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Districts wise analysis of human capital formation in Karnataka

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Abstract
The present paper examines districts wise analysis of human capital formation in karnataka here Education sector is consider, classified karnataka state districts like north karnataka and south karnataka. Human capital considers education and health as a means to increase labour productivity. Human development is based on the idea that education and health are integral to human well-being because only when people have the capacity to read and write and the ability to lead a long and healthy life, they will be able to make other choices which they value. Uzawa developed an endogenous growth model based on investment in human capital which was used by Lucas. Lucas assumes that investment on education leads to the production of human capital which is the crucial determinant in the growth process. The study is based on secondary data sources Saikshanic Anki Anshagala Pakshinota, Karnataka. Human Development Reports state level for education status. Report on Higher Education Vision 2020 submitted by Mission Group on Higher education policy Karnataka Jnana Aayoga (Karnataka Knowledge Commission) Government of Karnataka-December 2012. In order to study the performance of human development in Karnataka, the education sector is considered. The pass percentage is higher in South Karnataka as against North Karnataka. It is evident that the coefficient of variation in indicators like literacy rate, gross enrollment ratio in elementary education and SSLC pass per cent has declined significantly. Similarly, the disparity has raised in some indicator such as pupil teacher ratio and PUC pass per cent.

Keywords: human capital formation, gross enrollment ratio, education, pupil teachers ratio

1. Introduction
The present paper examines districts wise analysis of human capital formation in karnataka here Education sector is consider, classified karnataka state districts like north karnataka and south karnataka. As per Harbison, the human capital arrangement specifies, "the way toward gaining and increasing the quantity of people who have what it takes, training and experience which are basic for the monetary and the political improvement of the nation. Human capital arrangement is therefore connected with interest in man and his improvement as an original and beneficial asset."
Human capital considers education and health as a means to increase labour productivity. Human development is based on the idea that education and health are integral to human well-being because only when people have the capacity to read and write and the ability to lead a long and healthy life, they will be able to make other choices which they value. Human capital treats human beings as a means to an end; the end being the increase in productivity. In this vision, any investment in education and health is unproductive if it does not enhance output of goods and services. In the human development point of view, human beings are ends in themselves. Human welfare should be increased through investments in education and health even if such investments do not result in higher labour productivity.

2. Theoretical Framework
2.1 The Lucas Model
Uzawa developed an endogenous growth model based on investment in human capital which was used by Lucas. Lucas assumes that investment on education leads to the production of human capital which is the crucial determinant in the growth process. He makes a distinction between the internal effects of human capital where the individual worker undergoing training becomes more productive, and external effects which spill over and increase the productivity of capital and of other workers in the economy. It is investment in human capital rather than physical capital that have spillover effects that increase the level of technology.

3. Review of Literature
Ojha and Pradhan (1987) [17] examined exclusively on educational capital in India and the study was stimulated by the strategic planning of the East Asian Economies. It considered human capital in an economy as the state of health and the educational levels of the people. The study was based on a multi-sectoral neo-classical type price driven CGE model, it incorporated the method of public education expenditure to build human capital which directly and indirectly helps to augment the supply of educated/skilled labour, and in turn add to in tax revenue and economic growth.
Waldow (2002) considered educational expenditure was an important and widely used indicator for the quantitative growth of educational systems and for human capital formation. However, educational expenditure was often difficult to measure correctly, especially in historical studies. The study focused on the trouble of measurement, using the case of Sweden in the second half of the 19th and the early 20th century as an example. Official statistics used as main

empirical basis for data on educational expenses. Their aim is to register the social, financial etc. conditions in a certain area as a qualification for modern, rational, bureaucratic modes of governing.

