International Journal of Social Science and Economic Research

ISSN: 2455-8834

Volume:03, Issue:10 "October 2018"

THE EFFECTIVENESS OF PUBLIC EXPENDITURE ON PRIMARY EDUCATION: A CASE STUDY OF GUJARAT STATE

[1*]Dr. Sarala Dasari, [2]Sonawane Satish Waman

[1]Assistant Professor, Centre for Studies in Economics and Planning, School of Social Science, Central University of Gujarat, Sector-29 Gandhinagar, Gujarat.

[2]PhD Fellow, Centre for Studies in Economics and Planning, School of Social Science, Central University of Gujarat Sector-29, Gandhinagar, Gujarat.

*Corresponding Author

ABSTRACT

An increasing literature on public spending on primary education emphasizes that overall education dominated by both central and state Government spending and it's increased overall development process. So, an issue study will analyse education spending by government, despite various and widespread narratives to the contrary, how much increased by a substantial amount in perspective with Gujarat state from the period of 2000 to 2016. Therefore, study is being made on the effectiveness of structure of financial management system for education, especially primary education. This study will find that variations in primary education are positively and significantly correlated with variations of financing education in Gujarat. Based on the results from analysis, the paper points out to strengthening finances and governance of the central governments as key factors in supplying public finances and social infrastructure, to promoting finance on education and, in turn, entire development process.

Keywords: Gujarat Primary Education, Gross Enrolment Ratio, Public Spending, Schooling Pattern Administrative Structure etc.

1. INTRODUCTION

The children of today are the future of tomorrow; this powerful statement assumes special significance in our context as children (0-14 years) comprise one third of the total population in the country. As MDG Goal 2 is *'Achieving universal primary education'* with the target to ensure that by 2015, children everywhere, boys and girls alike, will be able to complete a full

ISSN: 2455-8834

Volume:03, Issue:10 "October 2018"

course of primary education. An education transforms lives and is at the heart of UNESCOs[1] mission to build peace, eradicate poverty and drive sustainable development. Such as, human capital has been identified more supportive for poverty reduction rather than human development more generally (Ravallion and Chen (1997); Sen (1999); Squire (1993) and Schultz (1999). **Global Education Monitoring Report (2016)[2]** The Education 2030 Framework for Action, recognizes that gender equality is inextricably linked to the right to education for all.

In 2014, the global pre-primary gross enrolment ratio was 44%. Southern Asia is the region with the lowest participation rate (18%), followed by sub-Saharan Africa (22%) and Northern Africa and Western Asia (29%). Much higher rates are observed in Latin America and the Caribbean (73%), Eastern and South-eastern Asia (76%) and Europe and Northern America (85%). Gender parity in preprimary education has been nearly achieved everywhere except Southern Asia, where 94 girls are enrolled in preprimary education for every 100 boys. About 63% of all countries with data record gender parity in pre-primary enrolment. In the remaining 37% of countries, more girls are enrolled in 37 countries and more boys in 22.

2. LITERATURE REVIEW: PUBLIC SPENDING AND EDUCATION

There are few studies on financing of school education in India such as Gupta et al. (2002), Baldacci et al., (2003), Rajkumar and Swaroop (2008), Gupta and Verhoeven (2001), Kaur, Misra and Suresh (2013), Sipahimalani (2000). The first attempt was made in the seminar on education on Investment in 1966 at the department of economics, University of Lucknow. Another seminar was organized by NCERT on the measurement of cost productivity and efficiency in education in 1967 **(Josephine, 2004).** In this seminar many papers were presented and many new concepts emerged. From the period of 1966 and 1967 the issue of education in India has been picked up at a wider level.

Therefore, the literature on spending on primary school education has not more available especially in the context of Gujarat. It may be noted that there is lack of studies that analysis into the functioning and efficiency of primary education in the Gujarat context. The lack of literature highlighting the problems faced by primary schools makes it difficult to understand the context of their existence in a state with a large growing population. This study is a humble attempt to investigate about the functioning of primary education in the state and it is expected that this study will further increase the current understanding about the functioning of these education in Gujarat.

[1]United Nations Educational, Scientific and Cultural Organization (UNESCO) which was establish in 1947 for Mobilizing education: so that every child, boy or girl, has access to quality education as a fundamental human right and as a prerequisite for human development.

[2]The Global Education Monitoring (GEM) Report is an independent annual publication. The GEM Report is funded by a group of governments, multilateral agencies and private foundations and facilitated and supported by UNESCO.

ISSN: 2455-8834

Volume:03, Issue:10 "October 2018"

Some researcher i.e. Muktadir-Al-Mukit, D. (2012); Miller, R. (2007); Bhattarai, K. (2016); Gill Kaur, N., & Letic, J. (2013); Nowak, A. Z., & Dahal, G. (2016); Yardimcioglu, F., Gürdal, T., & Altundemir, M. E. (2014); Otieno, O. D. (2016); Omojimite, B. U. (2010); Pegkas, P. (2014); Pegkas, P., & Tsamadias, C. (2015); Barro, R. J. (2000). Babalola, S. J. (2011) summarized in his different studies that schooling is necessary for industrial development. The form of schooling that emerged in the 19th century generates specific intellectual, behavioural and social knowledge that are critical components for the way of production and consumption, daily life in cities and nations, the size and fitness of the population for work, the creation and use of knowledge.

