

# ACHIEVEMENTS IN HUMAN CAPITAL FORMATION IN SRI LANKA

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## ABSTRACT

Education, being one main way of human capital formation, plays a crucial role in socio-economic development. For a balanced regional development, similar to other resources, formation of human capital in all regions of a country is essential. The paper deals with how the human capital formation through formal education occurs at the regional level in Sri Lanka. The methodology, being quantitative, includes descriptive analysis and ranking of provinces through a composite index on human capital formation. The study completely depends on institutional and non-institutional secondary data sources. The results suggest that, among the provinces, the disparity in human capital formation through education is significant. The Western Province is ranked at the first place while the Eastern Province gets the last. North-Western Province and the Southern Province are also outstanding while the position of Uva and Central Provinces are not satisfactory. In addition, the study finds that there are gender-related disparities also in the formation of human capital at the regional level.

## INTRODUCTION

Human capital<sup>2</sup> formation plays a crucial role in socio-economic development of a country (Psacharopoulos and Patrinos, 2002; Becker, 1964; Schultz, 1961). Education, being one of the principle ways of creating human capital, has been contributing a lot to the human capital formation. This is equally important when determining individual income, capacity to interact and communicate with others (World Bank, 2005). Thus, inequalities in people in the degree of human capital embedded in them due to education contribute to inequalities in the overall living standard among them. In Sri Lanka, literacy rate has reached a level as high as 92.5%, a rate which is comparable to developed nations (Central Bank of Sri Lanka (CBSL), 2005). When the degree of human capital formation is measured in terms of education attainment of the people, it is evident that the proportion of population who is educated up to secondary and post secondary levels has continuously improved and reached 41% and 21% respectively. In contrast, the percentage of population who never attended school has continuously declined. During the last 25 years, this percentage has declined from 11.8% in 1986/87 to 7.9% in 2003/04 (CBSL, 2005). The percentage of students who successfully complete G.C.E. O/L and A/L Examinations is respectively 37% and 56%

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<sup>2</sup>The term human capital refers to the education and health levels of individuals or labor force created as a result of education, training and health service that make them more productive (Todaro, 2000; Schultz, 1961).

(WB, 2005). The computer literacy of those who attained G.C.E. (A/L) or above is 59.7% (Department of Census and Statistics, 2009). Thus, the overall situation of the country is such that human capital formation is satisfactorily high. However, it is important to know how the human capital is created at the regional level in the country and how comparably the people in different regions are being transformed into valuable human capital through education. This study focuses on this issue.

The paper unfolds in seven sections: introduction; aim and objectives of the study; research methodology; data sources of the study; the analysis of descriptive statistics on human capital formation through education; index for human capital formation; and conclusions.

## AIM AND OBJECTIVES

The aim of the paper is to identify the situation of human capital formation through formal<sup>3</sup> education at the regional level in Sri Lanka. In order to achieve this aim, the study is based on the following two specific objectives:

- i. To construct a composite index to measure the degree of human capital formation.
- ii. To identify the regional disparities in human capital formation.

Finally, the nine provinces of the country are ranked according to the degree of human capital formation so that one can identify weaker provinces.

## METHODOLOGY

This paper uses the quantitative method of analysis for reaching the above aim and specific objectives. It consists of simple descriptive statistical methods such as percentage, tables, graphs and a composite index that measures the degree of human capital formation across the regions. Although a region can have different meanings, a region is meant to be a province in this study. Thus, the regional disparities in the Sri Lankan context are identified with regard to the nine provinces in Sri Lanka.

The nine provinces are ranked according to the degree of human capital formation based on a composite index constructed in the study. The construction of the index consists of five main steps. First, data on human capital which was created by education was gathered in relation to each province. Second, the main indicators of human capital formation which are common to all provinces were identified. Third, weights for each indicator of human capital formation were assigned with the help of “Principle Component Analysis<sup>4</sup>”. Finally, values of human capital formation indicators were multiplied by the respective weights so that a composite index for each province could be constructed by adding the values of each indicator for each province. The following is the equation for human capital formation index.

$$HCI_i = O_{i1}W_1 + O_{i2}W_2 + \dots + O_{ij}W_j + \dots + O_{in}W_n,$$

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<sup>3</sup>Formal education includes structured learning formats, study for an educational qualification; organized institutions, methods or procedures etc while informal education is the knowledge obtained by association; asking questions from co-workers, and watching others etc (Roussel, 2000).

<sup>4</sup>Scores of the first principle component were taken as weights for different indicators of human capital formation so that there would not be any biasness in assigning the weights. This method of obtaining weights has also been used in measuring regional inequalities in education in Sri Lanka (Chandrakumara, 2010).

where,  $HCI_i$  is the human capital formation index of the  $i^{th}$  province.  $O_{ij}$  is the value for human capital formation of province  $i$  from the indicator  $j$ , and  $W_j$  is the weight derived from the Principle Component for dimension applied to indicator  $j$ , and so on. The Principle Component Analysis for deriving the weights was carried out with the statistical software MINITAB while the simple calculations, graphs, tables etc were performed in EXCEL.

## **DATA**

The study depends on secondary data obtained from institutional and non-institutional sources. Sri Lankan institutions, particularly, Department of Census and Statistics (DCS), Central Bank of Sri Lanka (CBSL), Ministry of Education (ME), University Grants Commission (UGC) and international institutions, mainly, the World Bank (WB), United Nations Development Programme (UNDP) are the main sources of data. In addition, data available in the studies of individual level researchers were used for the study.

## **DESCRIPTIVE ANALYSIS**

The position of human capital formation can be identified on the basis of the following indicators which represent the quantity and quality of the output produced by the education system in Sri Lanka. Analysis of provincial-wise data helps compare the degree of human capital formation among the provinces.

