

AN ANALYSIS OF FINANCING OF  
ELEMENTARY EDUCATION IN  
INDIA

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## **ABSTRACT**

*Education is a basic component of human capital. Efforts have been made to improve the education levels in India ever since planning has been introduced. When these efforts were not very effective in reaching higher levels of education in the country, Sarva Siksha Abhiyan (SSA) was introduced in a mission mode to reach the goal of Universal Elementary Education (UEE). After the introduction of SSA, the funds flow to elementary education has increased considerably. But utilization of these funds is a question to be addressed in order to understand the efficiency of the system. Given the scarcity of resources it is obligatory on the part of the government to improve the efficiency of resources along with improvement in transparency, accountability and ensuring community participation to achieve the goal of UEE. An attempt is being made in the present study to analyze the trends in financing of education and estimate the efficiency of states in public expenditure on elementary education at the macro level and transparency and accountability issues at the micro level.*

*The study is based on both secondary and primary data. Macro level analysis concerning the states in India is based on the secondary data collected from various sources. Data Envelopment Analysis (DEA) is carried out to estimate the efficiency of respective states. Factors influencing the differential efficiencies are estimated with regression analysis. On the other hand micro analysis is based on the survey conducted in three sample districts viz., Udupi, Mysore and Chamarajanagar districts. Transparency and accountability issues at the school level and intra-school variation were analyzed with primary data collected from sample schools.*

*From the secondary data it was found that the expenditure on education was only Rs. 153 crores during I five year plan and it increased to Rs. 238608 crores by XI five year plan period. Multiple regression model proved that, on an average Rs. one crore increase in total educational expenditure leads to Rs. 21 lakh increase in expenditure on elementary education. On the other hand, Rs. one crore increase in GDP increases expenditure on elementary education by Rs. 70,000 per year. The budgeted expenditure on elementary education at all India level substantially improved from Rs. 302.22 crore in 1990-95 to Rs.1541.85 crores in 2005-10. The multiple regression results show that*

*literacy, utilization of funds and poverty are significant determinants of the educational outcomes.*

*The summary of Malmquist result of Model-1 estimated that mean Total Factor Productivity (TFP) is 0.834. TFP of inputs at all India level for 5-year period decreased by 17%. The Tobit regression model of TFP shows that among other variables, the GSDP and literacy rate have positive influence on TFP, while density of population and poverty are negatively associated with TFP. Further, the Tobit regression model of technical efficiency suggests that increase in GSDP is likely to increase the technical efficiency while density of population is likely to reduce technical efficiency.*

*From the primary analysis it is observed that around 90% of teachers in all districts opined that TLM has a positive impact on their teaching. Compared to urban schools more number of rural schools in all districts experienced delay in receiving SSA funds. Compared to urban schools, more number of HMs (29.3 %) in rural schools visited higher authority for releasing funds. Among the issues discussed in the meetings civil work was the most priority issue for all SDMCs where 82.9% of SDMCs gave top priority for civil work.*

*The important suggestions that emerged out of the study are that due to inter-state differences in socio economic status, state specific guidelines or more flexibility for making appropriate changes in the overall implementation strategy for efficient utilization of scarce resources is important. In depth state specific studies are to be initiated to identify the differences in utilization of funds and factors responsible for efficiency in utilization so that appropriate flexibility component can be introduced in the overall intervention strategies. Further, the structure of SDMC needs to be modified giving more representation to teachers and parents in order to ensure accountability and transparency in schools.*

## **CHAPTER - I**

### **INTRODUCTION**

#### **1.1 Introduction**

Education is a basic component of human capital. It captures capability of acquiring knowledge, communication and participation in community life. Quality of economic and social well being is systematically built on strong foundation of education. It is a key to increase economic efficiency and social consistency and it increases the overall productivity and intellectual flexibility of the labour force. By increasing the value and efficiency of labour, it helps to raise the poor from poverty.

The aggregate effect of human capital has been the subject matter of an active debate in growth theory. The neo-classical growth models particularly Solow (1957) explained differences in per capita income between nations and regions through differences in productivity. This productivity of a labour has causal relation with educational opportunities.