Among the researcher an articles published in different journals, the more prominent are "Basic Education as a Political Issue" by **Jean Dreze and Amartya Sen**; Another group of studies in general are on education especially related to India i.e. the study "Cost Recovery Approaches in Education in India" by **J.B.G. Tilak**; "Public Financing of Education: A Review of the Institutional Framework" by **P.R. Panchamukhi**; “Deficiencies of primary education in India” by **Amartya Sen** in 2005; “Role and Importance of Educational for Effective Growth of Indian Economy: An Overview” by **Sreenivaslu, E**. in 2013; “Education and Economic Growth in India” by **Chakraborty, K. S**. in 2012; “Higher Education Reservations and India's Economic Growth: An Examination” by **Mahajan, G**. in 2008; “Educational Planning and Economic Development” by Ramamoorthy, B. in 1968; “Preference for Boys, Family Size, and Educational Attainment in India” by **Kugler, A. D., and Kumar, S.** in 2017; “Economic development in India: the role of individual enterprise (and entrepreneurial spirit)” by **Lal, A. K., and Clement, R. W**. in 2006; “An economic history of education in colonial India” by **Chaudhary, L.** in 2007; “Does Expenditure on Education Affect Economic Growth in India? Evidence from Cointegration and Granger Causality Analysis” by **Mallick, L., and Dash, D. P**. in 2015; “The Role of Higher Education in Economic Development” by **Sharma, A. and Kumari, A.** in 2017; “Human Capital Formation and Economic Growth in India: A CGE Analysis” by **Ojha, V. P., and Pradhan, B. K**. in 2010; “Gender Equality and Economic Growth in India” by **Agénor, P. R., Mares, J., & Sorsa, P.** in 2015; “Does education at all levels cause growth? India, a case study” by **Self, S., and Grabowski, R**. in 2004; “Twenty-Five Years of Indian Economic Reform: A Story of Private-Sector Success, Government Failure, and Institutional Weakness” by **Aiyar, S. S**. in 2016. These studies estimate and contain indices of educational development or investment in education in different states of India.

The study did by **Amartya Sen** (2005) merely emphasized the three districts of West Bengal: Birbhum, Medinipur and Puruliya by selecting Schools from villages in six randomly chosen blocks in each district. Altogether 18 primary schools (PS) were intensively studied, along with 17 Sishu Shiksha Kendras (SSK), six of each (PS and SSK) from each district (except for the

ISSN: 2455-8834

Volume:03, Issue:10 "October 2018"

district of Birbhum where it has been possible to study only five SSK so far). in which the survey were conducted, and their significance for West Bengal as a whole is suggestive, rather than definitive. Furthermore, **Sreenivaslu, E**. (2013) state that, twenty percent of Indian get a fairly decent education and in a nation of 1.2 billion, this is huge number and helps to explain why India has become the back office of the world. Government schools have failed in India, and this is why one-third of Indians children attend private schools. Many foreign/abroad countries including India, China, Australia, Newzeel and, Singapore and many other developing moves started to welcome more international students to contribute to the development of Indian economic system. The study by **Chakraborty, K. S**. (2012) found relationship between expenditure on education and expenditure on education as a percentage of aggregate expenditure by different state governments in India on economic growth. **Mahajan, G**. (2008) mentioned that, while examining the implications of the policy, particularly the claim that higher education reservations will dilute the quality of human capital and study suggests that the policy may present long-term challenges not currently anticipated. **Ramamoorthy, B. (1968**) says while 86,668 students enrolled for BA/BSc in 1950-51, the number of those who passed out in 1952-53 was only 40,017; the enrolment for MA/MSc in 1952-53 was 19,684 and the number of those who passed out in 1954-55 was only 11,103. This is a national waste, caused by the defective pattern of investment in education. **Kugler, A. D., and Kumar, S.** (2017) in his study on preference for boys, family size, and educational attainment in India shows that children from larger families have lower educational attainment and are less likely to be enrolled in school, with larger effects for rural, poorer, and low-caste families as well as for families with illiterate mothers. The study by **Chaudhary, L.** (2007) merely highlighted provision of schooling in British India from 1850 to 1917 and analyse colonial policy made several recommendations to increase mass schooling, the growth of primary education generally lagged behind secondary education over most of the period. Another two study by **Mallick and Dash** (2015); **Sharma and Kumari** (2017) investigates relationship between expenditure on education and economic growth in India form the period 1951 to 2012 and suggest that the government has to focus more on expenditure in education in order to create better human development which can have better contribution to economic growth. Empirical studies in the literature on education and economic growth by **Ojha and Pradhan (2010); Agénor, Mares & Sorsa (**2015) also find compelling evidence for the hypothesis that a substantial proportion of the growth of the economies is attributable to the rise in the educational levels of the workforce. As the study by **Aiyar, (2016)** find out that only 48.1 percent of children in their fifth school year could read a text appropriate for their second school year till 2015.

There has also been literature on the cost of education. **Srivastava and Sen** conducted a study (1970) on the utilization of money by the tribal students. Sen made a cross-sectional survey of Calcutta Metropolitan Area (1969), dealing with the cost of education. **Tilak, J.B.G.** studied

ISSN: 2455-8834

Volume:03, Issue:10 "October 2018"

(2006) that the utilization resources in education in the three Mandals in Guntur district in Andhra Pradesh and Rajsthan. Another study of Kerala's higher education by **Tilak, J. B. (2001)** shows that Kerala made impressive progress in literacy and elementary education, it is shown here that it has largely neglected higher education; and that Kerala compares very poorly with other states in India with respect to several indicators of development of higher education.

Another, there have also been three studies analysing the cost of different methods of teaching and education, i.e. **Aghion, Boustan, Hoxby and Vandenbussche (2009), Omojimite (2010), Tilak (2003), Tomić (2015)**. The Kothari Commission (1964-66) also emphasized the utilization of resources, considering education as an important factor in manpower planning for a planned economy. Studies on the cost-benefit aspects of education are few, the stress in calculating the return on education having generally been on its social aspect. Among such studies are those by Kothari Commission, Panchamukhi the **Tilak and Kothari** have considered the connection of education with income distribution. The notable study by **Tilak, J. B. (1989)** on education and its relation to economic growth and suggest that the Rates of return are highest in primary education, followed by secondary and then university levels. For primary education, **unit** costs are small relative to the extra lifetime income or productivity associated with literacy. For university education, the opposite is true.