- i. Literacy Rate
- ii. Participation in formal education
- iii. Attainment of education
- iv. Passing rates at main examinations: G.C.E. (O/L) and G.C.E. (A/L)
- v. Percentage of students qualifying for university admission
- vi. Admission proportions by major stream of study

### **Literacy Rate<sup>5</sup>**

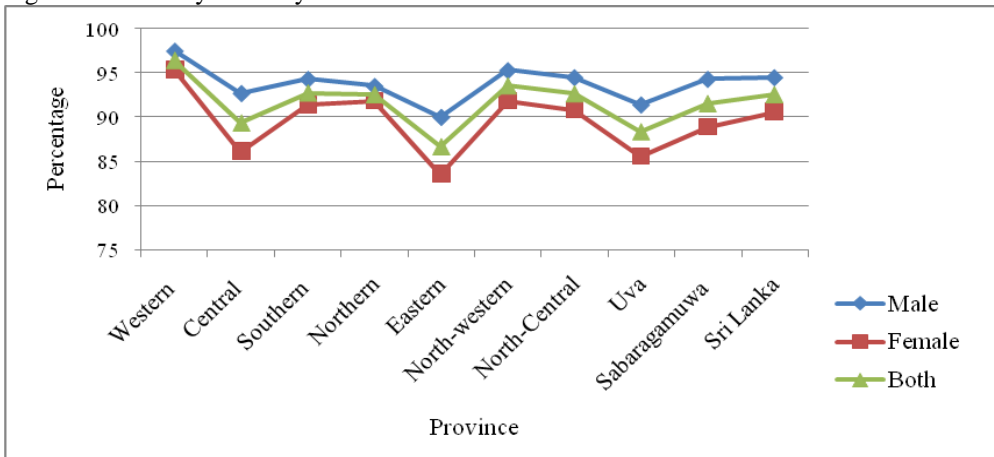
The meaning of literacy is the ability of people to read and write in a language. Literacy rate is the number of literate persons as a percentage of population aged five years and above (CBSL, 1999). Even though this is not a sufficient indicator of human capital formation, it gives an approximate idea on the outcome of the education of a country. A higher literacy rate implies that people are trainable so as to build human capital in them. The literacy rate of Sri Lanka is substantially high that it exceeds 92 percent (CBSL, 2005). However, a comparison of literacy rates among the provinces shows that there is a substantial variation at the regional level. Figure 01 and Appendix 01 show three main features on the disparity in literacy rate.

First, it is evident that literacy rate is highest in the Western province and lowest in the Eastern province. The difference (96.4–86.6) between these two provinces is nearly 10 percentage points. Further, literacy rate in six provinces exceeds 90% while the other two, Central and Uva, are still below that level. Second, it shows that in all provinces, female literacy rate lies behind the male literacy rate. Finally, it seems that in provinces where the overall literacy rate is low, the gap between male and female is still higher (Figure 01). Thus, this situation in the pattern of literacy rates implies that there are regional disparities in the formation of human capital in interaction with other variables such as gender.

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<sup>5</sup> According to the CBSL (2005), literacy rate has been closely associated with the expansion of educational facilities in Sri Lanka. Thus, the literacy rate can be approximately considered as an outcome of the formal education.

Figure 01: Literacy Rates by Province and Gender



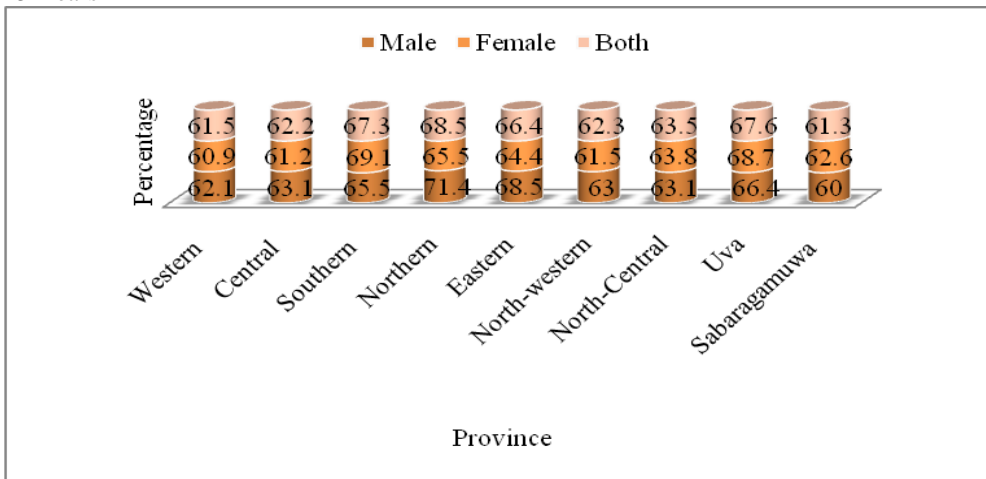
Source: Consumer Finances and Socio-Economic Survey, CBSL, 2005.

Note: Excluding Killinochchi, Mannar, and Mullaitivu Districts.

### Participation in Formal Education

Participation of children in formal education is very important for the formation of human capital. Completion of formal schooling is a prerequisite even for informal trainings. Thus, as a study which analyzes the human capital formation at regional level, it is important to examine how far children are participating in education. The population of the age group 5–25 years is considered as the base population of ‘potential students’ when participation rate in formal education is calculated (CBSL, 2005). According to this definition, participation rate in education in the island is nearly 64%. Figure 02 shows the participation rates related to age groups and the nine provinces of the country. The highest participation rate is shown in the Northern Province while the lowest rate is shown in Sabaragamuwa.

