-Attend	Total	Non-experience	Experience	Total
Urban	401 (89.3%)	48 (10.7%)	499	408 (88.9%)	51 (11.1%)	459
Rural	2,855 (90.0%)	317 (10.0%)	3,172	2,823 (87.4%)	407 (12.6%)	3,230
Farming	788 (89.9%)	144 (10.1%)	932	692 (89.9%)	692 (10.2%)	971
Estate	1,103 (84.5%)	124 (15.5%)	1,227	113 (71.3%)	1,133 (28.7%)	1,262
Total	5,147 (89.0%)	633 (11.0%)	5,780	5,056 (85.4%)	866 (14.6%)	5,922

Furthermore, 5,056 children had no experience of grade repetition or dropping out, while 866 children had such experiences. The proportion of children with these experiences varied across sectors, with 11% in urban, 13% in rural, 10% in farming, and a significantly higher 29% in the estate sector. These findings highlight significant differences in the educational attainments of children between the estate sector and other sectors.

Impact of Household Income on Educational Attainment

Past studies have often mentioned that out-of-school attendance is deeply rooted in structural inequalities and disparities. Extensive research has been conducted in various fields to investigate the impact of the family environment on educational attainment, with household income identified as one of the key factors affecting educational disparity (Harsh and Paul 2007).

The average monthly income for all 3,682 households is approximately Rs. 16,000, with urban Rs. 25,595, rural Rs. 17,075, farming Rs. 20,765, and estate Rs. 10,585. In terms of income groups, approximately 50% of households in urban areas belonged to the high-income group, while in rural and farming areas, it ranged from 30% to 40%. However, in the estate, only 4% of households belonged to the high-income group, and a significant 59% lived under 10K, indicating that estate children are much more likely to face poverty than those who live in other sectors.

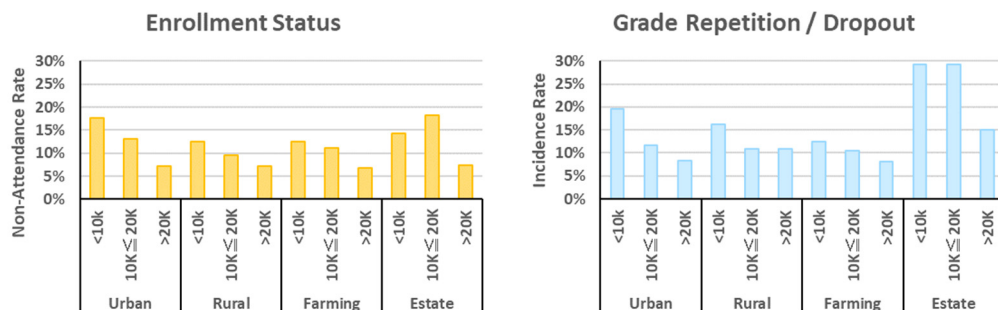


Fig. 1 Educational attainment within living sectors by income group

Figure 1 shows the relationship between household income and educational attainment. In non-estate sectors, higher household income is associated with improved enrollment and reduced grade repetition/dropout rates. However, this pattern is not observed in the estate sector. Further analysis

reveals that while enrollment status and grade repetition/dropout status are statistically significant overall, they are not significant within the estate sector. This suggests that factors other than income are related to the educational disparities within estates.

Educational Disparity within Tea Cultivation Communities

Sri Lanka is divided into 25 districts and 9 provinces, with 331 divisions and 14,021 GN divisions. The study focuses on the Kotapola division in the Matara District, which consists of 37 GN divisions. Data collection and interviews were conducted in four selected divisions characterized by low living conditions. This area is known for its low-grown tea, with diverse management types due to historical backgrounds. In contrast to the upcountry, where large tea plantations were established on hillsides during the colonial era, tea cultivation in the low-grown tea areas has evolved on land adjacent to the villages (Wenzlhuemer, 2008).

