



ISSN Print: 2394-7500  
ISSN Online: 2394-5869  
Impact Factor: 5.2  
IJAR 2015; 1(11): 13-21  
www.allresearchjournal.com  
Received: 07-08-2015  
Accepted: 09-09-2015

**DPS Chandrakumara**  
PhD, Senior Lecturer in  
Economics, Department of  
Economics, University of Sri  
Jayawardenepura, Sri Lanka

## Regional Imbalances in the Distribution of Educational Resources in Sri Lanka

**DPS Chandrakumara**

### Abstract

Since the introduction of free education, for six decades, Sri Lanka has been continuously increasing her educational resources. However, similarly to other resources, a fairly equal distribution of these resources among the regions is necessary for a balanced growth of the country. This paper aims at identifying how equally the increased resources have been distributed among the nine provinces in Sri Lanka. The main source of data is the education census of the Ministry of Education of Sri Lanka. In addition, other secondary sources are also incorporated in the analysis. The pattern of resource distribution among the provinces is identified with the help of some tools of descriptive statistics. The resource availability of individual provinces is measured and imbalances are identified using a composite index of educational resource availability. The study identifies that the regional imbalances in resource distribution is high across the provinces. Using the composite index, the nine provinces are divided into three main categories. First category includes only the Western Province which is the richest in educational resources. Second category includes Southern, North-western and Central provinces which are second only to the Western Province in resource availability. Third category consists of the three provinces North-central, Uva and Sabaragamuwa which lie behind the second category. Finally, the fourth category which consists of the Northern and Eastern provinces is the poorest in educational resources. Thus, the study achieves the aim and identifies that the regional imbalances in the resource availability for education in Sri Lanka are substantially high across the provinces.

**Keywords:** Regional Imbalances, Distribution, Educational Resources, Sri Lanka

### 1. Introduction

Universal free education in Sri Lanka was introduced in 1949 (CBSL, 1999). Since then education was made free and available to every child from Year one to university and other tertiary level education. After independence, the number of schools substantially increased and educational facilities were broadly expanded throughout the country (Silva, 1996)<sup>[21]</sup>. As a result, at present, 219,000 teachers in 9,714 public schools are serving for 3,836,550 students (CBSL, 2008). In addition to public schools, 653 Pirivena and 93 private schools are providing the service in the country. The number of national universities also expanded up to 15 so that it can absorb about 66,996 internal students in various disciplines per year under the present capacity. Government expenditure on education has been remaining around 10 percent as a percentage of total expenditure and nearly 3 percent as a percentage of GDP (CBSL, 2008). In addition, other welfare programmes such as textbooks and mid-day meals for students, trainings to teachers etc have been provided free of charge. Furthermore, subsidiary services needed for education, roads, transport etc, have shown a continuous increase. Hence, the expansion of both physical and human resources for education has been satisfactorily high.

The prosperity of educational facilities in the country is usually shown by two main indicators, 'density of schools compared to student population' and the 'student – teacher ratio'. When the regions are compared in terms of these indicators, it seems that there is no very high disparity in the distribution of facilities. For instance, there are no records for students whose education was stopped due to lack of schools in any area of the country. It means that all the children who demanded for education had no problem of enrolling in schools. The second indicator, 'student/teacher ratio' also has not shown a significant

**Correspondence**  
**DPS Chandrakumara**  
PhD, Senior Lecturer in  
Economics, Department of  
Economics, University of Sri  
Jayawardenepura, Sri Lanka

difference among the provinces. The lowest ratio is 19 for North-Western Province while the highest is 23 for Western Province (WB, 2002) [23]. However, measuring the regional availability of educational facilities using these single-dimensional indicators is not meaningful and does not properly show the general position in the prosperity in resources. To measure the availability of educational facilities so as to compare among regions, a multi-dimensional or composite index that takes into account all the main facilities in each region is necessary. However, no attempts have been made to measure the regional disparity in educational resource availability in Sri Lanka using such a composite index. Hence, this study attempts to fill this gap. The paper proceeds in seven sections. Next to this section of introduction, section 2 consists of the aim and objectives of the paper. Section 3 presents the methodology of the study. Section 4 is a brief description about the data. Section 5 is a descriptive analysis on the distribution of educational resources among the provinces. Section 6 is devoted to construction of the composite index and measuring the imbalances among the provinces. The final section, section 7, presents the conclusions of the study.

### Aim and Objectives

Aim of the paper is to identify the distribution of educational resources among the provinces in Sri Lanka and to identify and measure the regional imbalances. In order to cooperate the aim, the study based on the following two specific objectives.

1. To construct a composite index that indicates the educational resource prosperity.
2. To Measure the education resource prosperity in each province of Sri Lanka.

Finally, the paper aims at ranking the nine provinces in Sri Lanka according to the prosperity of educational resources in each province.