Figure 02: Children's Participation in Formal Education as a % of the Population Aged 5 - 25 Years

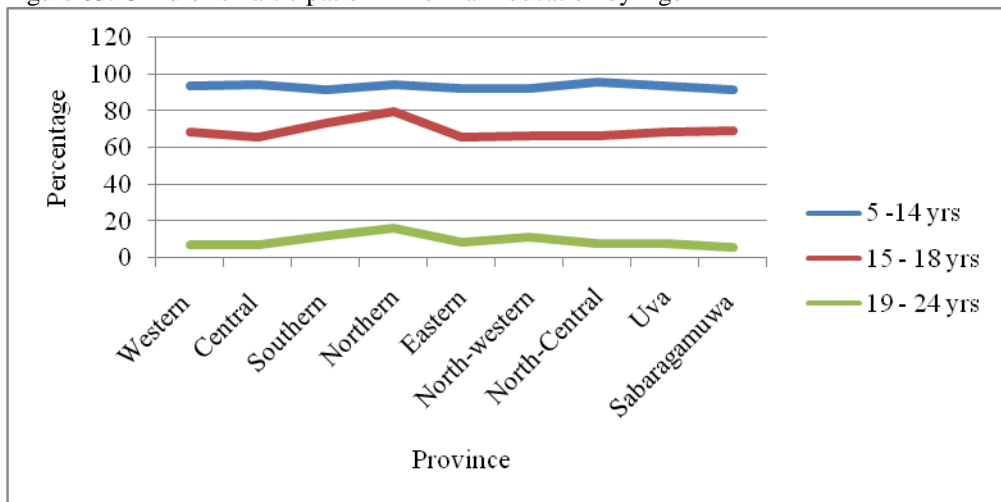


Source: Consumer Finances and Socio-Economic Survey, CBSL, 2005.

Note: Excluding Killinochchi, Mannar, and Mullaitivu Districts.

Figure 03 clearly shows how the human capital formation through education narrows down with the age level of children. The participation in education is highest for the children aged 5 – 14 years. This must have been partly influenced by the compulsory education regulation of the government. However, the participation rate declines with the increase in age. The lowest participation rate is shown for the children of 19 – 24 years in age. This is, however, largely affected by the limited capacities of higher education institutes to absorb all those who qualify for higher education. In addition, a part of students drop out from education due to low results that disqualify them from stepping into higher level. The figure shows that Northern Province is outstanding in the educational participation at each level.

Figure 03: Children's Participation in Formal Education by Age

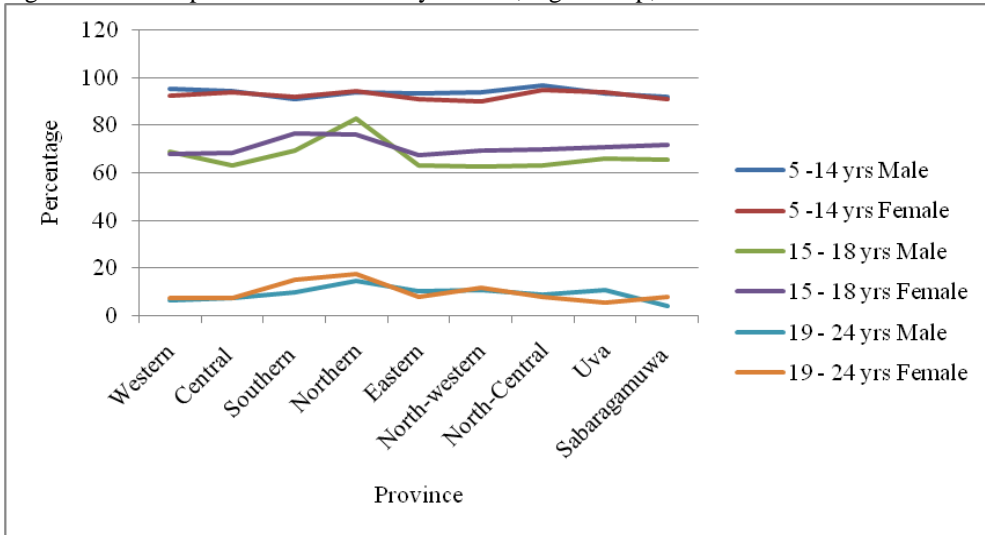


Source: Consumer Finances and Socio-Economic Survey, CBSL, 2005.

Note: Excluding Killinochchi, Mannar, and Mullaitivu Districts.

In the age group of 5 – 14, there is no large gender difference among the provinces as per Figure 04. In the age group 15 – 18 years, male participation rate in the Northern Province is higher than that of females whereas in all other provinces it is lower than that of females. However, in the age group of 19 – 24, participation in the female education is higher in the Northern and also the Southern Provinces. By and large, it seems that even the minor variations between male and female participation across the provinces are seen in the age group of 15 – 18 years.

Figure 04: Participation in Education by Gender, Age Group, and Province



Source: Consumer Finances and Socio-Economic Survey, CBSL, 2005.

Note: Excluding Killinochchi, Mannar, and Mullaitivu Districts.

### Attainment of Education

Formal education which begins from the kindergarten passes different levels such as primary, secondary and tertiary levels. The number of years spent in formal schooling until end of the secondary education is 13 years. Those who sufficiently qualify and wish to continue formal education beyond higher secondary level, step into the tertiary level. For some people, education does not end even at their old age. However, after the secondary level, education is not necessary to be a continuous process. Education attainment implies the number of years or the level of education that the individuals or population of a country reached. This can be considered as a good indicator of human capital formation through education.