Conrad (2011) empirically examined the education's level-specific contribution to economic growth in selected Caribbean countries using some underlying assumptions of the educational stock approach which was popularized in Solow's (1956) growth theory and later on built upon by Lucas (1988). This study also takes into consideration of government's involvement in the human capital framework through involvement, defined as public expenditure on education, which is also an indicator of the quality of education. This provides a consistent human capital framework which is necessary in order to provide better answers to the public finance question of allowance of a wide range of government expenditures, and in the long run, can be further developed to include optimal tax and subsidy structures to finance educational efforts in developing countries.

Chani *et.al*. (2012) [5] empirically tested the casual relationship between human capital formation all the way through education and economic development in Pakistan. Keeping in view the endogenous growth theory, the study also tests direction of causality, also human capital formation causes economic development or economic development causes human capital or both of them are causing and following each other. The study investigated the informal relationship between economic development and formation of human capital in Pakistan. Based on endogenous growth theory, empirically tested the standard growth model consisting of Gross household Product (GDP) per capita as a dependent relative variable and human capital formation, asset in physical capital and labour force as independent variables.

Diana (2013) [7] highlighted the role of education in the growth of economic competitiveness and competence of human capital, in accordance with the quality of education and investments in human resources, to enhance labour productiveness. The study on the go by a brief analysis of Romania's educational system, by comparison with the EU countries (27 Countries), analysing the number of high school students and college students per teacher, the percentage of education expenditure in the GDP, the correlation among the labour force's training level and insertion into the labour market. The paper also evaluated the EU countries' ranking linked to higher education and professional training, pointing out the importance of lifelong professional guidance at the place of work. Education, public awareness enhancement and training considered as the processes in which human capital may reach its maximum potential. They are essential for the encouragement of sustainable development and for the valuing of the population's capacity to approach the main issues related to society's development.

4. Objectives of the Study

1. To examine the district wise human capital formation in Karnataka with special reference to Education sector.
2. To offer policy suggestions for the improvement of education infrastructure in Karnataka.

5. Methodology

The study is based on secondary data sources Saikshanic Anki Anshagala Pakshinota, Karnataka. Human Development Reports state level for education status. Report on Higher Education Vision 2020 submitted by Mission Group on Higher education policy Karnataka Jnana Aayoga (Karnataka Knowledge Commission) Government of Karnataka-December 2012. In order to study the performance of human development in Karnataka, the education sector is considered. Particularly, the study considers only 5 important indicators of education sector for two time period (2001 and 2011). In detail, the indicators in the education sectors are: 1) Literacy Rate, 2) Gross enrolment rate of elementary school, 3) Pupil teacher's ratio for elementary education, 4) SSLC pass percentage, and 5) PUC pass percentage. At present there are 30 districts in the state of karnataka. Since Chikkaballapur district was a part of Kolar district, Ramanagara district was a part of Bangaluru district and Yadgiri district was a part of Gulbarga district, the study contents statistics about only 27 districts of karnataka. On education data has been collected for 2014 from the Performance of Districts, Taluks and Urban Local Bodies in Karnataka, 2014-A Snapshot document and for same indicators updated for 2001. In this study districts have been classified in to south and north Karnataka, On the basis of average values for the comparative purpose and assigned ranks for the districts. To make the study more effective, methods like, percentage and Coefficient of Variation (CV) have been used. The study is based on new growth theories such as endogenous growth theory.

6 Results and Discussion

Perfomance of Education in Karnataka

6.1 Literacy Rate in Karnataka

Table 1 indicates that the literacy rate across districts of Karnataka. The total literacy rate of Karnataka has increased from 67 per cent in 2001 to 75.4 per cent in 2011. It is evident that increasing literacy has reduced the disparity in literacy rate among the districts from 14.4 per cent in 2001 to 10.3 per cent in 2011. The literacy rate was found higher in the South Karnataka with 69.7 per cent increased to 76.8 than in the North Karnataka with 61.5 per cent in 2001 to 71.4 per cent in 2011. The highest literacy rate has seen during 2001 and 2011 in Bengaluru Urban district followed by Dakshina Kannada and Udupi whereas lowest was seen in Raichur district in 2001 and 2011. The North Karnataka districts are lagging behind in literacy rate in 2001 and 2011 compared with South Karnataka districts.