Stevens and Weale (2003) did not find conclusive evidence to propose that the returns to education are very different from returns to physical capital. But they observed that education is needed as a means of allowing countries to make good use of available technology and come to a conclusion that education plays a role in facilitating the best practice of technology. Knowledge of technology depends on investment on education in particular and investment on human capital in general.

Education has both the intrinsic and instrumental values; it is desirable not only for individuals but also for the society as a whole (Sen, 1999). Education is a major determinant of differences in productivity; in addition basic education produces greater social benefits than private benefits. As education level increases from elementary to higher level, private benefits will be greater than social benefits. This indicates greater investment in the elementary level is more significant as it is the foundation for the subsequent higher levels of education. It was observed that one year increase in the primary schooling of the workforce would raise output by 23 per cent (Lee, 1995). Further, the rate of return to primary education is greater than rate of return to higher education (Psacharopolous, 1973). Education has the characteristic of

both consumption good as well as capital good. It is also a way to diminish the inequality, improve the productivity. Furthermore, it has positive relationship with standard of living, productivity and negative relation with poverty and fertility (Todaro, 1972).

Elementary education distributes larger positive externalities to the society, Nerlove (1972) and other economists considered education as pure public good and Levin (1987) and others contended that education as a merit good. But market mechanisms do not operate more efficiently with respect to public and merit goods. This applies to education also, where market fails in the valuation of education leading to inefficient allocation of resources. This characteristic has been used to justify the rationale for public intervention in provision and financing of education. The United Nations Organization (UNO) also assured that 'Everyone has the right to education. Education shall be free at least in the elementary level and fundamental stages. Technical and professional and higher education shall be generally accessible to all on the basis of merit (UNO, 1990). This declaration reiterates the fact that human beings should have desire and enjoy the education opportunity.

The concept of National Education System in India implies that up to a given level, all students irrespective of caste, sex or location, have access to education of a comparable quality. Education sector in India is receiving significant share under social sector in all five year plans and budgets. It was also included in the 'National Programme of Minimum Needs' in five year plans of the central government. Besides, Government of India (GOI) has appointed committees and commissions to deal with different issues related to education policy and financing of education. Most of these committees and policies have strongly recommended that the government should enhance the public spending on education to six per cent of the national income and at least half of this share should be spent on elementary education (Tilak, 1999). However, the state and central governments are not been allocating six per cent of national income to education.

Cost of primary education matters in India. Higher cost reduces the probability of children attending school which negatively affects the achievement of national goals. According to Mukhopadhyay (2006) to achieve better national goals, the government should provide free tuition for primary education and it should also borne other costs

i.e. cost of travelling, school fee and others. Targeted subsidies are very useful in improving enrolment at the school level for achieving crucial goal of Universal Elementary Education (UEE) which means 100 per cent enrolment and retention of children with schooling facilities in all habitation.

Several programmes namely Operation Black Board (OBB), District Primary Education Programme (DPEP), Mid Day Meals (MDM) and others have been introduced in India for the achievement of UEE. Sarva Shiksha Abhiyan (SSA) is one among such programmes and it has been introduced as the flagship programme by the Ministry of Human Resource Development (MHRD), GOI during 2001-02 with an objective of achieving UEE. At the operational level it aims at harmonizing the central government initiatives in school education with the efforts of the state governments. Despite several efforts there is an inter-state gap in achievement in literacy level, pupil-teacher ratio, inadequate finance and quality of education. Education inequality is increasing between developed and developing states.