### Methodology

A region is defined by many scholars in different ways. It can be either an international geographical area such as Asian region or an internal area within a country. When it becomes a country concept, it can further have different forms such as federal states, provinces, districts or rural urban divisions (Rodriguez-Pose, 2003; Noorbakhsh, 2003) [19, 18]. This paper studies the regional imbalances in the distribution of education resources on the provincial basis of the country. Further, the study is delimited for the education resources needed from grade 1 to Advanced Level students and special reference is given to the public sectors resources. The analytical method was wholly quantitative and can be divided into two main parts. First, in order to identify regional differences in educational resources the method of descriptive analysis was used. Under this method, simple numerical calculations, tables, bar charts etc were used so that differences between provinces could be identified. This section of analysis was carried out using EXCEL and MINITAB computer software. Second, in order to measure resource imbalances among regions a resource index was constructed with the help of 'Principle Component Analysis'. The construction of resource index consisted of several steps. First, data on resource availability was gathered for each province. Second, commonly available educational resources in all provinces were identified. Third, quantity available in each resource was identified separately for each province.

Fourth, weights for each resource were assigned with the help of 'Principle Component Analysis'. Finally, quantities of resources available in each province were multiplied by respective weights so that a composite index for each province was constructed by adding the values related to each asset in each province. The following was the equation for the composite index for a province.

$$CRI_{ci} = R_{i1}W_1 + R_{i2}W_2 + \dots + R_{ij}W_j + \dots + R_{in}W_n$$

Where  $CRI_{ci}$  is the composite resource index of the  $i^{th}$  province.  $R_{ij}$  is the resource value<sup>1</sup> of province  $i$  from resource category  $j$ , and  $W_j$  is the weight derived from principle component for dimension applied to category  $j$ , and so on. The principle component analysis for deriving the weights was performed with the help of the statistical software MINITAB.

The composite index ( $CRI_{ci}$ ) is a multi-dimensional indicator which is impossible to imagine by simple visualization (Clarke, 2006) [10]. The provinces were ranked in terms of  $CRI_{ci}$  so that one could compare the educational resource availability among the provinces.

### Data

The study is completely based on secondary data which was obtained from both institutional and non-institutional sources. The main source of institutional data is the Ministry of Education (MOE). Data of the School Census – 2005 and 2006 which have been prepared by the Statistical Branch of the Ministry of Education was used for the study. In addition, data obtained from the reports of Central Bank of Sri Lanka (CBSL), Department of Census and Statistics (DCS) and the World Bank (WB) were also used. Moreover, data gathered by individual level researchers for different purposes were also utilized for the study.

### Distribution of Educational Resources

Education resources mainly consist of directly useful physical and human resources and indirectly useful resources. Physical resources which are directly useful for education are mainly the school network and the buildings and equipment needed for teaching and learning. Absolute figures on the distribution of schools and teachers among the provinces in Sri Lanka are given in Table 1. It shows that how the public sector dominates the school education in Sri Lanka. Total number of public schools in the country is 9,714 while the number of private schools and Pirivenas are respectively only 93 and 653. Central and Western Provinces are highest in the absolute number of public schools while Northern, Eastern, North Central and Uva are the lowest. However, the average school size<sup>2</sup> () is highest in the Western Province while it is lowest in the Northern Province. More than half of the private schools of the country are situated in the Western Province while there are only few in five provinces. Pirivena educational institutions are scarce in the provinces where the majority of people are Hindus. The dependency of students on public schools is very high in all provinces. In some provinces such as Eastern, North Western and North Central nearly 100% of students depend

<sup>1</sup> Number of units or percentage.

<sup>2</sup> Average school size is obtained by dividing the number of students in the province by the number of schools (WB, 2002).

on public schools. Even in the Western Province where the highest number of private schools is established, more than 90% of students are enrolled in public schools.

The absolute figure for the teacher population in public schools is highest in the Western Province. In addition, central and Southern provinces are secondly at the front in teacher population compared to the lowest absolute figures in Northern, North-Central and Uva provinces. The student/teacher ratio is best in the North-Western Province and worst in the Northern and Eastern provinces.

The figures related to the number of schools do not indicate anything about the size of schools in terms of the number of

students that can be accommodated by the schools. The number of large-scale schools a province belongs is a good indicator of the richness in education resources. The average size of school is highest in the Western Province and it is 627 students (Table 2). About 79% of the large-scale schools that have a student population more than 2500 are situated in the Western, Central, Southern and North-western provinces. The four provinces, Northern, Eastern, North-Central and Uva, account only for 12% of the schools that can accommodate more than 2500 students. This shows that the large-scale schools in the country have been concentrated into four main provinces.

**Table 1:** Some Key statistics on Education in Sri Lanka

Province	No. of pub schools <sup>3</sup>	No. of Students in pub. schools	No. of Private schools <sup>4</sup>	Private school students	No. of Pirivenas <sup>5</sup>	Pirivena students	National schools		Total No. of students in all schools	% of students in public schools
							No.	%		
Western	1,353	857,466	52	81,662	136	12,653	64	19.75	951,741	90.09
Central	1,467	503,525	12	9,855	94	7,907	54	16.67	521,287	96.59
Southern	1,093	494,906	11	5,239	149	10,132	60	18.52	510,277	96.99
Northern	892	264,849	6	7,925	1	263	11	3.40	273,037	97.00
Eastern	971	372,452	1	40	20	1,246	27	8.33	373,738	99.66
North-western	1,221	456,502	3	782	85	7,589	34	10.49	464,873	98.20
North-Central	782	248,637	1	85	48	3,997	10	3.09	252,719	98.38
Uva	831	276,851	5	2,123	49	3,876	36	11.11	282,850	97.88
Sabaragamuwa	1,104	361,352	2	163	71	7,236	28	8.64	368,751	97.99
Sri Lanka	9,714	3,836,550	93	107,874	653	54,899	324	100.00	3,999,323	95.90

**Sources:** (i). Ministry of Education, 2007.

(ii). World Bank, 2007.