The literacy gain has achieved higher in North Karnataka of 9.9 per cent then 7 per cent in South Karnataka. The highest literacy gain has found in Kalburagi about 14.3 per cent while the lowest literacy gain seen in Chitradurga of -0.2 per cent (Negative). More literacy gain has achieved in the case of North Karnataka districts has compared to South Karnataka districts. Reason behind the literacy gain in the north Karnataka is the awareness of education among the people increasing at a very faster way.

Table 1: Literacy Rate in Karnataka

Districts	2001	Rank	2011	Rank	Literacy Gain
South Karnataka	69.7		76.8		7.0
Bengaluru Urban	83.9	1	87.7	1	3.8
Bengaluru Rural	65.0	14	77.9	9	12.9
Chamarajanagar	51.3	25	61.4	26	10.1
Chikkamagaluru	72.6	7	79.3	8	6.7
Chitradurga	64.9	15	64.7	25	-0.2
Dakshina Kannada	83.5	2	86.6	2	3.1
Davanagere	67.7	11	75.7	12	8.0
Hassan	68.8	9	76.0	11	7.2
Kodagu	78.2	4	82.6	5	4.4
Kolar	63.1	18	74.4	15	11.3
Mandya	61.2	20	70.5	19	9.3
Mysuru	63.7	17	72.8	17	9.1
Shivamogga	74.9	6	80.5	6	5.6
Tumakuru	67.2	12	75.1	13	7.9
Udupi	79.9	3	86.2	3	6.3
North Karnataka	61.5		71.4		9.9
Bagalkot	57.8	22	68.8	20	11.0
Belagavi	64.4	16	73.5	16	9.1
Ballari	58.0	21	67.4	22	9.4
Bidar	62.0	19	70.5	18	8.5
Vijayapura	57.5	23	67.2	23	9.7
Dharwad	71.9	8	80.0	7	8.1
Gadag	66.3	13	75.1	14	8.8
Kalaburagi	50.6	26	64.9	24	14.3
Haveri	68.1	10	77.4	10	9.3
Koppal	55.0	24	68.1	21	13.1
Raichur	49.5	27	59.6	27	10.1
Uttara Kannada	76.6	5	84.1	4	7.5
Karnataka	67.0		75.4		8.36
CV	14.4		10.3		

***Sources*:** Population Census of Karnataka 2001 and 2011

6.2 Gross Enrollment Ratio (GER) in Elementary Education

The National Education Policy (NEP) was launched in 1986 aiming at the decentralized planning and management of elementary education. The Action Plan 1992 emphasized on micro-planning to ensure that each completes at least eight years of schooling. According to United Nation (UN), the GER is the number of students enrolled in school at several different grade levels. The United Nations Educational, Scientific and Cultural Organization (UNESCO), describes 'Gross Enrolment Ratio' as the total enrolment within a country "in a specific level of education, regardless of age, expressed as a percentage of the population in the official age group corresponding to this level of education. Table 2 reveals that the gross enrollment ratio at elementary school in Karnataka. The GER at Karnataka level has reduced marginally from 98.8 per cent to 97.2 per cent during 2001 and 2011. The GER is higher in South Karnataka then the North Karnataka. But the increase of GER is drastic in North Karnataka estimated at 12.2 per cent then that of South Karnataka was the 0.3 per cent during the same period. The GER at elementary school level was the highest in the Bengaluru Urban, whereas the lowest has found in the Raichur in 2001.