According to the recent publications of MHRD and Selected Educational Statistics (SES) it is observed that the country has made significant progress in education in general and elementary education in particular. There is a significant improvement in institutions, teachers and students at elementary education. Number of recognized educational institutions of the primary education increased from 209.7 lakh in 1950-51 to 832.2 lakh during 2009-10 period. The upper primary schools increased from 13.6 lakh in to 367.7 lakh during same period. In terms of enrolment, the overall admission at the elementary level was 223 lakh in 1950-51 period and it attained to 1950 lakh in 2009-10. The Gross Enrolment Ratio (GER) of elementary education is increased from 32.1 per cent in 1950-51 to 102.5 per cent in 2009-10 and the dropout rate is significantly decreased from 78.3 per cent to 42.4 per cent during the same period. The Gender Parity Index (GPI), which is the ratio of male students to female students, is improved from a low level of 0.38 during 1950-51 increased to 0.97 in 2009-10. The Pupil Teacher Ratio (PTR) is one of the indicators which represent the quality of education. PTR at primary school increased from 24 to 42 and at upper primary school from 20 to 34 between 1950-51 and 2009-10.

The quality of learning at elementary level in India is very low. In 2008, the proportion of children in Standard III who could read a Standard I text was under 50

per cent. A child in Standard III has to learn to do two digit subtractions, but the proportion of children in government schools who can even recognize numbers up to 100 correctly was near 50 per cent over the last four years (ASER, 2012). According to Muralidharan (2012) increasing inputs to primary education are unlikely to change the trajectory of student learning in a meaningful way unless accompanied by significant changes in pedagogy and improvements in governance.

Despite several attempts to achieve UEE, still majority of the states have not achieved this objective. A huge number of children are still out of school and above half of them dropout before completing the elementary level. The government has observed that the UEE may be too big task for a single institution to deliver. Therefore, Village Education Committees (VECs), Non-Government Organizations (NGOs), community organizations, private education providers, local bodies and parents have been promoted to supplement efforts of the government. Along with International agencies like World Bank (WB), United Nations International Children Education Fund (UNICEF), United Nations Educational, Scientific and Cultural Organization (UNESCO) and Asian Development Bank (ADB) and other several countries are providing education aid for achieving UEE.

The decline in allocation of funds to education due to Structural Adjustment Programmes (SAP) following economic reforms and lack of political will are the major obstacles towards achieving UEE. The sources of funds for education include central and state government budget allocations, aid from international agencies, and mobilization of funds from local Non-Government Organizations (NGOs) and village level education committees. The funds from last two agencies are marginal. It is suggested that the collection of education cess from those who are getting benefitted was suggested to augment the financial resource for funding elementary education. However, government should strengthen decentralization system for mobilizing additional resources to fulfil this gap. The present research attempts to estimate the efficiency of education spending across different states and the transparency and accountability issues at the school level in Karnataka with an objective to identify the factors influencing these efficiency and accountability.



## 1.2 Conceptual Framework of the Study

Finance is commonly referred to providing funds for commercial activities. But public financing or public expenditure is referred to the expenses incurred by the government for maintenance of government responsibilities and stimulate welfare of the society. Financing is an economic activity of the government to provide and manage necessary resources for satisfying the needs of the people. Education is an important determinant of human development and human welfare. In this regard it is considered as a public good, which produces wide variety of positive externalities and social advantages to the society.

Some of the arguments justifying the government intervention in education are

1. Elementary education is recognized as a pure public good (Vaizey 1962). It distributes larger positive externalities to society, which have direct and indirect impact on the development of the nation.
2. Due to ignorance of people about the value of the education creating human capital there may be a short fall of private expenditure on education and this has to be supported by government institutions (Musgrave, 1959) and Levin,1987).
3. Education is advocated on the grounds of providing equality of opportunity. Ensuring equality of opportunity in education to everyone irrespective of their social and economic background is considered as an important function of the modern state (Blaug and Woodhall, 1979)
4. Due to imperfect market and asymmetric information in developing and developed economies poor people still consider education as a consumption rather than investment (Arrow, 1993).
5. Market mechanism is determined by the demand for and supply of the private goods. But education is a public good, in nature and the marginal cost of an additional education unit is zero leading to market failure (Colclough, 1996). Therefore in the context of market failure state has to intervene.