**Table 2:** Schools by Size of Student Population

Province	Average school size	<50 Students	51-100	101-200	201-500	501-1000	1001-2500	>2500	Total
Western	627	110	139	206	382	243	218	55	1,353
Central	364	266	235	303	361	187	100	15	1,467
Southern	473	123	151	250	292	146	107	24	1,093
Northern	306	173	150	171	228	124	43	3	892
Eastern	388	90	142	221	269	168	79	2	971
North-western	330	205	180	266	312	146	94	18	1,221
North-Central	336	171	127	145	193	95	45	6	782
Uva	366	158	107	181	214	107	62	2	831
Sabaragamuwa	337	253	161	223	263	124	69	11	1,104
Sri Lanka	410	1,549 (16%)	1,392 (14.3%)	1,966 (20.2%)	2,514 (25.9%)	1,340 (13.8%)	817 (8.4%)	136 (1.4%)	9,714 (100.00%)

**Source:** Ministry of Education, 2007.

<sup>3</sup> This includes both provincial and national schools in the public sector.

<sup>4</sup> There are no private schools in Kilinochchi, Mannar, Vaunia, Mullativu, Ampara, Trincomalee, and Polonnaruwa Districts.

<sup>5</sup> There are no pirivenas in Jaffna, Kilinochchi, Mannar, Mullativu and Batticaloa Districts.

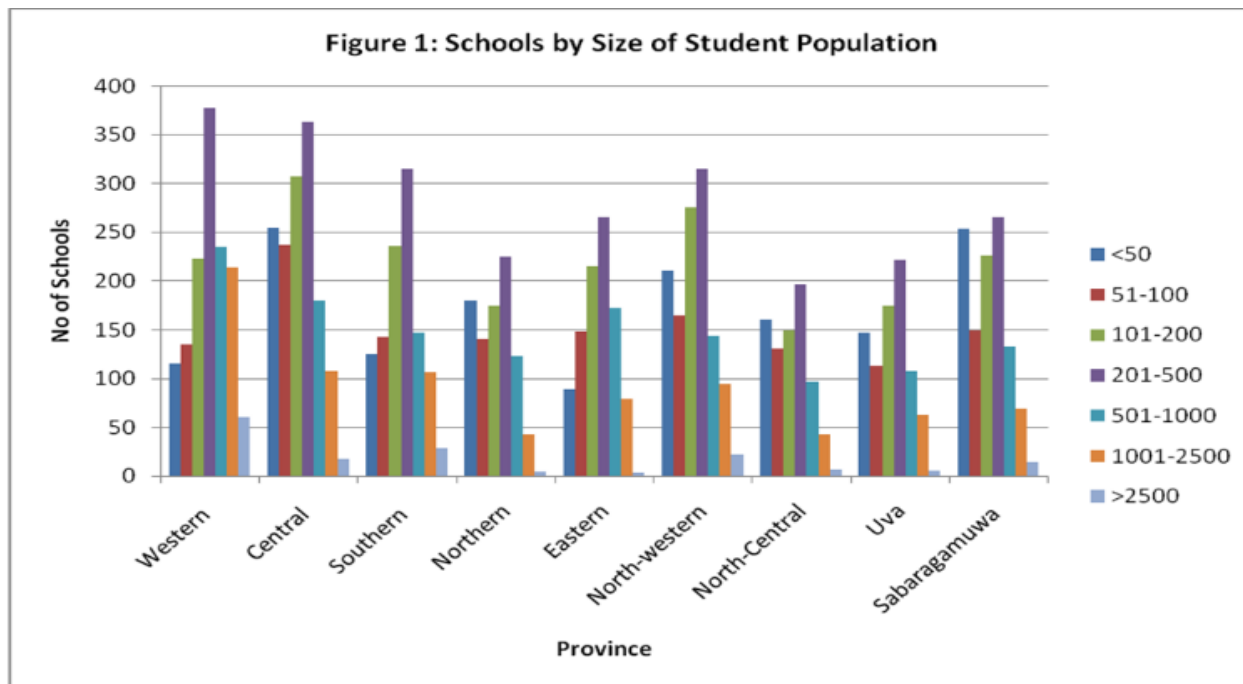
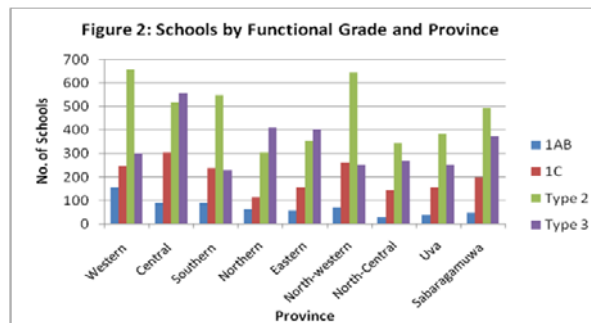