But in 2011, about one decade period the Bengaluru Urban has occupied the first place, while the last place occupied by Bengaluru Rural. Because, the State has reported that Bengaluru Rural has low GER just because of district is adjacent to the Bengaluru urban district. Children are travelling from the Bengaluru rural to Bengaluru urban for Education. Likewise some district showing lower GER because of children travelling from one district to another district even for primary education. Interestingly, the GER at elementary school grade was increasing at a faster way in North Karnataka districts then that of South Karnataka districts. The GER increasing per cent during the periods was the higher in North then South Karnataka from 11.1 per cent to 6.7 per cent during 2001 and 2011.

Table 2: Gross Enrollment Ratio (GER) of Elementary School

Districts	2001	Rank	2011	Rank	Difference Per cent 2011-2001
South Karnataka	101.2		101.5		0.3
Bengaluru Urban	128.2	1	123.3	1	-4.9
Bengaluru Rural	86.2	25	92.8	27	6.6
Chamarajanagar	91.1	20	103.4	11	12.3
Chikkamagaluru	99.6	12	101	15	1.4
Chitradurga	99.9	10	101.5	14	1.6
Dakshina Kannada	108.5	4	100.6	18	-7.9
Davanagere	98.3	16	106.2	7	7.9
Hassan	99.9	10	95.5	25	-4.4
Kodagu	106.1	5	100.8	17	-5.3
Kolar	99.5	13	100	19	0.5
Mandya	101.6	8	98.5	23	-3.1
Mysuru	89.7	22	99.3	22	9.6
Shivamogga	100.2	9	99.6	20	-0.6
Tumakuru	95.6	17	98.5	23	2.9
Udupi	114	2	100.9	16	-13.1
North Karnataka	93.7		106.3		12.6
Bagalkot	93.9	18	104.7	10	10.8
Belagavi	99.5	13	105.5	8	6
Ballari	87.6	24	107.5	5	19.9
Bidar	105.3	6	106.6	6	1.3
Vijayapura	92.3	19	103.2	12	10.9
Dharwad	99.3	15	110.3	4	11
Gadag	110.4	3	103.1	13	-7.3
Kalaburagi	90.1	21	119.5	2	29.4
Haveri	88.8	23	99.4	21	10.6
Koppal	79.9	26	105.1	9	25.2
Raichur	74.5	27	114.8	3	40.3
Uttara Kannada	103.2	7	95.3	26	-7.9
Karnataka	98.8		97.2		-1.6
CV	11.1		6.7		

***Sources*:** Karnataka Human Development Report 2005; Human Development: Performance of Districts, Taluks and Urban Local Bodies in Karnataka, 2014-A Snapshot report.

6.3 Pupil Teachers Ratio of Elementary Education

Pupil-Teacher Ratio (PTR) is measuring the adequacy and accessibility of teachers to students at elementary education. A high PTR shows that each teacher has to be responsible for a large number of pupils. The higher is the PTR and the lower is the relative access of pupils to teachers. The low pupil-teacher ratio signifies smaller classes, which enables the teacher to pay more attention to individual students, which may result in a better performance of the pupils in the long run. In other

words, it meant that the average number of students per qualified teacher at a given level of education.

Table 3 implies that the Students to teachers ratio in Karnataka. The PTR at Karnataka level has reduced significantly from 35 per cent in 2001 to 23.8 per cent in 2011. The inadequacy of teachers declined in all the South and North Karnataka districts. It is evident that the PTR is higher in North Karnataka as against South Karnataka. The teachers are more adequate in Hassan district whereas, the teachers are inadequacy in Kalburagi district in 2001. For the period 2011, the PTR in elementary education was less in Kodagu whereas the ratio was higher in Gadag. Although the inadequacy of teachers reduced during 2001 and 2011, especially in North Karnataka regions, but it is continued to be higher both in Bombay and Hyderabad Karnataka districts. The disparity in the PTR has increased significantly from 22 per cent to 24.1 per cent during same the period.