6. Public expenditure on education played an important role in improving the education indicators in many developing countries (Gupta et al 1999; Mehrotra,1998)

### **1.2.1 Efficiency**

Efficiency is one of the main indicators to determine how the public resources are utilized for the development of the society. The concept of efficiency is about the relationship between inputs and outputs. Farrell (1957) advocated the concept of productive efficiency, 'it is important to know how far a given industry can be expected to increase its output by simply increasing its efficiency. The input-output ratio is widely used to measure efficiency in the system. However, compared to productivity measurement, the efficiency concept incorporates the idea of the production possibility frontier, which indicates feasible output levels given the scale of education operation. The greater the output for a given input or the lower the input for a given output is the ways to achieve the efficiency. In educational system efficiency can be achieved through controlling and monitoring the educational resources into better educational outcomes.

A distinction can be made between technical efficiency and allocative efficiency. Technical efficiency gains are a movement towards the production possibility frontier. However, each point of technical efficiency does not make economic sense. It is captured by allocative efficiency. Allocative efficiency reflects the link between the optimal combination of inputs taking into account costs and benefits and the output achieved. Therefore, assessing allocative efficiency in the public expenditure on education requires the measurement of the inputs and outputs entering into the educational activities. Indicators of educational inputs under SSA are teachers salary, expenditure on civil works, teachers grant, school management grant, and school development grant, supply of free text books, teacher training and teaching learning equipment. The indicators of educational outcomes have increased in enrolment rate, completion rate, learning achievement levels and gender parity in educational attainment. This efficiency score helps to measure the performance of educational outcomes across the states. Further it also helps to understand the possible factors influencing on technical efficiency.

### **1.2.2 Accountability and Transparency**

Accountability refers to an institutional relationship, which enables successful service delivery by giving interdependent actors the proper incentives. The World Development Report (WDR, 2004) identifies four sets of actors in a service delivery scenario: the clients / beneficiaries, the politicians / policy makers, the providing organizations, and the frontline providers. Ideally, these sets of actors are linked in relationships of power and accountability: citizens should be able to exercise voice over politicians. Policy makers should have contacts with organizational providers. Organizations should manage frontline providers, and clients should be able to exercise client power through interactions with frontline providers. Weaknesses in any of this relationship or in the capacity of the actors can result in service failures.

In another way, accountability is broadly defined as the obligation of those who holds power to take responsibility for their behaviour and actions (Malena et al. 2004). Fundamentally the term accountability summarizes five main elements; delegation, financing, performance, information on performance and enforceability.

Inter-linkages among the five core elements of accountability are called as transparency. Transparency is defined as ‘the degree of which information is available to outsiders that enables them to make informed decisions or to assess the information made by insiders (Florini, 2007). The links between the two are said to be fashioned along two axes – transparency of information is instrumental for demanding accountability because without information individuals cannot know the excess of resource being committed by the state and wastage of resource. Further transparency of information is also seen as a significant for motivating citizens to exercise voice power. Voice power is defined as the capacity of citizens to pressurize the frontline officials in ensuring effective delivery of services (Goetz and Gaventa, 2001). The role of transparency in strengthening the voice of the community has been occupied special emphasis. It is assumed that access to information mobilizes citizens for collective action and this in turn strengthens the incentive structure of frontline providers. The greater transparency leads greater accountability. In fact, accountability and transparency are inseparable. Moreover accountability is a form of transparency. Transparency leads people to look at results and this leads to accountability.

There are many factors which determine the success or failure of any government programme. Among them accountability and transparency are two main determinants. Information on accountability and transparency mobilizes the community and improves the awareness among the citizens to ask for their rights. This indeed positively and significantly affects the welfare of the society.