3. BACKGROUND OF PRIMARY EDUCATION IN INDIA

The role of Universal Elementary Education (UEE) for strengthening the social fabric of democracy through provision of equal opportunities to all has been accepted since the inception of our Republic. The original Article 45 in the Directive Principles of State Policy in the Constitution mandated the State to endeavour to provide free and compulsory education to all children up to age fourteen in a period of ten years. The constitution (Eighty-six Amendment) Act, 20021 inserted Article 21-A in the Constitution of India to provide free and compulsory education of all children in the age group of six to fourteen years as a Fundamental Right in such a manner as the State may, by law, determine. The Right of Children to Free and Compulsory Education (RTE) Act, 2009, which represents the consequential legislation envisaged under Article 21-A, means that every child has a right to full time elementary education of satisfactory and equitable quality in a formal school which satisfies certain essential norms and standards.

The need to address inadequacies in retention, residual access, particularly of un-reached children, and the questions of quality are the most compelling reasons for the insertion of Article 21-A in the Constitution of India and the passage of the RTE Act, 2009 in the Parliament.

Article 21-A and the RTE Act came into effect on 1 April 2010. The title of the RTE Act incorporates the words 'free and compulsory'. 'Free education' means that no child, other than a

ISSN: 2455-8834

Volume:03, Issue:10 "October 2018"

child who has been admitted by his or her parents to a school which is not supported by the appropriate Government, shall be liable to pay any kind of fee or charges or expenses which may prevent him or her from pursuing and completing elementary education. 'Compulsory education' casts an obligation on the appropriate Government and local authorities to provide and ensure admission, attendance and completion of elementary education by all children in the 6-14 age group. With this, India has moved forward to a rights based framework that casts a legal obligation on the Central and State Governments to implement this fundamental child right as enshrined in the Article 21A of the Constitution, in accordance with the provisions of the RTE Act.

4. DEMOGRAPHIC PROFILE OF GUJARAT STATE

The State of Gujarat was formed on the first of May I960, as a result of the Bombay Reorganization Act, 1960, and became- one of the fifteen major states of India. A few small areas are administered centrally by the Union Government. Formerly, Gujarat .was a part of the greater bilingual Bombay State from which it has inherited the present administration in education. Gujarat has three Components- the old British territory of the former Bombay State consisting chiefly of the five districts of Ahmedabad, Broach, Kaira, Panchmahals and Surat, the princely states among which Baroda was the biggest and educationally well advanced and hutch. There is much in common in the administrative set-up of the three components. The State of Gujarat covers an area of 72,137 square miles and has a population which is 4.5 per cent of the total population of the Indian Union. This population lives in 243 towns and 18,729 villages spread over 183 talukas of the State. The density of population is 225 per square mile. At present, the main land of Gujarat consists of 10 districts, the Saurashtra consists of 6 districts, and Kutch forms a district by itself. Totally, there are 17 districts in the present State of Gujarat.