Table 3 gives more information on how the schools are distributed among provinces by the functional grade of schools. All the schools in the country are divided into three types with three grades in the type 1. A and B grade schools in the type 1 are the schools which have Advanced Level Science stream classes while the grade C are the schools that have only Arts and Commerce stream classes for Advanced Level. Type 3 includes the schools which have the classes only up to Grade 5 or Grade 8 while all other schools are included in the type 2 (Ministry of Education, 2006) [16]. Table reveals that nearly one-fourth of Grade A and B schools are situated in the Western Province. Central, Southern and North Central provinces are also high in the share of A and B grade schools. However, the number of schools belongs to this two highest grades is lowest in North Central, Uva and Sabaragamuwa provinces. Thus, it seems that opportunities available for students to specialize in the science stream vary among the provinces.

**Table 3:** Schools by Functional Grade and Province

Province	1AB		1C	Type 2	Type 3	Total
	No.	%				
Western	160	24.30	256	654	303	1,353
Central	93	13.78	308	520	546	1,467
Southern	91	14.09	238	548	216	1,097
Northern	62	9.91	118	313	399	892
Eastern	55	8.82	160	362	394	971
North-western	74	11.00	260	643	244	1,221
North-Central	31	4.64	147	339	265	782
Uva	43	6.18	169	376	243	831
Sabaragamuwa	50	7.28	198	490	366	1,104
Sri Lanka	659	100.00	1,854	4,225	2,976	9,714

Source: Ministry of Education, 2007.

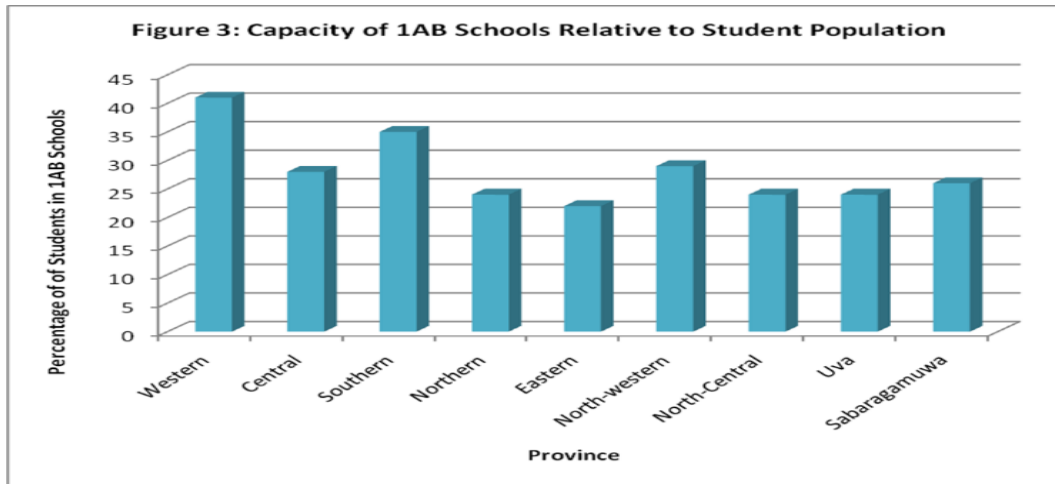


Specially, the capacity of grade 1AB schools where the Advanced Level Science stream classes are available is a good indicator for richness of education infrastructure in a province. However, it is more meaningful when this capacity is compared with the total number of student population in each province. Table 4 shows that the Western Province is rich enough to enroll 41% of the student population in Grade 1AB schools. Central, Southern and North-western provinces also remain somewhat high in the relative capacity to absorb students. However, the capacity of Northern, Eastern, North-central and Uva provinces are much lower than that of the Western Province and the country average.

**Table 4:** Capacity of Grade 1AB Schools by Province

Province	% of Students Enrolled by Grade 1AB Schools = Relative Capacity of 1AB Schools
Western	41.00
Central	28.00
Southern	35.00
Northern	24.00
Eastern	22.00
North-western	29.00
North-Central	24.00
Uva	24.00
Sabaragamuwa	26.00
Sri Lanka	28.00

Source: Based on Ministry of Education, School Census-2006, 2007.



The availability of schools in English is also a good indicator of education resources because English is very important for children when they step into higher education and the job market as well. Nearly 96% of schools are single medium. The number of schools where 3 or more subjects are taught in English medium is only 437 while nearly half of these are

situated in Western and Central provinces (Table 4). Eastern, North-central and Uva are the lowest in the availability of English medium schools. It is, thus, clear that the distribution of this important resource shows a very high variation among the provinces.