Appendix 03 displays the proportion of population who had formal education at different levels of education. According to the classification given in the table, higher levels of education indicate higher human capital levels. “Post-secondary” level represents the highest level of human capital while “no schooling” category represents the zero level of human capital created due to formal education. Appendix 03 reveals several features at regional level human capital formation. First, it shows that the Northern Province is the best in the creation of human capital resources with ‘post-secondary qualifications’ such as first degree and post-graduate degrees and trainings. Western Province is little behind the Northern even though the other provinces are far behind in the formation of post-secondary level qualification holders. Second, when the proportion of population with “secondary and above qualifications” is considered, it seems that the Western Province comes to the first place while all other provinces are far behind. Table 01 shows the order of the nine provinces when they are ranked based on this measure of human capital. Third, it seems that when the percentage of population belonging to “No schooling” category is considered, Western Province is the best while Eastern is the worst. Fourth, when the male-female difference in the attaining of post-secondary level education is taken into account, it seems that, as a whole, males are behind females. This women-favorable gap in the human capital formation is highest in the Northern Province. When the category of “No schooling” is taken

into account, Table 02 shows that majority under this category are males in all provinces. However, males under this category are exceptionally high in the Eastern Province. In Uva and Central Provinces also the percentage of male population under the “No schooling” category is high.

Table 01: Ranking of Provinces According to Attainment of Education

Province	% of Population Attained at Secondary Level and Above	Rank	Position of Human Capital Formation
Western	72.5	1	Best
Central	57.3	6	
Southern	60.7	4	
Northern	60.3	5	
Eastern	48.3	8	Worst
North-Western	63.0	2	Good
North-Central	61.7	3	
Uva	52.5	7	
Sabaragamuwa	60.3	5	
Sri Lanka	62.2		

Source: Consumer Finances and Socio-Economic Survey, CBSL, 2005.

Note: Excluding Killinochchi, Mannar, and Mullaitivu Districts.

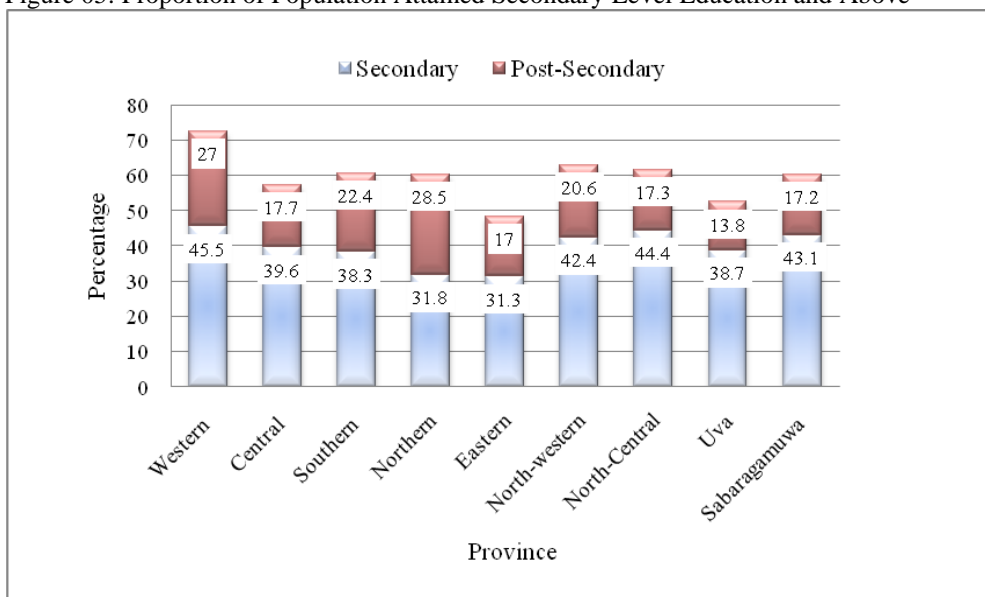
Table 02: Ranking of Provinces According to “No schooling”

Province	No Schooling	Rank	Position
Western	3.9	1	Best
Central	11.1	6	
Southern	7.7	4	
Northern	7.6	3	
Eastern	13.8	8	Worst
North-Western	6.7	2	Good
North-Central	7.6	3	
Uva	11.9	7	
Sabaragamuwa	9.0	5	
Sri Lanka	7.9	-	-

Source: Consumer Finances and Socio-Economic Survey, CBSL, 2005.

Note: Excluding Killinochchi, Mannar, and Mullaitivu Districts.

Figure 05: Proportion of Population Attained Secondary Level Education and Above



Source: Consumer Finances and Socio-Economic Survey, CBSL, 2005.

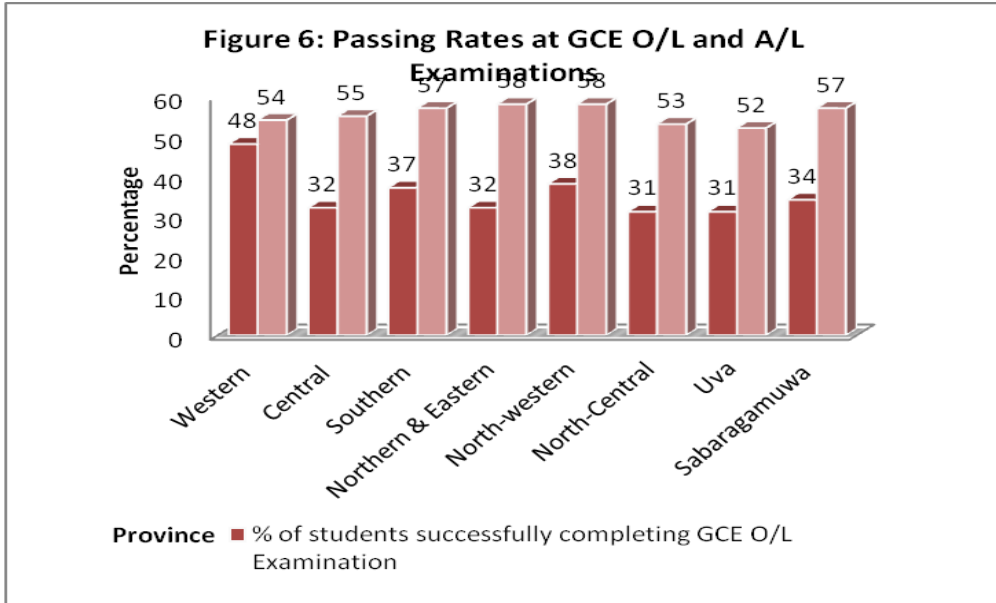
Note: Excluding Killinochchi, Mannar, and Mullaitivu Districts.