### **1.3 Process of Fund Flows to Elementary Education in India**

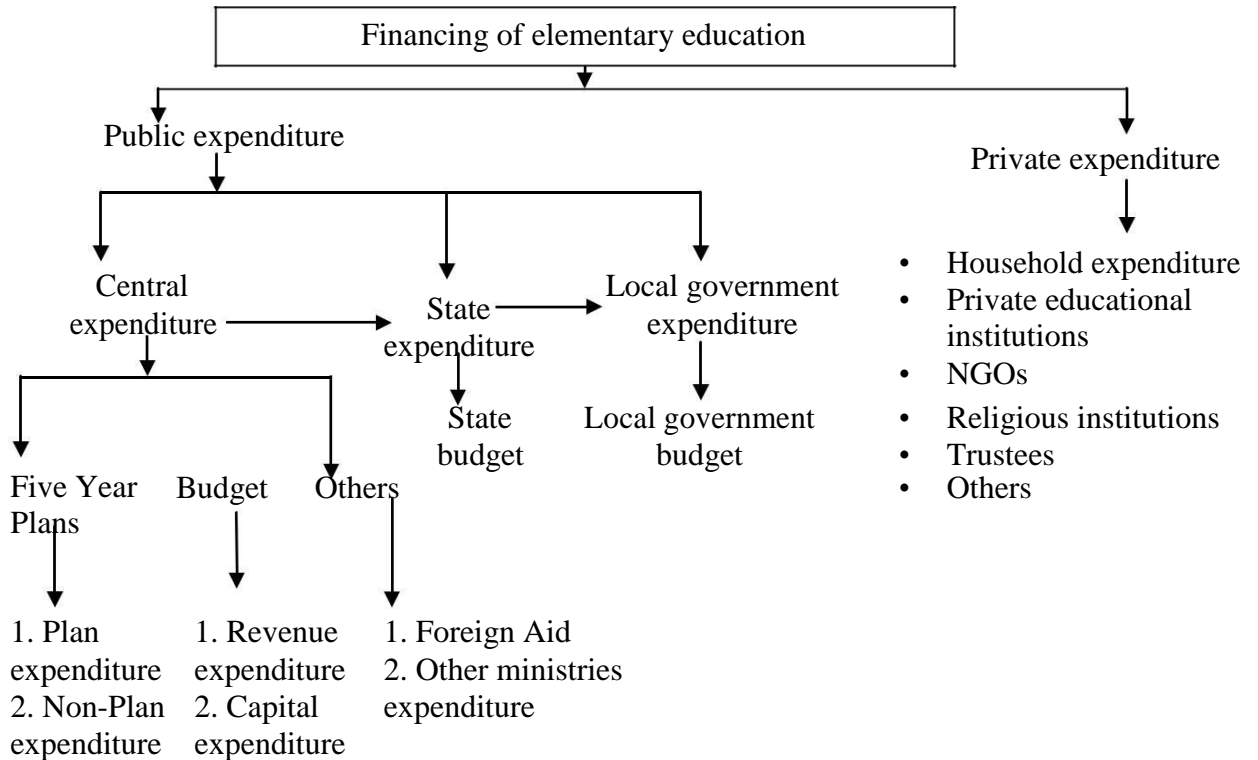
The flow chart shows the flow of financial resources to elementary education at various stages. It explains the interconnectivity and dependence among the various financial stakeholders (Tilak, 2005). The interconnectivity and dependence will be studied through the variables such as allocation through plans, allocations to various programmes under different budgets, amount spent and the outcomes. Public financing of elementary education includes central, state and local government expenditure in order to provide educational infrastructure.

In the figure below:

- Public and private expenditure are the two main financial sources of education. Public expenditure comes from the expenditure of central government, state government, local government and foreign aid, which is distributed through the Centrally Sponsored Schemes (CSS). Private sources include private contribution, NGOs, household expenditure etc.,
- The central government expenditure comes from plan allocation, annual budgets and foreign aid. Expenditure under Five Year Plans is classified into two parts 1. Plan expenditure and 2. Non-Plan expenditure and the expenditure in the budget is divided as 1. Revenue budget 2. Capital budget.
- The bulk of tax revenue is collected by the centre while the states have main responsibility of maintaining and developing the education sector. A part of the resource gap of the state government is met through transfer mandated by the Finance Commission from central government to the states. States also receive funds from the Planning Commission; directly in the form of central assistance to states and indirectly through the central ministries in the form of CSS.