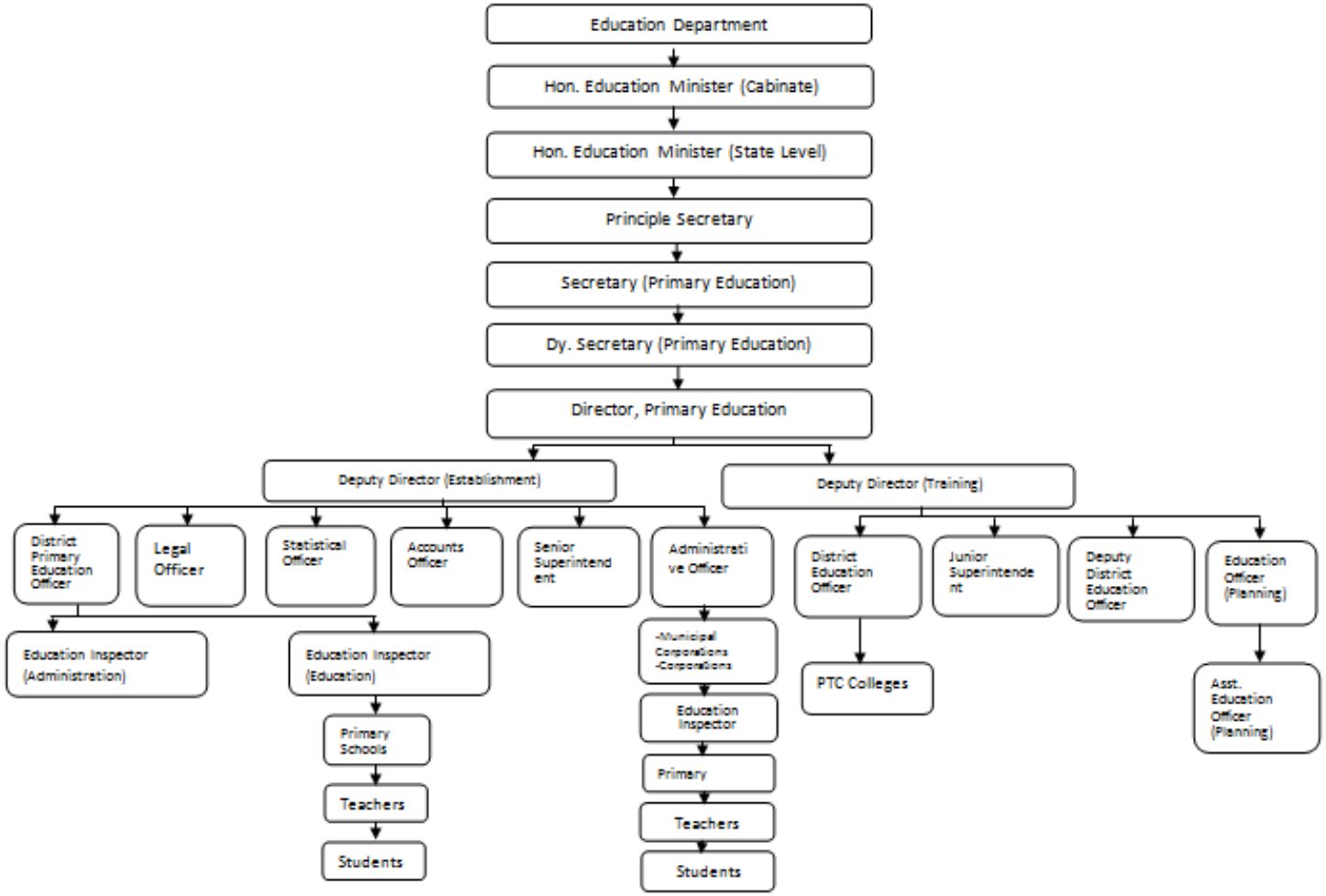
5. ADMINISTRATIVE STRUCTURE OF GUJARAT PRIMARY EDUCATION

On account of division of the then directorate of Education on office of Director of Education (Primary and Adult) has come into existence. Since 9-10-1976. Then on account of division of office of the director of Education (Primary and Adult) the office of the Director of Primary Education came into existence since 1-12-1986.

ISSN: 2455-8834

Volume:03, Issue:10 "October 2018"

Figure 1.1: The Structure of Gujarat Primary Education



ISSN: 2455-8834

Volume:03, Issue:10 "October 2018"

5.1 Key to Abbreviations in Figure 4.4.

In Figure 4.4 the detailed analysis of key to abbreviations are given following

DD (E)	Deputy Director (Establishment)
DD (T)	Deputy Director (Training)
DPEO	District Primary Education Officer
LO	Legal Officer
SO	Statistical Officer
AO	Account Officer
SS	Senior Superintendent
AO	Administrative Officer
DEO	District Education Officer
JS	Junior Superintendent
DDEO	Deputy District Education Officer
EI (A)	Education Inspector (Administration)
EI (E)	Education Inspector (Education)
MCs-Cs	Municipal Corporations-Corporations
PTC College	Primary Teachers Certificate Colleges
EO (P)	Education Officer (Planning)
AEO (P)	Asst. Education Officer (Planning)
PS	Primary Schools

Source: Directorate of Primary Education, Education Department, Govt. of Gujarat.

6. GUJARAT PROFILE OF PRIMARY EDUCATION

Primary Education has been made compulsory, universal and free of cost in the state. It has been arrangement to provide institutions in the rural areas. The state Govt. provides grant-in-aid for this pre-primary education provided by the recognized institutions in the rural areas (Directorate of Primary Education, Government of Gujarat).

ISSN: 2455-8834

Volume:03, Issue:10 "October 2018"

Table 02: Dropout Rates of Standard 1st to 7th

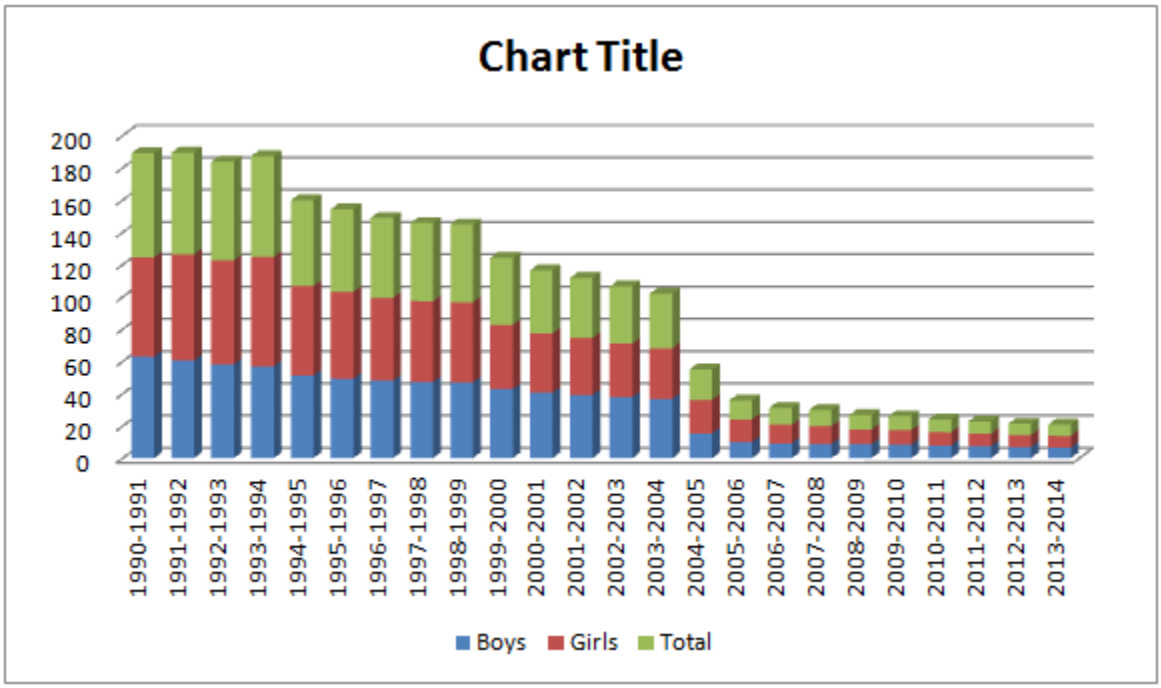
Year	Dropout Rate of Std. 1 to 7/8			Dropout Rate of Std. 1 to 5		
	Dropout Rate %			Dropout Rate %		
	Boys	Girls	Total	Boys	Girls	Total
1990-1991	62.86	61.6	64.48	44.63	53.41	49.02
1991-1992	60.58	65.63	63.1	43.67	52.67	48.17
1992-1993	58.17	64.29	61.23	41.74	50.19	45.97
1993-1994	56.91	67.84	62.38	40.38	49.84	44.63
1994-1995	51.17	55.52	53.11	34.94	41.1	37.71
1995-1996	49.19	53.8	51.25	33.45	40.01	36.93
1996-1997	48.19	51.17	49.49	32.72	39.74	35.4
1997-1998	47.12	50.18	48.43	32.26	38.95	35.31
1998-1999	46.91	49.74	48.18	29.28	27.56	28.96
1999-2000	42.76	39.9	41.48	23.67	20.83	22.11
2000-2001	40.53	36.9	38.92	21.05	20.81	19.12
2001-2002	39.16	35.28	37.22	20.46	20.53	20.5
2002-2003	37.8	33.17	35.46	19.08	19.14	19.12
2003-2004	36.59	31.49	33.73	17.79	17.84	17.83
2004-2005	15.33	20.8	18.79	8.72	11.77	10.16
2005-2006	9.97	14.02	11.82	4.53	5.79	5.13
2006-2007	9.13	11.64	10.29	2.84	3.68	3.24
2007-2008	8.81	11.08	9.87	2.77	3.25	2.98
2008-2009	8.58	9.17	8.87	2.28	2.31	2.29
2009-2010	8.33	8.97	8.65	2.18	2.23	2.2
2010-2011	7.87	8.12	7.95	2.08	2.11	2.09
2011-2012	7.35	7.82	7.56	2.05	2.08	2.07
2012-2013	6.87	7.37	7.08	2.02	2.06	2.04
2013-2014	6.53	7.28	6.91	1.97	2.02	2

