Regional Disparities, Inclusive Growth and Educational Development in Karnataka

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ABSTRACT

Inclusive growth policy is an attempt to bring the backward sectors, classes, castes, tribes, women, and marginal people into main stream economy. It is necessary to understand the problem of exclusion to have better inclusive policy. The paper is an effort to analyze the regional disparities in educational development of Karnataka as a back drop to inclusive growth policy. It is revealed that out of four regions selected for study Gulbarga is the backward region in field of education. In comparison to other regions, the literacy rate is quite low and drop-out rate is quite high. However, educational programmes introduced by the government have increased the enrolments in the region but students are not able to complete their education fully with high drop-out rate. It is suggested that immediate attention of government is required to handle the problem.

KEWORDS

Regional Disparities; Inclusive Growth and Educational Development; Gulbarga (Karnataka).

PAPER TYPE *Research*

INTRODUCTION

Inclusive growth is an instrument to halve the problem of regional disparities of all kinds. One of the major objectives of Indian plans since the first plan is to reduce regional disparities. But till today the problem of disparities is not solved, instead, it has been widening. Inclusive growth is a powerful instrumental approach which emphasis more on reducing the disparities of all kinds in general and regional disparities in particular. Hence, the government of India introduced Inclusive policy to overcome the neglected aspects of development.

Inclusive growth policy is an attempt to bring the backward sectors, backward regions backward classes, castes, tribes, women, and marginal people into mainstream economy. Interestingly it is very much necessary to understand the problem of exclusion to have better inclusive policy.

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Since 1990, there has been paradigm shift in the developmental approach. Today, the basic purpose of development is to enlarge people's choices **(GOK, 2005)**. The other objective of development is to create and enable an environment for people to enjoy long, healthy and creative lives **(GOK, 2005)**. The vast literatures available on education and human development have clearly proved that education plays a major role in promoting development in general and human development in particular. The difference in educational attainments leads to disparities in all the spars of activities, like economic development, socio-cultural development and human development. The United Nations Development Programme (UNDP), in its methodology to construct the Human Development Index (HDI) has used three dimensions namely, education, health and income. Hence, education is one of the important components of human development and recognized as a fundamental human right. It sustains economic growth by providing basic as well as specialized skills that ensure increased productivity and higher per capita incomes **(Jha, 1991)**. On the other hand human development is directly depending upon universal access to education, health and income with their implications for equity and social justice. Equal opportunity, equal access to education and equally utilizing these opportunities and access leads to sustainable, healthy, and educated society **(UNESCO, 2007)**. Education is essential for the growth and development of individual as well as society. Therefore, education is a major role in the development of individual construction of society and development of economy. Thus, education is the key component of human development **(Sharma, 2007)**.

LITERATURE REVIEW

Education has a positive relationship with economic development **(Palanithurai, 2004; GOI, 1966).** This argument is more valid in the context of developing countries **(Devi, 1994 a)**. The economic growth model of development was questioned by the UNDP in its first human development report of 1990, which reiterate that people, not things, are the wealth of nations. In that direction human development is the process of building the capabilities to enable people to lead productive lives **(UNDP, 1990)**. Education is the stepping stone and precondition for building capabilities **(Devi, 1994 b)**. As human development reports reveal most of the South Asian countries are having low human development and India is one such **(UNDP, 2010)**. Within India all the states are not having same level of human development and there occurs a wide range of disparities in human development of India based on gender, region and other factors **(GOI, 2002)**. Theoretically and empirically it has been found that males are more literate than females; forward regions are having higher literacy than backward regions and

high income states having higher literacy rate than other states **(Rampal, 2000; Premakumara, 2006; Kaul, 2001; Caseen, 2002)**. Therefore, there is dire need of inclusive growth policy to solve the problem exclusions.

PROBLEM

It is evident from the literature review that regional disparity is a common problem of all states of India. Disparity in education is one the most debated topic since it is a constitutional right of every citizen. Disparity in education will lead to disparity in human development as well as economic development and therefore, there is an urgent need for its reduction. One of the major reasons for regional imbalances is lack of education. Providing basic education to all is the responsibility of state. But still regional disparities exist. In the back drop of inclusive growth strategy of India, it is necessary to understand the regional disparity in educational development. In this back ground, the present study made attempt to understand the problem of disparity and to estimate the extent of regional disparity in educational development of Karnataka in terms of literacy rate, enrolment, and drop-out rate.

SCOPE

Scope of the study is restricted to Karnataka and the study uses secondary data for analysis. There are thirty one districts in Karnataka and these districts are grouped into four parts based on the regional features. The data was collected for the years 1991 and 2001 at district level. The major variables considered in this paper are literacy rate, enrolment and drop-out rates. The analysis of disparity was limited to primary and secondary education only.

METHODOLOGYAND MODEL SPECIFICATION

The paper uses comparative dimension for the analysis. Descriptive and analytical methods and tools were used for analysis. For the disparity analysis dummy variable econometric models were used, since nominal scale was operating. The model explains the presence or non- presence of an attribute **(Damodar & Sangeetha, 2007)**. To avoid the dummy variable trap, n-1 dummies were used since there are four regions in Karnataka and Gulbarga region has been treated as bench mark. The study used secondary data for analysis.