Table 3: Pupil Teachers Ratio of Elementary Education

Districts	2001	Rank	2011	Rank
South Karnataka	29.9		21.6	
Bengaluru Urban	38.0	18	25.6	15
Bengaluru Rural	25.0	2	16.0	4
Chamarajanagar	34.0	12	23.0	11
Chikkamagaluru	24.0	2	14.7	3
Chitradurga	34.0	13	22.0	8
Dakshina Kannada	37.0	16	21.0	6
Davanagere	34.0	14	21.3	7
Hassan	23.0	1	13.3	2
Kodagu	29.0	9	13.0	1
Kolar	27.0	6	32.8	25
Mandya	28.0	8	20.0	5
Mysuru	33.0	11	25.6	16
Shivamogga	27.0	7	24.0	12
Tumakuru	26.0	5	29.0	20
Udupi	29.0	10	22.4	9
North Karnataka	40.4		28.7	
Bagalkot	40.0	20	30.4	23
Belagavi	38.0	19	27.4	18
Ballari	41.0	22	32.3	24
Bidar	40.0	21	25.4	14
Vijayapura	42.0	23	29.2	22
Dharwad	45.0	24	29.0	21
Gadag	37.0	17	34.6	27
Kalaburagi	50.0	27	24.4	13
Haveri	36.0	15	27.2	17
Koppal	45.0	25	33.6	26
Raichur	46.0	26	28.2	19
Uttara Kannada	25.0	4	22.9	10
Karnataka	35.0		23.8	
CV	22.0		24.1	

***Sources*:** Karnataka Human Development Report 2005; Human Development: Performance of Districts, Taluks and Urban Local Bodies in Karnataka, 2014-A Snapshot report.

6.4 Pass Percentage in SSLC Examination

Table 4 shows that the SSLC pass percentage across districts in Karnataka. The percentage of students who have passed in SSLC has increased significantly from 56.3 per cent in 2001 to 74.7 per cent in 2011 in Karnataka. It has increased by 18.4 per cent during the periods in the state. It has found that the pass percentage in SSLC examination was higher South Karnataka then that of North Karnataka. the increasing per cent point, in the case of South Karnataka was higher and estimated at 23.1 per cent then the 21.4 per cent in the case of North Karnataka. Across the districts especially in the year 2001, the highest percentage of students passes in SSLC examination in Udupi district whereas the lowest was found in Kalaburagi district. In 2011, the highest pass percentage was in Uttara Kannada district while lowest was in Bidar district in Karnataka. The decadal increase per cent has found higher in Kolar district about 40.3 per cent but lower was found in the Bidar district which is almost negative value of (-2.1 per cent). The pass percentage in SSLC examination was very lower in North Karnataka districts that too are very lower in Hyderabad Karnataka districts compared to Bombay Karnataka districts. Because the educational infrastructure at elementary level may be poor in these areas. The disparity across the districts in SSLC pass percentage has reduced drastically from 15.6 per cent to 9.9 per cent during two time periods.

Table 4: SSLC Pass Percentage

Districts	2001	Rank	2011	Rank	Difference Per cent 2011-2001
South Karnataka	56.9		80.0		23.1
Bengaluru Urban	57.4	11	77.9	19	20.5
Bengaluru Rural	51.8	21	82.2	11	30.4
Chamarajanagar	42.2	26	72.6	24	30.4
Chikkamagaluru	61.5	8	74.5	23	13
Chitradurga	58.0	10	82.1	12	24.1
Dakshina Kannada	76.5	2	89.6	2	13.1
Davanagere	49.2	23	80.0	16	30.8
Hassan	56.6	14	63.4	26	6.8
Kodagu	53.5	18	78.2	18	24.7
Kolar	43.4	25	83.7	8	40.3
Mandya	63.4	6	84.1	6	20.7
Mysuru	48.9	24	85.1	5	36.2
Shivamogga	60.5	9	77.1	20	16.6
Tumakuru	53.0	20	82.5	10	29.5
Udupi	77.3	1	86.9	3	9.6
North Karnataka	57.0		78.4		21.4
Bagalkot	63.6	5	83.8	7	20.2
Belagavi	65.8	4	83.0	9	17.2
Ballari	55.8	15	81.8	13	26
Bidar	54.8	16	52.7	27	-2.1
Vijayapura	56.9	12	70.4	25	13.5
Dharwad	54.5	17	80.8	15	26.3
Gadag	62.9	7	76.2	21	13.3
Kalaburagi	41.5	27	76.2	21	34.7
Haveri	56.9	12	81.5	14	24.6
Koppal	53.3	19	85.9	4	32.6
Raichur	49.9	22	79.1	17	29.2
Uttara Kannada	68.8	3	89.8	1	21
Karnataka	56.3		74.7		18.4
CV	15.6		9.9		