- Along with the ministry of education, other ministries are also providing complementary support in the form of training, scholarship etc.,

**Chart 1.1: Stage of Fund flows to Elementary Education**



### 1.4 Research Issues

The review of literature in the second chapter reveals that the government could not able to provide basic educational infrastructure to schools to a large extent. SSA came as flagship programme to take care of this aspect and provide accessibility to education to all the children. Large amount of funds was allocated for this programme. The implementation of the programmes raised several issues to be addressed. They are;

1. Can government invest sufficient share to elementary education in order to achieve elusive goal of UEE?
2. Can this existing pattern of allocation reduce inter-state variation in education attainment? How SSA programme has made effort to reduce the

interstate disparity in terms of expenditure or allocation on elementary education?

3. Is there a trade-off between equity and efficiency in allocations of educational funds under SSA?
4. What is the relationship between educational expenditure and educational outcomes?
5. Can decentralization play an important role in ensuring accountability and to undertake proper monitoring, especially involving the community?
6. Can government improve the outcomes of elementary education through increasing the accountability, transparency and increase the efficiency of the resource utilization in the system?

### **1.5 Statement of the Problem**

Elementary education is the basic foundation of all levels of education. It faces both inter-sector and intra-sector competition in budget allocation for funds (Pandit, 1972). Bottlenecks in the public provisioning of education, inadequacy in spending, malfunctioning of schools, and huge deficit in the education sector are identified as main factors responsible for the delay in India's progress towards UEE (Jha, 2007). After the introduction of SSA, the funds flow is increased considerably. But the utilization of these funds is a question to be addressed in order to understand the efficiency of the system. Given the scarcity of resources it is obligatory on the part of the government to improve the efficiency of resources. Along with improvement in transparency, accountability ensuring community participation to achieve the goal of UEE. In this context this present study attempts to measure the efficiency of public spending on elementary education across different states in the country after the introduction of SSA. The study has policy relevance as it mainly concentrates on understanding the efficiency of the resources spent on elementary education, efficiency of the existing institutions in ensuring accountability and transparency in the utilization of funds.

## **1.6 Research Gap**

The debate on the government role in financing of elementary education dates back to Indian independence. Several educational committees have been formed to address various issues relating to financing of elementary education. Review of literature on financing of elementary education revealed that while some studies have justified traditional argument of increasing budgetary allocation, others have focused on mobilization of funds of financing of elementary education. Regarding the mobilization of funds for elementary education imposing education cess, cut down the unproductive expenditure on defence and internal security and reducing the subsidy to higher education, introduction of Public Private Partnership (PPP) are suggested as some of the measures. All these studies have focused on the issue of financing of elementary education at the macro level. But no attempt was made to analyze the efficiency of the public spending on elementary education relating the spending and outcomes.

The present study made an attempt to fill this research gap. Therefore, the study focuses on analyzing the technical efficiency of education financing at elementary level across states in India and transparency and accountability issues in Karnataka.

## **1.7 Objectives of the Study**

The overall objective of this study is to estimate the efficiency of the existing system of financing of elementary education with a focus on SSA. The supporting objectives are

1. To analyze the trends in public expenditure on elementary education during 20 years i.e. from 1990-91 to 2010-11.
2. To study the interstate variation in financing of elementary education in India.
3. To examine the relationship between expenditure and outcomes of elementary education.
4. To identify the factors responsible for differential outcomes in elementary education.

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5. To analyze the technical efficiency of financing of elementary education under SSA.
6. To understand the accountability and transparency issues at the school level in sample districts.

### **1.8 Hypotheses of the Study**

It is proposed to test the following hypotheses

1. Inter-state variation in financing of elementary education declined after the introduction of SSA.
2. Public expenditure on elementary education has reduced dropout rate.
3. Economic status of the state does influence the utilization of funds

### **1.9 Methodology of the Study**

#### **1.9.1 Data sources**

In order to understand the changes in the trends in funding on elementary education and their implications at the nation level and across the states, the study relies exclusively on secondary data for the period of 1990-91 to 2010-11. Secondary data were collected from various issues of National Council of Education Research and Training (NCERT), Annual Status of Education Report (ASER) published by PRATHAM, An Analysis of Budgeted Expenditure on Education and Selected Educational Statistics (SES) published by Ministry of Human Resource and Development (MHRD), Sarva Shiksha Abhiyan (SSA) reports, District Information System for Education (DISE) published by National University for Educational Planning and Administration (NUEPA) and various reports of World Bank.