Source: Directorate of Primary Education, Education Department, Govt. of Gujarat.

ISSN: 2455-8834

Volume:03, Issue:10 "October 2018"

Figure 1.2: Drop-Outs Rate of std. 1 to 7/8 in Gujarat State



Source: Directorate of Primary Education, Education Department, Govt. of Gujarat

7. RESEARCH GAP OF THE STUDY

On the basis of above relevant theoretical and empirical review of literature it is found that there are a few studies on Public expenditure on primary education in Gujarat State. But, there are number of studies which focusing on relevance of government spending on basic education, significant time lag between increases in education spending and the realization of their full effects on social indicators and growth in developing countries, The effects of education and health spending are strongly influenced by the quality of governance.

Therefore, the paper will found that, should their progress of enrolling children in primary school from 2000 to 2018 in Gujarat. On the basis of theoretical and empirical literature, the study found the gap of periodical issue of basic (Primary) education and the role of both Central government and Gujarat state government to fulfil the responsibility of Free and compulsory education to all children under the age of six to fourteen years child according to original Article of 45 of Constitution of India.

The second issue study has been found that as gap of research concerning to the Gujarat's primary education is that, should affect primary education by Gujarat state government

ISSN: 2455-8834

Volume:03, Issue:10 "October 2018"

expenditure on education? Therefore, the focus shall be on the primary education in Gujarat State influenced by education spending by both central and state government. So the present study differs from the earlier studies in some ways and shall be enriching the extant literature.

8. STATEMENT OF PROBLEM

In the context of Gujarat state of India, it is essential to inspect that, the success of free and compulsory education to all children under the age group of six to fourteen years children. In spite of the significance of the issue of the study, there are quite empirical studies focusing on public expenditure on primary education in Gujarat state which specially analysed the determinants of public expenditure on education and its infrastructural facilities. So the study needs to analyse upgradation of the data in the context of public expenditure on primary education in Gujarat state and to determine factors that are determine educational outcomes. The study also need to investigate determinants of public expenditure on Infrastructural facilities in primary education in Gujarat state based on panel data by considering relevant indicators of primary education and public expenditure in Gujarat state.

9. RESEARCH QUESTIONS

1) How the nature of relationship between the government spending on primary education and educational outcomes?
2) Dose affects infrastructural facilities for primary education by spending on education of both central and state Govt.

10. OBJECTIVES OF THE STUDY

1) To examine the relationship between the government spending on primary education and educational outcomes?
2) Does affects of infrastructural facilities for primary education by spending on education of both central and State Govt.

11. HYPOTHESIS OF THE STUDY

Ho: There is no significant relationship between the government's spending on primary education and educational outcomes.

H_1: There is a significant relationship between the government's spending on primary education and educational outcomes.

Ho: There is no significant relationship between infrastructural facilities for primary ` education and spending on education by both central and state Govt.

H_1: There is significant relationship between infrastructural facilities for primary

ISSN: 2455-8834

Volume:03, Issue:10 "October 2018"

education and spending on education by both central and state Govt.

12. METHODOLOGY CONTEXT AND DATA ISSUE

The study will analyzes the efficacy of public expenditure on primary education from 2000-2014 and how affects primary school enrolment rates and other important educational outcomes. The proposed study is based on empirical and analytical study which is based on secondary data. The secondary data is collected from Reserve Bank of India (RBI) to examine the basic educational status of Gujarat State according to SSA's objectives such as to improve the quality of elementary education through gender specific interventions and to stress upon the relevance and quality of girls' education for their empowerment. In addition to analysis at the district level, the study also compare the effect of elementary educational spending across a few districts in Gujarat State, especially those in different stages of human capital development.

The study will collect primary educational, income and public expenditure on elementary education statistics for 32 districts in the state of Gujarat. The study will collect complete district level data for the period of 2000 to 2014 school years as well as the study will conduct panel analysis for the period of 2000 to 2014. The panel dataset will be compiling from a combination of state government data (i.e. Gujarat State) and RBI,s data which is publicly available data in the form of District Report Cards from the District Information System for Education (DISE[3]).