***Sources*:** Karnataka Human Development Report 2005; Human Development: Performance of Districts, Taluks and Urban Local Bodies in Karnataka, 2014-A Snapshot report.

6.5 PUC Pass Percentage

Table 5 indicates that the PUC Pass Percentage across district

in Karnataka. Percentage of students passed in PUC examination increased marginally from 57.8 per cent in 2001 to 58.2 per cent in 2011. The pass percentage is higher in South Karnataka as against North Karnataka. The decadal Increase per cent is also higher in the South at 6.8 per cent then in the North Karnataka at 3.2 per cent. The highest percentage of pass in PUC examination was in Dakhina Kannada district about 80.3 per cent followed by Udupi (79.8 per cent) and Uttar Kannada (67.4 per cent). While the lowest pass percentage was in the district of Kalaburagi 36.6 per cent in 2001. In the year 2011, the pass percentage in PUC was higher in Udupi followed by Uttar Kannada and Dakhin Kannada districts but low pass percentage was in Koppal district. Majority of the students were passing from the Raichur district estimated at 24.7 per cent in PUC examination during the two time period. The least were passed in the Koppal district of (-17.7) per cent. The disparity in PUC pass percentage has increased drastically from 18.7 per cent to 23.6 during 2001 and 2011 in Karnataka.

Table 5: PUC Pass Percentage

Districts	2001	Rank	2011	Rank	Difference Per cent 2011-2001
South Karnataka	60.6		67.4		6.8
Bengaluru Urban	66.3	5	62.0	13	-4.3
Bengaluru Rural	53.3	14	60.2	15	6.9
Chamarajanagar	52.0	18	71.1	6	19.1
Chikkamagaluru	67.0	4	70.4	7	3.4
Chitradurga	51.0	20	49.9	21	-1.1
Dakshina Kannada	80.3	1	85.7	3	5.4
Davanagere	53.1	16	56.8	17	3.7
Hassan	58.7	9	65.5	11	6.8
Kodagu	65.3	6	73.4	4	8.1
Kolar	52.7	17	66.6	9	13.9
Mandya	52.0	18	54.5	20	2.5
Mysuru	57.5	10	60.8	14	3.3
Shivamogga	62.9	7	67.9	8	5.0
Tumakuru	56.5	11	73.1	5	16.6
Udupi	79.8	2	92.6	1	12.8
North Karnataka	50.1		53.3		3.2
Bagalkot	53.3	14	58.3	16	5.0
Belagavi	53.6	12	48.2	23	-5.4
Ballari	50.9	21	49.8	22	-1.1
Bidar	39.1	26	39.4	26	0.3
Vijayapura	47.3	24	41.1	25	-6.2
Dharwad	53.5	13	55.3	19	1.8
Gadag	50.6	22	47.6	24	-3.0
Kalaburagi	36.7	27	55.5	18	18.8
Haveri	60.5	8	63.0	12	2.5
Koppal	47.6	23	29.9	27	-17.7
Raichur	41.2	25	65.9	10	24.7
Uttara Kannada	67.4	3	86.0	2	18.6
Karnataka	57.8		58.2		0.4
CV	18.7		23.6		

***Sources*:** Karnataka Human Development Report 2005; Human Development: Performance of Districts, Taluks and Urban Local Bodies in Karnataka, 2014-A Snapshot report.