To identify the presence of regional bias the following model was used.

$$L_i = \alpha + \beta_1 D_{1i} + \beta_2 D_{2i} + \beta_3 D_{3i} + u_i \text{.....(1)}$$

Where,

L_i = Literacy Rate

D_{1i} = 1 if Bangalore region

= 0 otherwise

D_{2i} = 2 if Belgaum region

= 0 otherwise

D_{3i} = 3 if Mysore region

= 0 otherwise

The two other models for enrolment and drop-out which have followed the same methodology are;

$$E_i = \alpha + \beta_1 D_{1i} + \beta_2 D_{2i} + \beta_3 D_{3i} + u_i \text{.....(2)}$$

Where,

E_i = Enrolment rate

$$D_i = \alpha + \beta_1 D_{1i} + \beta_2 D_{2i} + \beta_3 D_{3i} + u_i \text{.....(3)}$$

Where,

D_i = Drop-out rate

DESCRIPTIVE ANALYSIS

The analysis includes comparison of literacy rate for the years 1991 and 2001. Comparison of enrolment rate, drop-out rate, girls' literacy rate as compared to that of boys, and comparison of enrolment rate and drop-out rate for the years 1991 and 2001 have been analysed.

Literacy Rate Comparison

Table 1 gives the aggregative information about the literacy rate changes in Karnataka during the period 1991 and 2001.

Table 1: Comparison of Literacy rate for the Period 1991 and 2001

Results For	1991	2001
Average Literacy Rate in Karnataka	55.00	65.73
t-test for equality of Means	t-test value: -3.725***	
Significant at	Sig: 0.000	

******Significant at one percent level***

In Karnataka during 1991and 2001, the literacy rate has increased from 55% to 65.73%. It is revealed from the t-test analysis that the difference between two periods is significant at one percent level. Hence, the literacy rate in the state has increased by 10.7315% in 10 years period.

Enrolment Comparison

Table 2 gives the information about the enrolments made in Karnataka during the period 1991 and 2001.

Table 2: Comparison of Literacy rate for the Period 1991 and 2001

Results For	1991	2001
Average enrolment in Karnataka	258626	348481
t-test for equality of Means	t-test value: -1.767*	
Significant at	Sig: 0.083	

******Significant at ten percent level***

In Karnataka during 1991 and 2001, the number of enrolments were increased from 2,58,626 to 3,48,481. It is evident from the t-test analysis that the difference between two periods is significant at 10% level. Hence, the enrolments in the state were increased. Since the difference is not significant at 1 %, level it gives the room for thinking about the consistency in increase and variance among the districts.

Drop-out rate Comparison

Table 3 highlights information about the enrolment rate changes in Karnataka during the period 1999 and 2003.

Table 3: Comparison of Drop-out rate for the Period 1999 and 2003

Results For	1999	2003
Average drop-out rate in Karnataka	53.15	42.31
t-test for equality of Means	t-test value: -2.23**	
Significant at	Sig: 0.032	

******Significant at five percent level***

In Karnataka during 1999 and 2003, the drop-out rate has decreased from 53.15% to 42.31%. From t-test analysis the difference between two periods is significant at 5 % level. Hence, the drop-out rate in the state has decreased by 10.8419% in 4 years period, which is considerably good achievement.

RESULTS & DISCUSSION

Regional Bias in Literacy Rate

The dummy variable regression was run twice to identify the presence of regional bias for the district level data, for the year 1991 and 2001.

The results for the year 1991 are:

$$\mathbf{L_i = \alpha + \beta_1 D_{1i} + \beta_2 D_{2i} + \beta_3 D_{3i} + u_i}$$

$$\mathbf{L_i} = 40.42 + 17.22D_{1i} + 17.37D_{2i} + 18.91D_{3i}$$

t: (9.57) (3.11) (3.14) (3.51)

Prob: (0.00) (0.01) (0.01) (0.00)

$R^{2:}$ 0.39, Adjusted $R^{2:}$ 0.31

The results for the year 2001 are:

$$L_i = \alpha + \beta_1 D_{1i} + \beta_2 D_{2i} + \beta_3 D_{3i} + u_i$$

$$L_i = 54.25 + 14.88 D_{1i} + 11.55 D_{2i} + 15.60 D_{3i}$$

t: (14.63) (3.06) (2.38) (3.30)

Prob: (0.00) (0.00) (0.03) (0.01)

$R^{2:}$ 0.36, Adjusted $R^{2:}$ 0.27

Both the models are reasonably good fitted with the adjusted R squared values of 0.31and 0.27. The constant and coefficient values are acceptable at 1 % level, since probabilities are almost nearer to zero. The positive signs of the coefficients show the presence of regional bias. It is evident from the above results that the regional bias has a great impact on the educational development of Karnataka. The constants of the regression indicate the level of literacy rate in the bench mark region which is Gulbarga in this analysis. The co-efficient represents the level of difference compared with bench mark region. In the case of Karnataka, Bangalore, Belgaum and Mysore districts more than 17% higher literacy rate was seen when compared to Gulbarga region. During the period 1991 to 2001 the literacy rate in Gulbarga region has increased from 40.42% to 54.25%. The difference with other regions was also reduced from 17% to 13%. Therefore, it can be said that the literacy rate in Gulbarga region has increased, the difference with other regions has reduced marginally, but still a huge regional disparity exists in Karnataka in terms of literacy rate.