The second part of the study which looks into the transparency and accountability issues relies on primary data collected from head masters and teachers and resource persons in the sample districts.

##### **1.9.1.1 Sample Design**

Multistage sampling technique was adopted for the study. In the first stage three districts were selected purposively based on the utilization of funds from SSA.

Utilization of Funds (UF), which indicates the expenditure capacity of the district and it was calculated by the following formula

$$UF = \text{expenditure} / \text{allocation} * 100$$

Based on this, three districts i.e, Udupi, Mysore and C. H. Nagar were selected for the study. All three districts represent highest utilization, medium utilization and least utilization.

In the second stage 100 per cent of the taluks were covered. In the third stage sample schools were selected from all the taluks in each sample district by random sampling. Four per cent of the schools in each taluk of Mysore and three per cent of the schools in all the taluks of Udupi and Chamarajanagara were selected randomly and out of which 50 per cent are from rural and 50 per cent from urban areas.

Primary data was collected with a pre-tested interview schedule. Separate schedule were prepared for the school level information and for individual teachers. School level information was collected from Head Master (HM) of the following aspects;

1. School level information about the available infrastructure
2. Teacher and student strength
3. Experience of HM
4. Flow of funds and delay
5. Composition of SDMC
6. Transparency and accountability in spending money
7. Perceptions of HM

Information from individual teachers was collected on

1. Sanctioning and utilization of funds from SSA
2. Perceptions about the quality of teaching
3. Perceptions about strategy adopted by SSA.

**Table 1.1: Details of Sample Schools**

Districts	Taluks	Elementary Schools		Total	Schools selected
		Rural	Urban		
Mysore	Hunsur	272	19	291	12
	H.D. Kote	302	10	312	12
	K.R. Nagar	212	13	225	10
	T. N. Pura	218	14	232	10
	Mysore	200	110	310	12
	Nanjangud	249	16	265	10
	Periyapatna	278	6	284	11
	<b>Total</b>			<b>1919</b>	<b>77</b>
C.H. Nagar	C. H. Nagar	229	33	262	6
	Yelandur	51	5	56	4
	Kollegala	240	21	261	6
	Gundal Pet	175	12	187	6
	<b>Total</b>			<b>766</b>	<b>22</b>
Udupi	Udupi	235	8	243	7
	Karkala	137	7	144	4
	Kundapura	207	19	226	7
	<b>Total</b>			<b>613</b>	<b>18</b>
	<b>Number of sample schools selected for study</b>			<b>3298</b>	<b>117</b>

**1.9.2 Analytical Tools**

The Study used various statistical and mathematical tools for the analysis of data. The statistical tools are Average, Standard Deviation (SD), Co-efficient of Variation (CV), Compound Annual Growth Rate (CAGR), Correlation and Regression analysis.

Multiple regression models were used to identify the factors responsible for the regional disparities in the performance of the states in educational outcomes. The following models are specified.

$$\ln(\text{enrol}_i) = \alpha + \beta_1 \ln(\text{lit}_i) + \beta_2 \ln(\text{pov}_i) + \beta_3 \ln(\text{uf}_i) + u_i \dots \dots \dots \quad (\text{a})$$

$$\ln(\text{dropo}_i) = \alpha + \beta_1 \ln(\text{lit}_i) + \beta_2 \ln(\text{pov}_i) + \beta_3 \ln(\text{uf}_i) + u_i \dots \dots \dots \quad (\text{b})$$

$$\ln(\text{GPI}_i) = \alpha + \beta_1 \ln(\text{lit}_i) + \beta_2 \ln(\text{pov}_i) + \beta_3 \ln(\text{uf}_i) + u_i \dots \dots \dots \quad (\text{c})$$