6.6 Co-efficient of Variation of Education Indicators across Broad Divisions in Karnataka

The disparities in educational indicators across the districts in Karnataka. Especially the disparity constructed across the broad divisions of Karnataka e. g the South Karnataka and North Karnataka. It is evident that the disparity has declined significantly in some indicators such as literacy rate, gross enrollment ratio in elementary education and SSLC pass per cent. Similarly, the disparity has risen in some indicator such as pupil teacher ratio and PUC pass per cent.

The disparity among South and North Karnataka in indicators like literacy rate, GER in elementary education and SSLC pass per cent has declined drastically. Particularly, disparity in the case of pupil-teachers ratio indicators has reduced in North Karnataka from 15.7 per cent to 12.5 per cent whereas in South Karnataka, it has increased significantly from 16 per cent to 26.12 per cent depicted in (Table 6).

Table 6: Co-efficient of Variation of Education Indicators across Broad Divisions of Karnataka

Division	Literacy Rate		GER (ES)		PTR (ES)		SSLC Pass Per cent		PUC Pass Per cent	
	2001	2011	2001	2011	2001	2011	2001	2011	2001	2011
South Karnataka	13.00	9.88	10.16	6.68	16.00	26.12	17.90	8.10	15.88	16.73
North Karnataka	13.51	9.67	11.16	6.07	15.70	12.51	13.04	12.14	17.38	27.22
Karnataka State	14.43	10.29	11.08	6.70	22.01	24.11	15.63	9.89	18.73	23.59

Note: GER (ES): Gross Enrollment rate of Elementary School; and PTR (ES): Pupil Teachers Ratio of Elementary School.
***Sources*:** Estimated

7. Suggestions

- Even though the literacy rate of karnataka is higher than that of the national figure, serious efforts will have to be made to raise the literacy rate since it adds to the mental capacity to work of the individuals.
- Higher secondary education should be made compulsory in the state since more than two third of literate people in karnataka do not have higher secondary level education. Attractive measures will have to be designed to raise the enrollment rate at this level.
- To remove the regional disparities between south karnataka and north karnataka, attractive measures should be adopted both by government and private educational institutions to raise the literacy rate of north karnataka region and bring it par with that of south karnataka.
- To restrict the number of students travelling from rural areas to urban educational institutions, the infrastructural base of the education of rural areas should be strengthened. This will go a long way in promoting rural development.
- Among the districts of north karnataka, the number of teachers compare to that of total pupils strength in the hyderabad karnataka region is adequate, hence proper recoupment procedure will have to be adopted to appoint more number of teachers in this region, then that the quality of education can be up graded in this region.
- Compare to the number of private educational institutions, the number of government educational institutions in the state of karnataka is par less. Proper measures should be undertaken to establish more number of government educational institutions in the state to enable the poor and middle class students to get better educational facilities.

8. Conclusion

The foregoing analysis reveals that the total literacy rate of has increased significantly in Karnataka. The disparity in literacy rate has declined during two time periods. The Gross Enrollment Ratio is higher in South Karnataka then the North Karnataka. The pupil teacher's ratio at Karnataka level has reduced significantly the same period. It is evident that the PTR is higher in North Karnataka as against South Karnataka. The percentage of students who have passed in SSLC has increased significantly during the period in Karnataka. It has found that the pass percentage in SSLC examination was higher South Karnataka then that of North Karnataka. Percentage of students passed in PUC examination increased marginally during the period.

The pass percentage is higher in South Karnataka as against North Karnataka. It is evident that the coefficient of variation in indicators like literacy rate, gross enrollment ratio in elementary education and SSLC pass per cent has declined significantly. Similarly, the disparity has raised in some indicator such as pupil teacher ratio and PUC pass per cent.

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