Therefore, for fulfilment the objectives on the basis of formulated hypothesis, The study has used the framework of Multiple Linear Regression Model (MLRM) for analysing the impact of public expenditure on elementary education in Gujarat state by adding core determinants such as public expenditure on primary education, health, Gross State Domestic Product (GSDP) in terms of per capita income, Gross Enrolment Ratio (GER) and so on. The selection of a MLRM is based on its success in other empirical studies. For the descriptive analysis of data, an empirical method will use in the study.

The process of specification of MLRM is depend on by addressing the theoretical and empirical review of literature concerning to spending education expenditure on elementary education by state government of Gujarat. The STATA will be used to find out the relationship between explanatory variables and determinants of public expenditure parameters by using statistical tool such as MLRM.

12.1 Variable Selection

[3]DISE, recently established in 2001, provides unique and comprehensive data at the state and district level for primary and upper-primary schools. These datasets cover 1.12 million primary schools (grades 1-5) and upper primary or intermediate schools (grades 6-8) schools in 609 districts in India. The Report Cards are based on school level data provided by the State Project/Mission Directors to the Department of School Education and Literacy.

ISSN: 2455-8834

Volume:03, Issue:10 "October 2018"

For the process of selecting variables to estimates the results of this study, there is some relevant literature such as Barro (1996), Mingat and Tan, (1992), Appleton et al., (1996), Gupta et al. (2002), Baldacci et al., (2003), Rajkumar and Swaroop (2008), Roberts (2003), Kaur, Misra and Suresh (2013), Flug et al., (1998), Romer (1986), Lucas (1988) Ravallion and Chen (1997).

Therefore, Gupta et al. (2002) use the following model to evaluate the effectiveness of government spending on education and healthcare across 50 developing countries. So, the per capita output equation is assumed to take the following form:

$$y = f(s_k, he, ed, \Omega) \qquad (1)$$

They explain in his equation, y is real per capita GDP; $S_k$is the investment ratio; *he* denotes health capital; *ed* represents education capital; and Ω denotes the set of macro and institutional control variables, such as the fiscal balance, inflation rate, trade openness, and governance that augment the baseline specification of the model.

12.2 Model Specification

Building on the existing theoretical and empirical literature, this study perceives a causal relationship between public expenditure on education and educational development in Gujarat state.

The classical MLRM (e.g. *k* variables regression model i.e. Y and X_2, X_3….X_k) involving two or more than two explanatory variables states that, regression model is a logical extension of two and three variable regression model (Gujarati, 2004). The econometric form of regression model for perceives a causal relationship between public expenditure on education and educational development in Gujarat state can be generalized as follows based on assumption of Classical linear regression model (CLRM).

The regression model is as follows:-

$$\mathbf{Y_t = \alpha + \beta_1 X_{1t} + \beta_2 X_{2t} + \beta_3 X_{3t} + \ldots\ldots + \beta_K X_{kt} + U_t}$$

$$(X = 1t, 2t, 3_t \ldots\ldots k_t) \qquad \ldots\ldots (1.1.)$$

Where, $Y_t$is the dependent variable; X_{2t}, X_{3t}, X_{4t} and X_{kt} are the explanatory variables (Independent Variables) and U_{ijt} is the disturbance term. α is the intercept, β_1, β_2...β_k are the parameters of the multiple linear regression model and U_t are stochastic disturbance term.

As functional determinants used in previous literature on educational spending such as Romer (1986), (Appleton et al., Mingat and Tan, 1992, 1996), Flug et al., (1998), Gupta et al. (2002),

ISSN: 2455-8834

Volume:03, Issue:10 "October 2018"

Roberts (2003), Baldacci et al., (2003), Rajkumar and Swaroop (2008), Kaur and Misra (2003) the following MLRM estimates the impact of public expenditure on primary education. The econometrics form of the model in terms of public expenditure on primary education in Gujarat state can be express as follows:

$Y_{it} = \beta_0 + \beta_1$ EXPENit + β_2 PCIit + β_3 PERGOVit + β_4 STRit + β_5 EXPENLITit + β_6 PCIURBANit + u_{it}……..... (1.2)

Where,

The Yit is an educational outcome, EXPPE it is public expenditure on primary education in Gujarat state, PCI is per capita income is Gross District Domestic Product (GDDP) defined in per capita terms, PERGOV is the percent of government schools in a district's, STR is the student teacher ratio, EXPENLIT is the interaction between expenditure per student and adults literacy in a district, PCIURBAN is the interaction between per capita income and percent of urban population in a district, *'i'* is a district fixed effect in terms sample and *"u_{it}"* contains all the remaining time-unit specific idiosyncratic error and *"t"* denotes time period.

13. SIGNIFICANCE OF THE STUDY

As India has the largest number of illiterates in the world; according to the 1991 census the illiterates in India number 352.1 million. Hence the country has a formidable task. Education in India is primarily a state-sponsored activity and therefore any squeeze in public resources for education will adversely affect in a substantial way the progress of education. However, unlike the western countries, India has not experienced any significant recession and the rate of growth of GNP continued to be around 5 per cent per annum in the eighties. But, educational expenditure as a proportion of GNP continues to be very low and more importantly it has started levelling off from the late seventies (Varghese, N.V. and Tilak, J.B., 1991).

So, The study will address partial and approximately information on public expenditure on primary education in Gujarat state to how will be pattern of funds are provided for the educational system in general and for primary education especially of Gujarat state. The study will investigate the common and core findings of most of studies analysis that heterogeneous effects of educational spending show the importance of analysis at more local level and bring question to some cross-country studies that assume outcome homogeneity across entire nations. Such analysis will generate insight for policy makers who address particular department of primary education of both central and state government sector through the linkages with international organizations such as UN, UNESCO, UNICEF, WB etc.