**Table 4:** Schools by Medium of Instructions and Province

Province	Sinhala	Tamil	Sinhala & Tamil	Sinhala & English	Tamil & English	Sinhala, Tamil & English	Total
Western	1,119	105	16	87	14	12	1,353
Central	878	517	15	36	9	12	1,467
Southern	1,006	37	4	44	1	1	1,193
Northern	17	835	-	-	40	-	892
Eastern	236	698	1	6	30	-	971
North-western	1,019	148	2	45	6	1	1,221
North-Central	677	86	-	19	-	-	782
Uva	609	192	-	26	3	1	831
Sabaragamuwa	874	186	-	35	7	2	1,104
Sri Lanka	6,435	2,804	38	298	110	29	9,714

Source: Ministry of Education, 2006.

Although the student/teacher ratio indicates the availability of teachers for students in all provinces, it does not show anything about the quality of teachers. Table 5 shows the distribution of teachers among the provinces by the major type of qualifications and trainings. Graduate teacher category includes the teachers who hold at least first degree or post-graduate degree/diploma qualifications in addition to the first degree. This category of teachers is the crucial asset for the Advanced Level students. The concentration of this

human capital in Western, Central, Southern and North-western provinces is clearly identifiable because these four provinces alone accounts for 61% of the total graduate teachers in Sri Lanka. In contrast, the percentage of graduate teachers who render the service in the remaining five provinces together is only 39% of the graduate teachers in the country. Thus, this indicator also proves how the human resource has been concentrated in four main provinces.

**Table 5:** Teachers of Major Qualification Category by Province

Province	Graduates No. & %	Trained No. & %	Untrained No. & %	Total
Western	12,711 (22.0)	23,573 (18.0)	926 (12.0)	37,210 (20.0)
Central	7,097 (12.0)	18,834 (15.0)	1,256 (17.0)	27,187 (15.0)
Southern	7,867 (14.0)	17,214 (13.0)	501 (7.0)	25,585 (14.0)
Northern	3,440 (6.0)	7,021 (5.0)	998 (13.0)	11,459 (6.0)
Eastern	3,222 (6.0)	11,420 (9.0)	1,373 (18.0)	16,015 (9.0)
North-western	7,312 (13.0)	16,704 (13.0)	791 (11.0)	24,807 (13.0)
North-Central	2,381 (4.0)	9,094 (7.0)	430 (6.0)	11,905 (6.0)
Uva	3,173 (6.0)	10,598 (8.0)	763 (10.0)	14,534 (8.0)
Sabaragamuwa	4,726 (8.0)	13,478 (11.0)	436 (6.0)	18,640 (10.0)
Sri Lanka	56,929 (100.0)	127,936 (100.0)	7,474 (100.0)	187,339 (100.0)

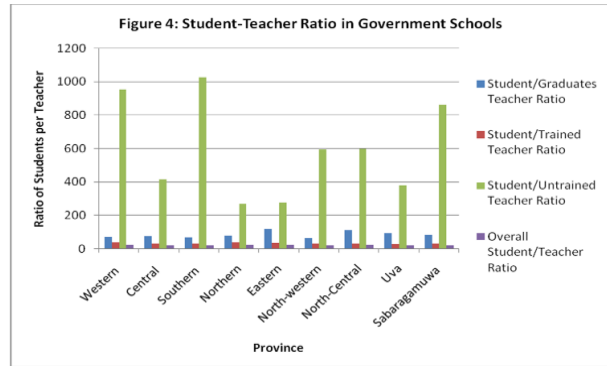
Source: Ministry of Education, 2006.

Distribution of teachers among the provinces is a good indicator to show the disparity in human capital availability for education in the provinces. Overall student/teacher ratio does not show a substantial variation among the provinces as there are a lot of untrained teachers in the Northern, Eastern, North-Central and Uva provinces. However, variations are significant when the qualifications of teachers available in each province are compared. Student/graduate-teacher ratio is best in the Southern Province and it is 48 students per 1 graduate teacher. This ratio is worst in Eastern Province and 85 students per graduate teacher. Other provinces changes vary between these two minimum and maximum ratios. In case of trained teachers there is no big variation among the provinces. However, it is evident that the Western Province is privileged to have a ratio of ‘one untrained teacher for 1009 students’. Southern Province also enjoys a very healthy ratio of students/untrained teachers of 900 students per teacher. In contrast, this ratio is worst in Northern and Eastern provinces and respectively 194 and 229 are the ratios of students per untrained teacher.

**Table 6:** Student Teacher Ratio in Government Schools

Province	Student/Graduates Teacher Ratio	Student/Trained Teacher Ratio	Student/Untrained Teacher Ratio	Overall Student/Teacher Ratio
Western	53	36	1009	21
Central	55	27	416	17
Southern	48	29	900	18
Northern	56	36	194	20
Eastern	85	32	229	21
North-western	52	27	664	17
North-Central	76	28	802	20
Uva	60	26	635	18
Sabaragamuwa	51	27	846	17
Sri Lanka	56	30	514	19

Source: Ministry of Education, 2007.