### Passing Rates at National Level Examinations

As in other countries, there are two main nationally important examinations in the formal education in Sri Lanka. These two are namely General Certificate of Education (Ordinary Level) and General Certificate of Education (Advanced Level)<sup>6</sup>. Those who sufficiently pass G.C.E. O/L Examination can continue to G.C.E. A/L Examination. The students who pass the A/L Examination can enroll in tertiary education either in universities or other training institutions. At the same time, children have the opportunities to obtain trainings from technical and professional level institutions as well. However, when the figures on educational attainment of children at all levels are considered, it seems that human capital formation in Sri Lanka gets ahead via G.C.E. O/L and G.C.E. A/L Examinations (Appendix 02). Thus, the proportion of students who successfully pass these two examinations is a good indicator of human capital formation in Sri Lanka (Figure 06).

<sup>6</sup>G.C.E. (O/L) and G.C.E. (A/L).





Source: Treasures of the Education System in Sri Lanka, World Bank, 2007.

Figure 06 reveals several features in the passing rates of the two examinations. First, it shows that passing rate at the O/L examination is highest in the Western Province and all the remaining provinces are far behind that. The lowest passing rate is from the North-Central and Uva Provinces. Second, in contrast to the O/L passing rate, the highest passing rate at the A/L Examination is from the Northern and Eastern Provinces<sup>7</sup> and the North-Central Province. This may cause to increase the proportion of students stepping into higher education from these provinces. Third, it seems that the proportion of students who successfully pass at the A/L is greater than that of O/L in all provinces. Finally, it seems that the rate of human capital formation significantly differs among the provinces in Sri Lanka.

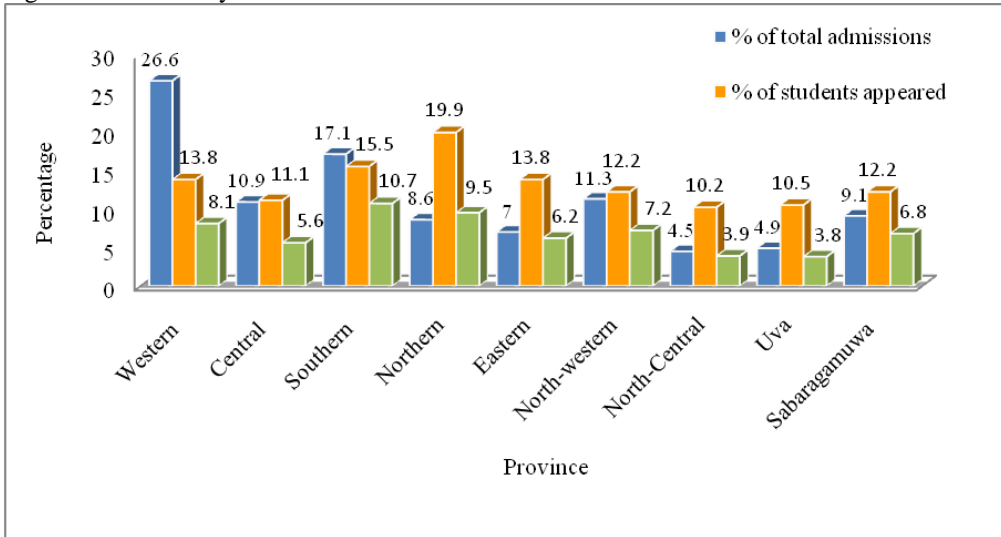
### Admissions to University from the Nine Provinces

There is no doubt that the number of admissions to university per year from the nine provinces taken as a percentage of total admissions is a good indicator of human capital formation. Figure 08 shows that the Western Province is the highest when the university admissions, as a percentage of total admissions of the country, are taken into account. However, the Northern Province is the highest when the university admissions are taken as a percentage of total number of students appeared for the A/L examination. When the admissions are taken as a percentage of students appeared for the examination, Western Province comes to the third place which is behind even the Southern Province.

The merit admissions as a percentage of the total number of students appeared for the A/L examination per year can also be taken as an indicator of human capital formation. Figure 07 shows that according to this indicator, the Southern Province gets the first place while the Northern Province gets the second place.

<sup>7</sup>The position of the Eastern Province may have been overestimated as in this calculation the Northern and Eastern Provinces have been taken together.