ISSN: 2455-8834

Volume:03, Issue:10 "October 2018"

The Gujarat state has deep roots for education. There are innumerable institutions providing educational services in KG to PG. and the universities as well as professional bodies offering education in Gujarat. Apart from a few institutions, most of the educational institutions in the state have all the required affiliations and approvals from various universities or independent professional bodies. Hence the educational environment in the state is robust and has been appreciated from students everywhere. Schools are affiliated either with the Govt., Panchayat, S.S.C board or CBSE board. Universities and colleges also have two to three affiliations.

This study will also be beneficial to analyse the structure of Gujarat's basic education. In addition, processor and techniques proposed in this study may be the base for future research particular now that the researchers have started focus on econometrics estimation of basic education to all. Therefore, results of this study will be beneficial for inferences relevant to India's basic educational structure.

14. CONCLUSION

On the basis of the above discussion, it may be said that the progress of present education an encouraging picture. The opportunities for progress in various aspects of education are manifold. The following observations may be made to summarise the foregoing discussion:

The pattern of educational administration in the State of Gujarat has the tone of decentralization. The State of Gujarat is considered to be quite progressive in education, in comparison with the other States of India. The progress of education in Gujarat in the last century suggests that in the year 1854, there were only 40746 schools including Primary, Upper Primary, Secondary and Higher Secondary Schools in 2011-2012, hut in the same year 33,496 Elementary Schools run and managed by the Government and 7444 school run by the private managements. This indicates the tremendous acceleration in the pace of progress. The development of education is very rapid during the last two decades. Some of the recent trends, e.g multipurpose schools, higher secondary schools, extension services programme, etc. are gathering momentum in recent years. Large number of classrooms have been constructed in Elementary schools in order to ensure that children have enough space to study. On an average 6.2 % classrooms per schools in Gujarat as against the national average of 4.7 % Only three out of 20 major states in India the Kerala (10.4), Haryana (6.5) and Punjab (6.3) provide more classrooms that Gujarat does. In Gujarat districts, there are more schools in rural areas in comparison with the urban areas, while in Saurashtra the number of schools in urban areas is greater than those in rural areas.

ISSN: 2455-8834

Volume:03, Issue:10 "October 2018"

REFERENCES

Appleton, S., Hoddinott, J. and Mackinnon, J. (2000) *Education and health in sub-Saharan Africa, Journal of International Development*, *8*, 307-339.

Baldacci, E., Clements, B., Gupta, S., and Cui, Q. (2004), *Social spending, human capital, and growth in developing countries*, International Monitory Fund Working Paper, WP/04/21.

British Columbia, Ministry of Education, (2001) *BC performance standards. Social responsibility: a Framework*, Previously published by Student Assessment and Program Evaluation Branch, 2000. ISBN 0-7726-4634-1

Barro, R. (1996), *Health, human capital, and economic growth*, Washington, DC: Pan American Health Organization.

Canadian Charter of Rights and Freedoms, Part I of the Constitution Act, 1982,being Schedule B to the Canada Act 1982 (UK), 1982, c. 11.

Canadian Secular Alliance (2014).*Canadian Secular Alliance policy on Public Financing of Religious Schools,*214-2 College St., Toronto, Ontario, M5G 1K3.www.secularalliance.ca

Clemens, Jason, Milagros Palacios, Jane Loyer, and Frazier Fathers (2014).*Measuring Choice and Competition in Canadian Education,*The Fraser Institute. http://www.fraserinstitute.org

Deani Neven Van Pelt and Joel Emes, (2015), *Education Spending in Canada: What's Actually Happening?*, Barbara Mitchell Centre for Improvement in Education, FRASER INSTITUTE.

Flug, K., Spilimbergo, A. and Wachtenheim, E. (1998), *Investment in education: do economic volatility and credit constraints matter?*, Journal of Development Economics, 55(2), 465-481.

Greg EkpungEdame and AgboroDiepreyeEturoma (2012) *The determinants of public expenditure on educational infrastructural facilities and economic growth in Nigeria;* E3 Journal of Business Management and Economics Vol. 5(6). pp. 152-161 http://www.e3journals.org, ISSN 2141-7482

Global Education Monitoring Report (216), *Education for People and Planets: Creating Sustainable Future for All*, United Nations Educational, Scientific and Cultural

Organisation, 7, Place de Fonteenoy, 75352 Paris 07 SP, France, ISBN: 978-92-3-100167-3.

Gupta, S. and Verhoeven M. (1997), *The efficiency of government expenditure: Experiences from Africa*, International Monitary Fund Working Paper, WP/97/153.

Kaur, Misra and Suresh (2013), *Cyclicality of Social Sector Expenditures: Evidance from Indian States*, Reserve Bank of India Occasional Ppaers, Vol. 34. No. 1&2:2013.

Lucas, R. E. (1988), *On the mechanics of economic development*, Journal of Monetary Economics, 22(1), 3-42.

Mingat, A., and Tan, J. (1992), *Education in Asia: A comparative study of cost and financing*, Washington, DC: World Bank.

Millennium Development Goal report (MDG) (2015), United Nations, New York, 2015.

National Indian Education Association (2016), *The building Relationship with Tribes: The native Process for ESSA Consultation*, 1514 P St NW, Suite B, Washington, DC 20005 www.NIEA.org

NCES, (2015), *Comparative Indicators of Education in the United States and other G-20 countries: 2015*, http://nces.ed.gov/pubs2016/2016100/index.asp

Psacharopoulos, G. and Patrinos, H. (2004), *Returns to investment in education: A further update*, Education Economics, 12(2), 111-134.

Robert, L. B. (1970), *Indian Education and Reservation Economic Development*, Southwestern Cooperative Educational Laboratory Albuquerque, N. Mex.

Ravallion, M. and Chen, S. (1997), *What can new survey data tell us about recent changes in distribution and poverty?*, World Bank Economic Review, 11(2), 357-382.