Table 2 provides an overview of households and children categorized by management types, including the enrollment status of children. The cross-tabulation analysis revealed a statistically significant difference among the three types of management communities. It is noteworthy that children living on private estates had lower enrollment rates compared to the other management types, with 22.4% of children in the private estate community not attending school. In contrast, only 6.9% of children in the RPC community and none in the IF community were not attending. (Fukuda, 2023)

Table 2 Family overview and enrollment status by management types

Management types	Enrollment status	Boy	Girl	Total	Enrollment status	
					Attend	Non-attend
Plantation company (RPC)	103	106	90	196	175 (93.1%)	13 (6.9%)
Private estate (PE)	100	117	88	205	149 (77.6%)	43 (22.4%)
Individual farming (IF)	99	72	61	133	131 (100.0%)	-
Total	302	295	239	534	455 (89.0%)	56 (11.0%)

Living Environments and Their Impact on Educational Attainment

Figure 2 illustrates the relationship between six living environment indicators and children's educational attainment. The data indicates an overall trend where lower attendance is linked to factors such as low household income, lower education levels of the household head, lack of ownership or residing in a line-house, reduced security of living space, and extended hours of activities.

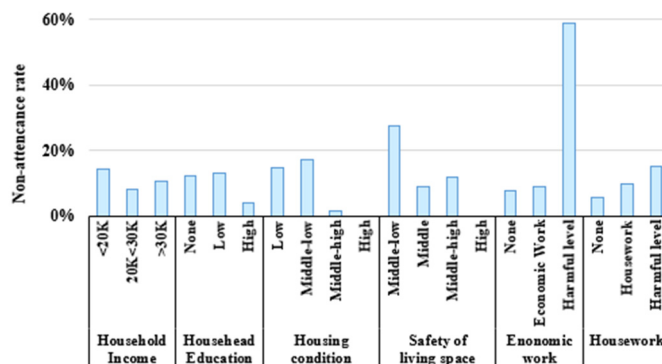


Fig. 2 Impact of living environments on educational attainment

Table 3 presents the statistical results of the cross-tabulation analysis, investigating the relationship between the living environments and children's enrollment status within the tea community. The findings indicate that within tea communities, household income alone does not significantly impact educational disparities. Instead, factors such as the education level of the household head, housing condition, safety of the living space, and children's economic activities show a significant association with educational disparities. These findings suggest that some of these factors may play more influential roles in shaping educational disparities.

Table 3 Relationship between living environments and enrollment status

Family environments		Living conditions		Child activities	
Household Income	Head Education	Housing	Safety	Economic work	Housework
Non-significant	Significant	Significant	Significant	-	Non-significant

χ -square test ($p=0.05$): Significant = Different, No significant = No different
 *Economic work: Due to the sample size, statistical analysis could not be conducted.

Factors Behind Educational Disparity

Table 4 provides the comparisons of the six environmental factors. It indicates that children living in the IF community engaged in economic and housework to some extent, but they had favorable housing conditions and living conditions. Children living in the RPC community had a lower household income and housing conditions, but they fared relatively better in the other four environmental factors. Children living in the PE community had moderate household income and housing conditions, but they experienced poorer levels in the remaining four environmental factors. This discrepancy within the tea community can be attributed to the social structure of each management type.

Table 4 Quality of living environments within tea cultivation communities

Management type	Family environments		Living conditions		Child activities	
	Household income	Head education	Housing	Safety	Economic work	Housework
Plantation company (RPC)	Low	Middle	Low	Middle	No	Low
Private estate (PE)	Middle	Low	Middle	Low	High	High
Individual farming (IF)	High	High	High	High	Middle	Middle

The social structure varies according to management type. Individual farmers (IFs) are self-employed and rely on income from tea harvesting and side jobs. They have higher average incomes, but a significant number of them fall below the poverty line. In contrast, wages for workers in RPCs are determined through wage board discussions involving the RPCs, trade unions, and the government. In contrast, PE workers' salaries are decided individually by each estate, potentially resulting in lower wages and fewer benefits, particularly in medium and small PEs. The higher average household income on PEs compared to RPCs can be attributed to multiple-income earners.