Figure 07: University Admissions - 2007

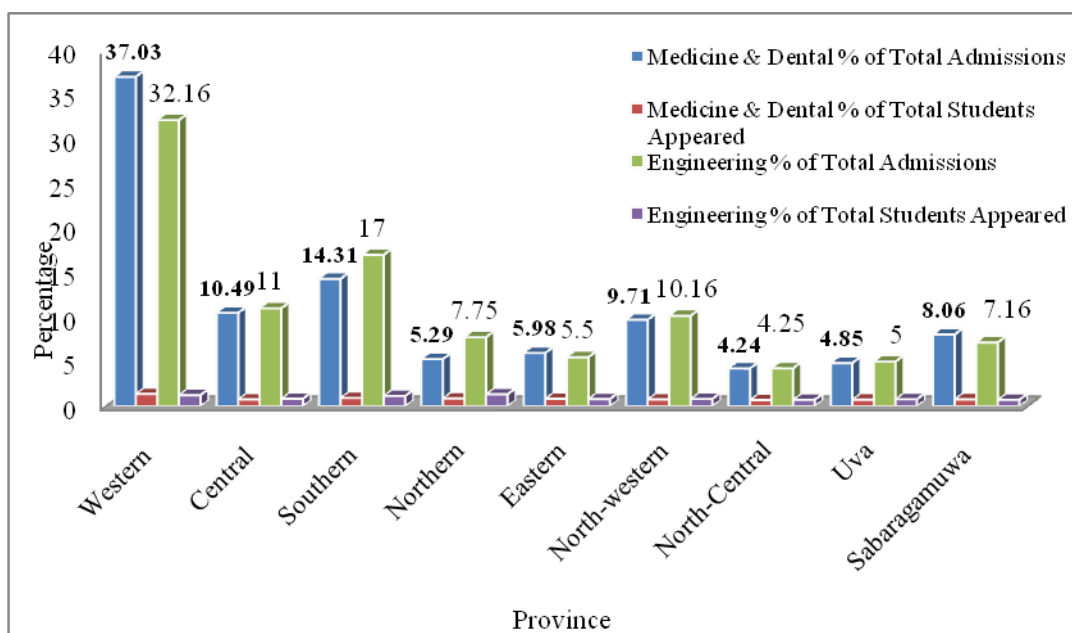


Source: Based on Sri Lanka University Statistics, University Grants Commission, 2008.

### Admission Proportions by Major Stream of Study

Human capital formation begins to specialize in different areas of study after the junior secondary (GCE O/L) level. At the Advanced Level, students choose different streams due to various reasons and they mostly continue higher education related to the same stream. University admissions in different streams is a good indicator to show the extent of specialization in different forms of human capital. Students who pass A/L examination in Science must get highest marks (z-score) if they wish to enroll in Medicine and Engineering. Students with lower marks are given the chance to enroll in other streams such as Physical Science or Bio-Science, Veterinary Science and Agriculture. In the commerce stream also there are sub-divisions where students are selected based on choice and the marks (z-score) obtained. When the students are chosen according to this method, it is important to analyze how they are distributed among the nine provinces in the country.

Figure 08: University Admissions 2007 - Medicine and Engineering



Source: Sri Lanka University Statistics, University Grants Commission, 2008.

Table 03: University Admissions - 2007

Province	Arts	Commerce & Mgt.	Law	Medicine & Dental Science	Veterinary & Agricul.	Engineering	Indig. Medicine	Science & Other Related Disciplines								
	% of total admissions	% of total students appeared	% of total admissions	% of total students appeared	% of total admissions	% of total students appeared	% of total admissions	% of total students appeared								
Western	14.0	2.1	31.9	3.2	25.1	0.2	37.0	1.4	24.7	0.7	32.2	1.2	28.6	0.3	31.7	4.8
Central	10.1	2.9	10.2	2.0	13.5	0.2	10.5	0.8	13.1	0.7	11.0	0.8	13.6	0.3	11.5	3.4
Southern	19.0	4.9	15.5	2.7	16.7	0.2	14.3	0.9	13.4	0.7	17.0	1.1	15.6	0.3	17.9	4.7
Northern	11.2	7.4	5.8	2.6	6.5	0.2	5.3	0.8	11.5	1.5	7.8	1.3	15.6	0.7	7.8	5.3
Eastern	10.1	5.7	6.0	2.6	7.4	0.2	5.9	0.8	7.0	0.8	5.5	0.8	3.1	0.1	5.6	3.2
North-	13.6	4.2	11.4	2.4	9.8	0.1	9.7	0.8	10.5	0.6	10.2	0.8	10.2	0.2	9.8	3.1

Western																	
North-Central	5.3	3.4	4.6	2.0	5.6	0.2	4.2	0.7	4.6	0.6	4.3	0.7	1.0	0.1	3.9	2.6	
Uva	4.9	3.0	5.3	2.1	6.0	0.2	4.8	0.7	5.5	0.6	5.0	0.8	2.7	0.1	4.6	2.8	
Sabaragam uwa	11.8	4.5	9.3	2.4	9.3	0.2	8.1	0.8	9.4	0.7	7.2	0.7	9.5	0.2	7.1	2.7	

Source: Sri Lanka University Statistics, University Grants Commission, 2008.

Figure 08 shows how the students' admissions for Medicine and Engineering are distributed by province. When the university admissions for medicine and Dental Science are taken as a percentage of total admissions from the same streams in the country, Western Province accounts for even more than 37%. However, when the number of admissions for Medicine and Dental Science is taken as a percentage of total number of students in the province, the significance of admissions is only 1.4% even though it is nearly double compared to other provinces. A similar situation can be observed in Engineering admissions also. For these streams, admissions from the North-Central, Uva, Northern and Eastern Provinces remain low. Figure 08 shows that the Western Province takes the first place in university admissions for the streams other than Arts while Uva and North-Central Provinces remain the lowest. Thus, the evidence is sufficient to show that there is an unambiguous disparity among the provinces in the formation of human capital in different areas of study.