Arunatilake (2006) [3] provides a more realistic set of indicators in order to measure the quality of schools by province (Table 7). She reveals that 98% of the roofs of schools of the Western Province are good in quality and above the country average. Although this figure in Sabaragamuwa and North central Provinces are rather low, the floor condition of 100% of schools is good in quality. The provinces are even more different when it is compared by the availability of divided classes in classrooms. According to this criterion, even in the Western Province, the divided classes are available only in 72% of the schools. The availability of separate classes in the schools of the North Central Province is only 15%. Provinces are not much variant when the availability of usable blackboards and the adequacy in the supply of chalk is considered. The other indicator, the current teachers as a percentage of teacher entitlement is highest in the Western Province while lowest in the Northern and Western provinces. Teacher shortages are high for English language, Science and Mathematics (Arunatilake, 2006) [3]. According to all these indicators, resource availability and hence the school quality is best in the Western Province while the Northern, Eastern and Uva provinces are the worst. The using of school quality indicators by Arunatilake can be considered as a better step to compare quality differences between the Provinces.

**Table 7:** Availability of Resources in Government Schools by Province

Province	Good Roof <sup>6</sup> (%)	Good Floor <sup>7</sup> (%)	Divided Classes in Class Rooms (%)	Separate Furniture for All Students (%)	Usable Blackboards and Adequate Supply of Chalk (%)	Current Teachers as a % of Teacher Entitlement
Western	98.0	99.0	72.0	62.0	75.0	97.0
Central	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Southern	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Northern <sup>8</sup>	96.0	99.0	27.0	28.0	70.0	82.0
Eastern	96.0	99.0	27.0	28.0	70.0	82.0
North-western	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
North-Central	85.0	100.0	15.0	66.0	75.0	89.0
Uva	94.0	95.0	37.0	58.0	69.0	84.0
Sabaragamuwa	82.0	100.0	47.0	74.0	65.0	93.0
Sri Lanka	92.0	99.0	44.0	60.0	72.0	92.0

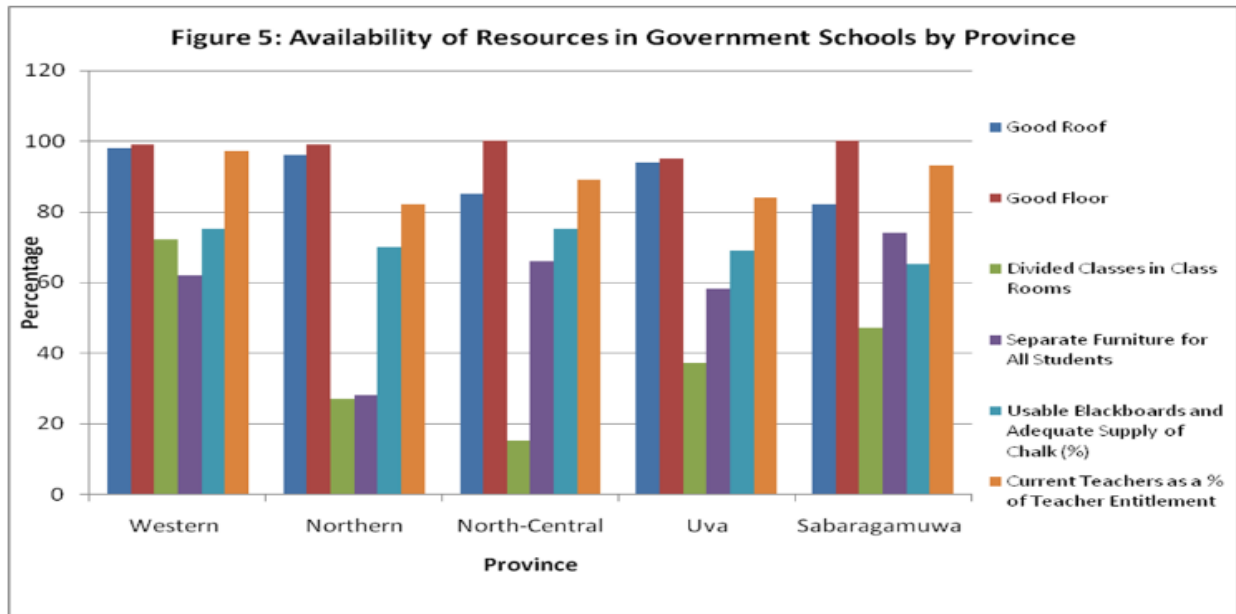
Source: Arunatilake, 2006.

n.a. = not available

<sup>6</sup> Roofs made of tiles or asbestos were considered as good (Arunatilake, 2008).

<sup>7</sup> Floors made of wood, cement, stones or tiles were considered as good (Arunatilake, 2008).

<sup>8</sup> Same figures have been used for Northern and Eastern provinces because the author had taken the two provinces together as the Northern/Eastern.



The findings of the descriptive analysis suggest that the key education resources of the country have not been evenly distributed across the country. It identifies four relatively rich provinces and remaining five underprivileged provinces in educational resources available for students. A more orderly comparison among the provinces is possible in terms of the composite index constructed in the next section.