Regional Bias in Enrolment

The results for the year 1991 are:

$$E_i = \alpha + \beta_1 D_{1i} + \beta_2 D_{2i} + \beta_3 D_{3i} + u_i$$

$$E_i = 217566 + 134603 D_{1i} + 281437 D_{2i} + 891 D_{3i}$$

t: (1.339) (0.633) (1.323) (0.004)

Prob: (0.19) (0.53) (0.20) (0.99)

$R^{2:}$ 0.11, Adjusted $R^{2:}$ -0.01.

The results for the year 2001 are:

$$E_i = \alpha + \beta_1 D_{1i} + \beta_2 D_{2i} + \beta_3 D_{3i} + u_i$$

$$E_i = 370661 + 95539 D_{1i} - 33485 D_{2i} - 133886 D_{3i}$$

t: (3.67) (0.72) (0.25) (1.04)

Prob: (0.00) (0.47) (0.80) (0.30)

$R^{2:}$ 0.14, Adjusted $R^{2:}$ 0.03

Both the models do not fit good with the adjusted R squared values of 0.14 and 0.03. The constant in the first model and coefficients in both the models are not acceptable at one, five or 10 % level, since probabilities

are not less than 0.10. Only the constant in the second model is acceptable at 1 % level. The positive signs of the coefficients show the presence of regional bias. The constants of the regression indicate the number of enrolments in the bench mark region which is Gulbarga in this analysis. The co-efficient represents the level of difference compared with bench mark region. But in the case of Karnataka, regional bias does not exist in terms of enrolments. Moreover, the enrolments in Gulbarga have increased during the period. Therefore, it can be said that since the government of Karnataka has given high priority to Gulbarga and introduced varieties of educational programmes, the enrolments in the Gulbarga region has increased considerably.

Regional Bias in Drop-out Rate

The dummy variable regression was run twice to identify the presence of regional bias for the district level data, for the year 1999 and 2003.

The results for the year 1991 are given bellow;

$$\mathbf{D_i = \alpha + \beta_1 D_{1i} + \beta_2 D_{2i} + \beta_3 D_{3i} + u_i}$$

$$\mathbf{D_i} = 72.30 - 26.16D_{1i} - 14.95D_{2i} - 27.84D_{3i}$$

t: (9.89) (-2.77) (-1.45) (-2.95)

Prob: (0.00) (0.01) (0.17) (0.01)

$R^{2:}$ 0.40, Adjusted $R^{2:}$ 0.29.

The results for the year 2001 are given bellow;

$$\mathbf{D_i = \alpha + \beta_1 D_{1i} + \beta_2 D_{2i} + \beta_3 D_{3i} + u_i}$$

$$\mathbf{D_i} = 62.14 - 20.17D_{1i} - 18.46D_{2i} - 30.13D_{3i}$$

t: (11.62) (-2.92) (-2.44) (-4.36)

Prob: (0.00) (0.01) (0.03) (0.00)

$R^{2:}$ 0.55, Adjusted $R^{2:}$ 0.46

Both the models are reasonably fit good with the adjusted R squared values of 0.55 and 0.46. The constant and coefficient values are acceptable at 1 % level, since probabilities are almost nearer to zero excluding the co-efficient β_2. The negative signs of the coefficients show the presence of regional bias. It can be found from the results that the regional bias presents very much in the educational development of Karnataka. The constants of the regression indicate the level of drop-out rate in the bench mark region which is Gulbarga in the analysis. The co-efficient represents the level of difference compared with bench mark region. In the case of Karnataka, Bangalore, Belgaum and Mysore districts less drop-out rate was witnessed when compared to Gulbarga region. During the period 1991 to 2001 the drop-out rate in Gulbarga region has decreased from 72.30% to 62.14%. But compared to other regions, drop-out rate in Gulbarga is still quite high. Therefore, it can be said that the

drop-out rate in Gulbarga region has decreased, and the difference with other regions has reduced marginally, but still a huge regional disparity exists in Karnataka in terms of drop-out rate.

CONCLUSION

Out of four regions, Gulbarga is found to be a backward region in the field of education. Compared to other regions, in Gulbarga the literacy rate is quite low and drop-out rate is quite high. Due to the educational programmes introduced by the government, the enrolments in the region have increased but students do not complete their education fully because of high drop-out rate. It needs immediate attention on part of government to tackle the problem. The study strongly advocates for the programmes which can increase the literacy rate and reduction in the drop-out rate simultaneously.

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