Housing types also differ. IF households typically own their housing, while most children in the estate community live in line houses provided by the estate. A notable difference between the RPC and PE households is their right to residency. Those in the RPCs can stay in line houses after retirement, even if their family members are not working. In contrast, PE residents can only stay if they or their family members are employed, except for some large estates. The better housing arrangement in PEs compared to RPCs can be partly attributed to some PE workers commuting from outside the estate and owning their own homes. Additionally, the education environments also vary. Children from the IF community have more opportunities to access education and attend relatively large schools in town. Conversely, children in the RPC and PE communities have fewer opportunities

to access education. Children in the RPC community primarily attend estate schools (with school buses for distant homes). Similarly, children in the PE community typically attend schools located nearby (Fukuda, 2023).

Reasons for School Non-attendance

As shown in Table 2, all of the IF children were attending school, while 13 RPC and 43 PE children were not attending. Table 5 provides the main reasons explained by the families of 39 non-attending children. The most common reasons were 'financial difficulty' (10 children), 'relocation between estates' (9), and 'child dislikes school/study' (7). Other reasons included 'child labor' (5), 'inadequate documents and procedures' (4), and 'disability' (4).

Table 5 Reasons for school non-attendance

	Financial difficulty	Relocation	Adjustment to school	Economic activities	Inadequate paperwork	Disable	Others	No answer
RPC	3	2	3	2	-	3	-	1
PE	7	7	4	3	4	1	4	16

Table 6 Enrollment status: impact of housing ownership and relocation

	RPC	PE	Total		RPC	PE	Total
Attend	174 (100.0%)	148 (100.0%)	453 (100.0%)	Attend	90 (100.0%)	84 (100.0%)	174 (100.0%)
Doesn't own house	154 (85.5%)	110 (74.3%)	264 (58.3%)	Relocated	1 (1.1%)	42 (50.0%)	43 (24.7%)
Owens house	20 (11.5%)	38 (25.7%)	189 (41.7%)	No relocation	89 (98.9%)	42 (50.0%)	158 (75.3%)
Non-Attend	13 (100.0%)	43 (100.0%)	56 (100.0%)	Non-Attend	9 (100.0%)	24 (100.0%)	33 (100.0%)
Doesn't own house	9 (69.2%)	40 (93.0%)	49 (87.5%)	Relocated	2 (22.2%)	18 (75.0%)	20 (60.0%)
Owens house	4 (30.8%)	3 (7.0%)	7 (12.5%)	No relocation	7 (77.8%)	6 (25.0%)	13 (39.4%)
Total	187	191	509	Total	99	108	207

Furthermore, six estates managers, five school teachers, and five GN officers described the challenges faced by the children. They mentioned that children growing up on the estates face economic disadvantages, as their families have limited awareness of education due to their education level. Consequently, workers, particularly those employed in PEs, often move from one estate to another in search of a better salary, which is an obstacle to children's education. In some cases, children stop attending school due to various factors, such as incomplete procedures by parents, financial constraints within their families, or difficulties in adapting to new schools. These findings suggest that the family's economic status and migration between estates impact children's enrollment status. As shown in Table 2, there was no significant difference between household income and school attendance status, but there was a significant relationship between housing conditions and school attendance status. Table 6 presents the relationship between housing ownership and enrollment status, as well as the relationship between relocation and enrollment status. The cross-tabulation analysis revealed statistically significant findings within the tea community overall. It is noteworthy that there is an observed educational gap based on residence rights and relocation experiences. Specifically, 58.3% of the school-attending children lived in line houses, while 87.5% of the non-attending children did. Among non-attending children on PEs, only 7.0% belonged to families who owned their housing, while 93.0% lived in line houses. As for relocation, overall, 24.7% of school-attending children had experienced relocation, while 60.6% among non-attending children. Among non-attending children in PEs, 25.0% had not experienced relocation, but 75.0% had.