**Construction of Composite Index and Measuring Resource Imbalances among Provinces**

Using a composite index is more appropriate in measuring the education resource prosperity since it is a multi-dimensional measure. The construction of the index includes three steps. First step is to identify the most appropriate indicators from the available data for the construction of the index. The following 10 indicators of educational resources were identified for this purpose.

1. Percentage of students in Grade 1AB schools: The number of students which can be enrolled in Grade 1A and 1B schools is taken as a percentage of the total student population in each province. This indicates the relative capacity of 1AB schools where the facilities are available for students to follow Science streams at the Advanced Level.
2. Percentage of students in private schools: This indicates the relative size of the private sector schools.
3. Percentage of schools where 3 or more subjects are taught in English: This is a measure that shows the availability of schools where the classes are conducted in international language also.
4. Students/Graduate and Trained teacher ratio: This measures the prosperity of human resources needed for education.
5. Percentage of schools with good roofs: This measures the quality of physical infrastructure of schools.
6. Percentage of schools with good floors: This is also an indicator of the quality of infrastructure.
7. Percentage of schools with divided classrooms: This is an indicator of availability of better facilities. It raises the efficiency of teaching and learning.
8. Percentage of schools with separate furniture for students: This has also been used by researchers as an

indicator of physical resources.

9. Percentage of schools with usable blackboards and adequate supply of chalk: This indicates whether the schools are properly provided with the complementary facilities.
10. Percentage of teachers out of the total teacher entitlement: This is also an indicator of human resources needed for education.

Choosing weights for each of the 10 selected assets was the second step of the construction of the index. For this purpose the efficient and unbiased techniques in obtaining weights, ‘principle component analysis’ was used (Abeyasekera, 2004; Filmer and Pritchett, 1998)<sup>[1, 11]</sup>. The values of the first principle component for each asset were used as the weights.

**Table 7:** Weights Given to Assets Indicators

Asset Indicator	Weight
1. Percentage of students in Grade 1AB schools = Relative capacity of 1AB schools	0.465
2. Percentage of students in private schools = Relative capacity of private schools	0.415
3. Percentage of schools where 3 or more subjects are taught in English = Capacity of schools where English is used in teaching	0.460
4. Students/Graduate and trained teacher ratio	0.303
5. Percentage of schools with good roofs = Quality of school infrastructure	0.164
6. Percentage of schools with good floors = Quality of school infrastructure	0.040
7. Percentage of schools with divided classrooms = Availability of better facilities	0.418
8. Percentage of schools with separate furniture for students = Availability of physical resources	0.192
9. Percentage of schools with usable blackboards and adequate supply of chalk = Availability of complementary facilities	0.263

Final step was the obtaining of index values for each province multiplying the assets values by the respective weights so that it was possible to compare and rank the provinces on the basis of the value of the index.

**Table 8:** Index Value and Rank by Province

Province	Index	Variation from the Maximum	Rank
(1)	(2)	(3)	(4)
Western	137.28	-	1
Central	112.45	24.83	3
Southern	115.76	21.52	2
Northern	96.30	40.98	8
Eastern	93.80	43.48	9
North-western	112.33	24.95	4
North-Central	98.28	39.00	7
Uva	105.47	31.81	6
Sabaragamuwa	105.68	31.60	5

**Table 9:** Mean, SD, Minimum and Maximum of the Index Values

Mean	SD	Minimum	Maximum	Range
138.59	13.22	93.80	137.28	43.48

Table 8 consists of the precise output of the analysis which shows the values of the educational resource index related to each province. Western Province is the highest in the availability of educational resources for students while the lowest is the Eastern Province. The gap between the index values between Western and Eastern provinces (137.28 – 93.80) is 43.48. Even the Southern Province that holds the second rank is also 21.52 points behind the Western Province. Basing on the extent of variation of each province from the maximum index value of the Western Province (column 3 of Table 8), it is possible to divide the nine provinces into three main categories. First one includes the Western Province as it is exceptionally high in resource availability compared to the other provinces. Second category includes Southern, Central and North-western provinces which come next to the Western Province with no big variation among the three. Third category consists of the three provinces Sabaragamuwa, Uva and North-Central because these three are also not much different to each other when the variations from the maximum index value are compared (column 3). The fourth category consists of the two provinces Northern and Eastern where the variations from the maximum index value are respectively 98.28 and 93.80. The Standard Deviation also shows a substantial variation in the resource availability among the provinces. Thus, the study proves that there is a clear inequality or imbalance among the provinces in the availability of educational resources for students.

### Conclusions

The conclusions of the study were drawn from the results of the descriptive analysis and the resource availability index. The following are the conclusions derived from the descriptive analysis:

- The educational institutions that provide the service up to Advanced Level consist of public schools, private schools and pirivena. However, in all provinces, more than 90% of students depend on the service of public schools.
- About 65% of national schools and 63% of 1AB schools have been concentrated into the four provinces, Western, Southern, Central and North-western.
- Capacities of 1AB schools relative to student population largely vary among the provinces. Even though the Western-province has the strength of enrolling 41% of the total students in 1AB schools, the other provinces are

far below. The strength of the Eastern Province is the lowest in enrolling the students in 1AB schools.