#### INDEX FOR HUMAN CAPITAL FORMATION

Descriptive analysis revealed that there were disparities in the formation of human capital at the regional level. However, it is sometimes confusing when different indicators give different results for the same regions on the formation of human capital. For instance, when the human capital formation is measured in terms of the education attainment at secondary level and above, Northern Province is ranked at the fifth place. In contrast, when the passing rate at GCE A/L Examination is considered, the same province is ranked at the first place. Thus, a more appropriate measure of human capital formation is needed in understanding the disparities among the provinces. In order to fill this gap, a composite index was constructed incorporating five common indicators used in the descriptive part of analysis.

Table 04: Human Capital Indicators and Weights

Human Capital Indicator	Weight (Scores of the first principle component)
1. Literacy rate (LR)	0.584
2. Rate of attainment of education (RAE)	0.585
3. Passing rate at the GCE O/L Examination (PROE)	0.535
4. Passing rate at the GCE A/L Examination (PRAE)	0.019
5. Percentage of university admissions (% of total students appeared for the examination from the province) (UAMS)	0.173

The five indicators shown in Table 04 were used for the composite index. Weights for each indicator were obtained through the “Principle Component Analysis”. Scores of the first principle component were used as the weights for human capital formation indicators. Quantity or percentage value of each indicator was multiplied by the respective weights and determined the values related to each indicator. Finally, adding the values of all indicators together, the index values were obtained at the provincial basis (Table 05).

Table 05: Construction of Composite Index by Province

Sources: Calculations based on Consumer Finances and Socioeconomic Survey, CBSL,

Province	LR	Weight1	RAE	Weight2	PROE	Weight3	PRAE	Weight4	UAMS	Weight5	Index
Western	96.4	0.584	72.5	0.585	48	0.535	54	0.019	13.8	0.173	127.80
Central	89.3	0.584	57.3	0.585	32	0.535	55	0.019	11.1	0.173	105.76
Southern	92.7	0.584	60.7	0.585	37	0.535	57	0.019	15.5	0.173	113.21
Northern	92.5	0.584	60.3	0.585	32	0.535	58	0.019	19.9	0.173	110.96
Eastern	86.6	0.584	48.3	0.585	32	0.535	58	0.019	13.8	0.173	99.44
North-Western	93.5	0.584	63	0.585	38	0.535	58	0.019	12.2	0.173	115.00
North-Central	92.6	0.584	61.7	0.585	31	0.535	53	0.019	10.2	0.173	109.53
Uva	88.3	0.584	52.5	0.585	31	0.535	52	0.019	10.5	0.173	101.67
Sabara-gamuwa	91.5	0.584	60.3	0.585	34	0.535	57	0.019	12.2	0.173	110.09

2005; Treasures of the Education System in Sri Lanka, World Bank, 2007; University Statistics, University Grants Commission, 2006 and 2008.

Table 06: Index Value and Rank by Province

Province	Index	Variation from the Maximum	Rank
(1)	(2)	(3)	(4)
Western	127.80	0.00	1
Central	105.76	22.04	7
Southern	113.21	14.59	3
Northern	110.96	16.84	4
Eastern	99.44	28.36	9
North-Western	115.00	12.8	2
North-Central	109.53	18.3	6
Uva	101.67	26.13	8
Sabaragamuwa	110.09	17.71	5

Source: Own calculations

Table 07: Mean, SD, Minimum, Maximum and Range of the Index Values

Mean	SD	Minimum	Maximum	Range
110.38	8.30	99.44	127.80	28.36

Source: Own calculations

The index helps ordering and comparing of the provinces according to the degree of human capital formation in each province. The more is the value of the index, the higher is the human capital formation through education. The nine provinces of the country can be ranked according to the composite index. The Western Province is ranked at the first place in the formation of human capital while the North-Western and Southern Provinces respectively take the second and third ranks. Eastern Province is the worst in human capital formation according to the index. Uva Province also does not differ much from the position of the Eastern Province. The Column (3) in Table 06 shows how far the other provinces deviate from the Western Province according to the value of human capital formation index. Even the North-Western Province which is ranked at the second place in human capital formation shows a gap of nearly 13 percentage points compared to the Western Province. The range of the index value between the best and the worst regions, 28.36 percentage points, and the Standard Deviation of 8.30 also prove that the regional disparity in human capital formation through formal education is significantly high.

## CONCLUSIONS

i. The study reaches the following conclusions on the regional level human capital formation in Sri Lanka:

ii. Almost all the indicators on human capital formation – literacy rate, education participation rate, attainment rate, passing rates at national level examinations, percentage of students who qualify for university admission – show that the regional disparity in the formation of human capital through formal education in Sri Lanka is significantly high.

iii. Although the literacy rate in all provinces is satisfactorily high, it varies in a 10 percentage point range across the provinces. The highest rate is from the Western Province while the lowest is from the Eastern Province.

iv. Literacy rate differs between male and female in such a way that female literacy rate lies behind the male literacy rate in all provinces. In provinces where the overall literacy rate is high, the gap between male and female is lower.

v. The rate of participation in education has a negative relationship with the age of children. This negative association seems stronger after completing the compulsory education by children. Rate of participation in education is highest for the children aged 5 – 14 years in all provinces. The participation rate is lowest for the children aged 19 – 24 years similarly in all provinces. Gender disparity in the participation rate is insignificant in all provinces.

vi. Northern Province is the best when the human capital formation is measured in terms of the proportion of population with post-secondary level qualifications. However, when it is measured in terms of the proportion of population with secondary and above qualifications, the Western Province is ranked at the first place.

vii. When the gender disparity in the attainment of post-secondary level qualifications is considered, it seems that females are forward than males in almost all provinces. This

women-favorable gap is highest in the Northern Province. When the gender disparity is measured in terms of the proportion of population who never attended school (No schooling category) the majority are males in all provinces. The percentage of male population under the “No schooling” category is exceptionally high in the Eastern Province and high in Uva and Central Provinces.