Exploring the Process of Educational Disparity by Interrelated Living Environments

The cross-tabulation analysis conducted in this study revealed that household income was not directly associated with educational disparity in the estate sector or the tea community. However, insights from interviews highlighted the link between household income and residential mobility.

Figure 3 illustrates the process of educational disparities by the living environments surrounding children, with a focus on residency rights, which were found to be statistically significant and emphasized in the interviews. Families without residency right tend to move from one estate to another, influenced by their lower income. That is families with lower incomes frequently relocate between estates in search of better employment conditions. These relocations may require children to change schools, which negatively impacts their educational attainments because of inadequate paperwork, additional cost, or difficulty adjusting to a new school environment.

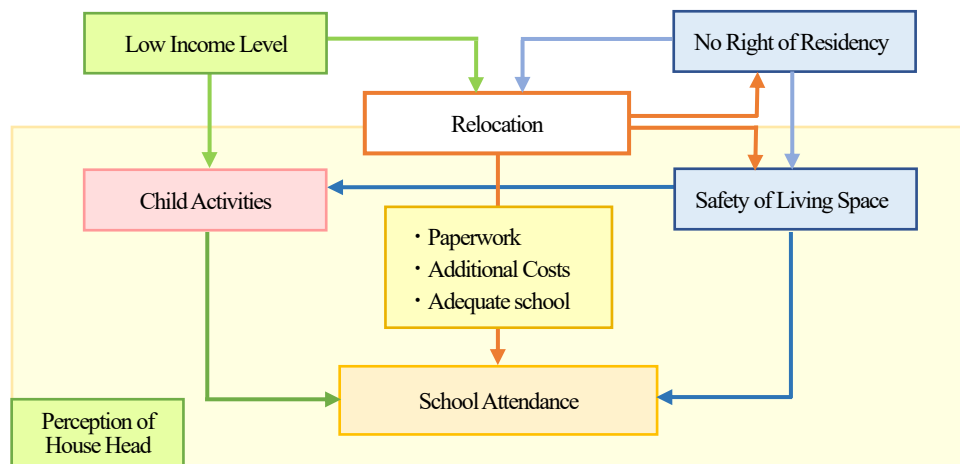


Fig. 3 Process of educational disparities in private estate communities

Furthermore, families without a residential right may be less willing to invest in housing and necessary facilities, which is potentially leading to unsafe living spaces and an increase in the time the children spend helping with housework, in turn negatively affecting their education attainment. Moreover, children often play an important role in low-income families, not only as income providers but also as chore providers. Long hours of engagement in these activities can affect their learning time and is one of the factors that widen the educational gap. Families with low educational backgrounds often lack a concrete understanding of the importance of education or a knowledge of proper sanitation or are unaware of the adverse consequences of child labor, which give a negative impact on children’s education attainment. By exploring the influence of these interrelated living environments on educational disparity, we gain valuable insights into the challenges that hinder equitable access to education.

CONCLUSION

This study employed a mixed-method analysis, combining quantitative and qualitative approaches, to examine the factors contributing to educational disparities. The quantitative analysis revealed that children in the estate sector, particularly those on private estates, had the lowest school enrollment rates.

Contrary to the prevailing belief that household income is a significant factor in educational disparities, the findings indicated no statistically significant relationship between household income and educational disparities within the estate sector or the tea community. However, the qualitative analysis suggested that relocation is one of the factors influencing the low enrollment status among children in private estates. Furthermore, it revealed the presence of other interrelated factors, including household income, which collectively contribute to the differences in enrollment status

among the three management types.

One limitation of this study was the absence of questions about relocation in the initial questionnaires. Further research could focus on comparing the factors that contribute to education disparities between the high-grown and low-grown tea areas of Sri Lanka.

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