- Nearly half of the English medium schools are situated in Western and Central provinces.
- Although the overall Student/Teacher ratio does not show a big variation among the provinces, there is a higher variation in the Students/Graduate-teacher and Student/Trained-teacher ratios. The ratio is best in the Southern Province while it is worst in the Eastern Province and 85 students per graduate teacher. The other provinces vary between these two figures.
- The quality of building and availability of complementary resources in government schools is higher in the Western Province. This province is also outstanding in the utilization of the cadre provisions for teachers. The current number of teachers in the province accounts for 97% of the cadre provisions for teachers.

Conclusions based on the resource availability index are as follows:

- Western Province is the highest in the availability of educational resources for students while the lowest is the Eastern Province.
- The nine provinces can be divided into three main categories based on the resource availability. First category includes the Western Province which is the richest among the all in relative resource availability. Second category includes Southern, Central and North-Western provinces which come next to the Western Province in resource availability with no big variation among the three. Third category which consists of the three provinces Sabaragamuwa, Uva and North-central, lie behind the second category according to the value of the index. Finally, the fourth category consists of the Northern and Eastern provinces which are poorest in the value of resource availability for education.

Thus, it is clear that the regional imbalances in the resource availability for education in Sri Lanka are substantially high across the provinces.

### References

1. Abeyasekera S. Multivariate Methods for Index Construction, Household Surveys and Transition Countries: Design, Implementation and Analysis, Statistical Service Centre, Reading, U.K., 2004.
2. Aluede ROA. Regional Demands and Contemporary Educational Disparities in Nigeria, Journal of Social Sciences. 2006; 13(3):183-189.
3. Arunatilake N. Education Participation in Sri Lanka: Why all are not in School, Education Participation in Sri Lanka – Why All are Not in School, International Journal of Educational Research. 2006; 45(3).
4. Asadullah MN. Educational Disparity in Pakistan 1947-71, Presentation at the UK Economic and Social History Conference, Oxford, 2004.
5. Basu S, Basu P. Regional Disparity in Australia: Analysis of Gender Development Index, International Review of Business Research Papers 2005; 1(2):56-66.
6. Carron G, Ngoc CT. (ed.), Regional Disparities in Educational Development: A Controversial Issue, IIEP, Paris, 1980.
7. Carron G, Ngoc CT. (ed.), Regional Disparities in Educational Development: Diagnosis and Policies for Reduction, IIEP, Paris, 1980.



8. Central Bank of Sri Lanka, Annual Report 2007, Colombo, 2008.
9. The Consumer Finances and Socio Economic Survey Report 2003/04 Part 1, Colombo, 2005.
10. Clarke R. Measuring Wealth Across Seven Thai Communities, ESRC Research Group on Wellbeing in Developing Countries, WED Working Paper 17, 2006. <http://www.welldew.org.uk>
11. Filmer D, Pritchett L. Estimating Wealth Effects without Expenditure Data: An Application to Educational Enrolments in States of India, World Bank Policy Research Working Paper No. 1994, World Bank, Washington, 1998.
12. Gunaratne L. Human Capital and Distribution of Personal Income: A Theoretical Analysis and an examination of Some Aspects of Income Distribution in Sri Lanka, Central Bank of Sri Lanka, Colombo, 1988.
13. Herath TN. An assessment of decentralized government school education in Sri Lanka, *KEDI Journal of Educational Policy*, 2008; 5(1):19-48.
14. Kotani K. Growing Together: Regional Disparities in Primary Education Achievement in Brazil, School of Education, Stanford University, 2004.
15. Magrini S. The evolution of income disparities among the regions of the European Union, *Regional Science and Urban Economics*, 1999; 29:257-281.
16. Ministry of Education Preliminary Report – 2005, Colombo, 2006.
17. Preliminary Report – 2007, Colombo, 2006.
18. Noorbakhsh F. *Human Development and Regional Disparities in India*, Centre for Development Studies, University of Glasgow, Glasgow, 2003.
19. Rodriguez-Pose A. Human Capital and Regional Disparities in the EU, European Commission and European Investment Bank, Brussels, 2003.
20. Sahn DE, Stifel D. Assets as a Measure of Household Welfare in Developing Countries, Working Paper 00-11, Centre for Social Development, Washington, 2000.
21. Silva, W.de From Free Education – Whither, Education and the Quality of Life, (ed) Jajasuriya, D.C., Har-Anand Publications, New Delhi, 1996.
22. UNDP Human Development Report 2007/2008, New York, 2007.
23. World Bank Higher education in Developing Countries, Peril and Promise, Washington, U.S.A., 2002.
24. *World Development Report: Development and the Next generation*, Wasnington, 2006.
25. Treasures of the Education System in Sri Lanka: restoring, performance, expanding opportunities and enhancing prospects, The World Human Resource Development Unit, Colombo, 2005.
26. Wishlade F, Yuill D. Measuring Disparities for Area Designation Purposes: Issues for the European Union, European Policies Research Centre, Glasgow, U.K., 1997.