Rajkumar, A.S. and Swaroop, V. (2008), *Public spending and outcomes: Does governance matter?*, Journal of Development Economics, 86(1), 96-111.

Romer, P. (1986), *Increasing returns and long-run growth*,Journal of Political Economy, 94(5), 1002-1037.

Sen, A. (1999),*Development as Freedom*, New York Times, New York, ISBN: 0-385-72027-0.

Sipahimalani, V. (2000), *India: Financing of elementary education in India in the 1990s,*South Asia Education Sector Technical Working Paper No.2. New Delhi, World Bank.

ISSN: 2455-8834

Volume:03, Issue:10 "October 2018"

Sarva Shiksha Abhiyan: Programme for Universal Elementary Education in India, Department of Elementary Education and Literacy, MHRD, Government of India, New Delhi, 2000.

Sarva Shiksha Abhiyan, (2009), *Framework for Implementation*, Ministry of Human Resource Development, Department of School Education and literacy, government of India.

UNESCO, UNICEF, World Bank, UNFPA, UNDP, UN Women and UNHCR-World Education Forum: 2015, *Education 2030-Incheon Declaration and Framework for Action: Towards Inclusive and Equitable Quality Education and Lifelong Learning for All*, 19-22 May 2015 in Incheon, Republic of Korea, ED-2016/WS/2.

United Nations Educational, Scientific and Cultural Organization, *UNESCO Institute for Statistics*, Retrieved October 2, 2008, from http://www.uis.unesco.org/ev.php?ID=2867_201&ID2=DO_TOPIC

World Bank (2008), *Millennium Development Goals*, Retrieved October 3, 2008, http://devdata.worldbank.org/gmis/mdg/list_of_goals.htm.

Varghese, N. V., & Tilak, J. B. (1991). *The financing of education in India*. International Institute for Educational Planning.

Yardimcioglu, F., Gürdal, T., & Altundemir, M. E. (2014). Education and Economic Growth: A Panel Cointegration Approach in OECD Countries (1980-2008). *Egitim ve Bilim*, *39*(173).

Cooray, A. (2009). The role of education in economic growth.

Bashir, S., Herath, J., & Gebremedhin, T. (2012, August). An empirical analysis of higher education and economic growth in West Virginia. In *Paper presentation at the Agricultural and Applied Economics Association Annual meeting of August 12th-14th*.

Aghion, P., Boustan, L., Hoxby, C., & Vandenbussche, J. (2009). The causal impact of education on economic growth: evidence from US. *Unpublished paper*.

Muktadir-Al-Mukit, D. (2012). Public Expenditure on Education and Economic Growth: The Case of Bangladesh.

Sen, A. (2005). *Deficiencies of primary education in India*. Waxmann-Verl.

Sreenivaslu, E. (2013). Role and Importance of Educational for Effective Growth of Indian Economy: An Overview. *IOSR Journal Of Humanities And Social Science (IOSR-JHSS)*, *7*(5), 32-35.

ISSN: 2455-8834

Volume:03, Issue:10 "October 2018"

Chakraborty, K. S. (2012). Education and Economic Growth in India.

Mahajan, G. (2008). Higher Education Reservations and India's Economic Growth: An Examination.

Ramamoorthy, B. (1968). Educational Planning and Economic Development. *Economic Affairs (Calcutta)*, *13*(1), 72.

Kugler, A. D., & Kumar, S. (2017). Preference for Boys, Family Size, and Educational Attainment in India. *Demography*, *54*(3), 835-859.

Lal, A. K., & Clement, R. W. (2006). Economic development in India: the role of individual enterprise (and entrepreneurial spirit). *Asia-Pacific Development Journal Volume 12, No. 2, December 2005*, *12*(2), 81.

Chaudhary, L. (2007). An economic history of education in colonial India. *Hoover Institution*.

Mallick, L., & Dash, D. P. (2015). Does Expenditure on Education Affect Economic Growth in India? Evidence from Cointegration and Granger Causality Analysis. *Theoretical & Applied Economics*, *22*(4).

Sharma, A. and Kumari, A. (2017). The Role of Higher Education in Economic Development. International Journal of Commerce and Manegement Research, ISBN: 978-93-85895-57-9.

Ojha, V. P., & Pradhan, B. K. (2010). Human Capital Formation and Economic Growth in India: A CGE Analysis. *Policy*, *1*(28), 131-134.

Agénor, P., J. Mares and P. Sorsa (2015). "Gender Equality and Economic Growth in India: A Quantitative Framework", *OECD Economics Department Working Papers*, No. 1263, OECD Publishing, Paris.

Aiyar, S. S. (2016). Twenty-Five Years of Indian Economic Reform: A Story of Private-Sector Success, Government Failure, and Institutional Weakness.

Tilak, J. B. (1994). *Cost Recovery Approaches in Education*. Tilak.

Tilak, J. B. (2007). Post-elementary education, poverty and development in India. *International Journal of Educational Development*, *27*(4), 435-445.

ISSN: 2455-8834

Volume:03, Issue:10 "October 2018"

Josephine, Y. (1999). Impact of structural adjustment programmes on the elementary education in northeast region of India - A preliminary investigation. *National Institute of Education Planning and Administration*

Tilak, J. B. (2006). Trends in Public Expenditure on Education–A Contrast between Two Educationally Backward States: Andhra Pradesh and Rajasthan. *Journal of Indian School of Political Economy*, *18*(1&2), 1-28.

Tilak, J. B. (2003). Public expenditure on education In India: A review of trends and emerging issues. *Financing in India: Current Issues and Changing Perspectives. New Delhi: Ravi Books*, 3-54.

Tilak, J. B. (2001). *Higher education and development in Kerala*. Centre for Socio-Economic & Environmental Studies.

Tilak, J. B. (2000). *Education poverty in India*. National Institute of Educational Planning and Administration.