viii. When the human capital formation is measured based on the passing rates of children at national level examinations also, the regional disparity is significant. Successfully passing rate at the O/L examination is highest in the Western Province while all the remaining provinces are far behind. However, the highest passing rate at the A/L examination is found from the Northern, Eastern and North-Central Provinces.

ix. When the university admissions of children from the nine provinces are considered, it seems that there is a significant variation among the provinces. When the admissions are taken as a percentage of total admissions of the country, the Western Province is at the first rank. However, when the admissions are taken as a percentage of the total number of students appeared for the examination in each province, the Northern Province is the highest while the Western Province moves back to the third place even behind the Southern Province. When only the admissions on merit basis are taken into account as a percentage of students appeared, it seems that the Southern Province gets the first rank and the Northern Province gets the second rank.

x. Western Province is outstanding when the human capital formation in Medicine and Dental Science fields is taken into consideration while it is significantly lower in North-Central, Uva, Northern, and Eastern Provinces.

xi. Finally, when the provinces are ranked based on the composite index which includes five main indicators – literacy rate, rate of attainment of education, passing rate at the GCE O/L examination, passing rate at the GCE A/L examination and percentage of university admissions (% of total students appeared for the examination from the province) – the Western Province is ranked at the first place while even the position of the North-Western province, which is ranked at the second place, is significantly lower in the index value of human capital formation. Eastern Province is the worst in the formation of human capital while Uva is also not so different from the index value of the Eastern Province. The gap between the best and the worst provinces, 28.36 percentage points, proves that the disparity in the formation of human capital through formal education is significantly high.

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Appendix 01: Literacy Rates at Provincial Level

Province	Male	Female	Both
Western	97.5	95.4	96.4
Central	92.7	86.1	89.3
Southern	94.3	91.4	92.7
Northern	93.5	91.8	92.5
Eastern	90.0	83.5	86.6
North-Western	95.3	91.8	93.5
North-Central	94.5	90.8	92.6
Uva	91.4	85.5	88.3
Sabaragamuwa	94.3	88.9	91.5
Sri Lanka	94.5	90.6	92.5

Source: Based on Consumer Finances and Socio-Economic Survey, CBSL, 2005.

Note: Excluding Killinochchi, Mannar and Mullaitivu Districts.

Appendix 02: Children's Participation in Formal Education as a Percentage of Population Aged 5 – 25 Years

Province	5 – 14			15 – 18			19 – 24			All Groups		
	M	F	Both	M	F	Both	M	F	Both	M	F	Both
Western	95.2	92.6	93.9	69.1	68.0	68.5	6.5	7.6	7.1	62.1	60.9	61.5
Central	94.4	93.9	94.1	63.4	68.5	65.8	7.4	7.3	7.3	63.1	61.2	62.2
Southern	91.3	91.9	91.6	69.4	76.5	73.2	10.0	15.1	12.5	65.5	69.1	67.3
Northern	94.1	94.3	94.2	82.7	75.8	79.6	14.6	17.6	16.3	71.4	65.5	68.5
Eastern	93.4	91.2	92.3	63.5	67.6	65.5	10.1	7.8	8.8	68.5	64.4	66.4
North-Western	94.2	90.2	92.3	62.9	69.4	66.3	10.9	11.8	11.4	63.0	61.5	62.3
North-Central	96.7	94.9	95.7	63.5	70.0	66.5	8.9	7.9	8.4	63.1	63.8	63.5
Uva	93.5	94.0	93.8	66.3	70.7	68.5	10.9	5.6	8.3	66.4	68.7	67.6
Sabaragamuwa	92.3	91.2	91.8	65.7	71.9	68.8	4.1	7.9	6.0	60.0	62.6	61.3
Sri Lanka	93.9	92.5	93.2	66.6	70.5	68.6	8.4	9.4	8.9	63.9	63.6	63.8

Source: CBSL, 2005.

Note: Excluding Killinochchi, Mannar and Mullaitivu Districts.

Appendix 03: Education Attainment Rates by Province

Province	No Schooling			Primary			Secondary			Post-Secondary		
	M	F	Both	M	F	Both	M	F	Both	M	F	Both
Western	2.7	4.9	3.9	23.5	23.8	23.6	47.2	44.0	45.5	26.5	27.4	27.0
Central	7.7	14.3	11.1	34.3	29.0	31.6	41.9	37.4	39.6	16.0	19.3	17.7
Southern	6.2	9.0	7.7	34.2	29.3	31.6	40.7	36.1	38.3	18.9	25.6	22.4
Northern	6.8	8.3	7.6	34.5	30.1	32.1	33.0	30.8	31.8	25.6	30.9	28.5
Eastern	10.3	16.9	13.8	40.2	35.9	37.9	32.3	30.5	31.3	17.3	16.7	17.0
North-Western	4.8	8.4	6.7	32.6	28.4	30.4	44.0	40.9	42.4	18.6	22.4	20.6
North-Central	5.7	9.4	7.6	31.4	30.1	30.7	45.4	43.3	44.4	17.5	17.1	17.3
Uva	8.9	14.7	11.9	38.0	33.4	35.6	40.0	37.5	38.7	13.1	14.5	13.8
Sabaragamuwa	6.1	11.7	9.0	33.3	28.1	30.6	45.6	40.9	43.1	15.0	19.3	17.2
Sri Lanka	5.8	9.7	7.9	31.6	28.3	29.9	42.9	39.4	41.0	19.7	22.5	21.2

Source: CBSL, 2005.

Note: Excluding Killinochchi, Mannar, and Mullaitivu Districts.