where,

$\text{enrol}_i$  = enrolment

$\text{dropo}_i$  = dropout rate

$\text{GPI}_i$  = Gender Parity Index

$\text{lit}_i$  = literacy

$\text{pov}_i$  = poverty

$\text{uf}_i$  = utilization of funds

$\alpha$  = constant

$\beta_1, \beta_2$  and  $\beta_3$  = slope coefficients

Relative performance of states in terms of efficiency was estimated with DEA, which is a mathematical tool used to estimate the efficiency of Decision Making Units (DMUs). This model is selected because it is the best model in the case of multiple inputs and outcomes.

The methodology used by Afonso and Aubyn (2005) for analysis of efficiency of secondary education provision in 25 OECD countries and by Sankar (2009) in the Indian context is used for the present study to analyse the efficiency of states in educational spending. In the present model, expenditure on education is considered as input and educational performance is considered as outcomes. Required information for inputs was collected for the period from 2004-05 to 2010-11. Data for outcomes was collected for the period from 2005-06 to 2010-11. One year lag was considered to give time for the impact of the inputs on outcomes.

Total expenditure was grouped into three categories.

**Category I = Expenditure on quantitative improvement** (school grant, civil works and maintenance grant of the school)

**Category II = Expenditure on qualitative improvements** (expenditure on teacher salary, textbook allowance, Teacher Learning Equipment (TLE), expenditure on Block Resource Centre (BRCs) and Cluster Resource Centre (CRCs) other than civil works, Integrated Education for Disabled (IED), teacher grant, Education Guarantee

Scheme (EGS), Alternative and Innovative Education (AIE), teachers training, community training, innovative activities, expenditure on research and evaluation, State Institute of Education and Management and Training (SIEMAT), National Programme for Education of Girls at Elementary Level (NPEGEL), Kasturba Gandhi Balika Vidhyalaya (KGBY) and expenditure on remedial teaching)

**Category III = Management Cost** (management cost of state and district).

**Educational outcomes** are measured by

- a) Enrolment
- b) Completion rate
- c) Gender Parity
- d) Learning achievement levels

### **1.9.2.1 Analytical Method**

A common approach to measuring efficiency is based on the concept of the efficiency frontier. There are many techniques available to estimate the shape of the efficiency frontier. Most of the studies aimed at measuring efficiency are based on either parametric or non-parametric methods. The study followed two stage procedures to analyze the efficiency. At the first stage efficiency was estimated using DEA analysis. In the second stage Tobit regression model was used to find out the factors responsible for variation in productivity and technical efficiency.

#### **1.9.2.1.1 Data Envelopment Analysis (DEA)**

Based on non-parametric mathematical model this approach assumes a specific functional form of the relationship between input and output. A non-parametric approach constructs an efficiency frontier using input/output data for the whole sample following a mathematical programming method. The calculated frontier provides benchmark against which the efficiency performance can be judged.

In DEA consider  $p$  inputs and  $q$  outputs for  $n$  DMUs (states).  $y_i$  is the column vector of the outputs and  $x_i$  is the column vector of the inputs for  $i$ -th State. The  $(p \times n)$  input matrix is defined as  $X$  and  $(q \times n)$  output matrix is represented by  $Y$ . The linear

programming model then assumes that for a given State (the DMU) maximize efficiency:

$$\begin{aligned}
 \text{Max } \lambda, \delta_i \text{ subject to } & \delta_i y_i \leq Y \lambda \\
 & x_i \geq X \lambda \\
 & \mathbf{1}' = 1 \\
 & \lambda \geq 0 \dots \dots \dots (1)
 \end{aligned}$$

In problem (1),  $\delta_i$  is a scalar satisfying  $1 \geq \delta_i$ . It is the efficiency score that measure technical efficiency of the i-th unit as the distance to the efficiency frontier, the later being defined as a linear combination of best practice observations. With  $1 > \delta_i$ , the decision unit is inside the frontier (i.e. it is inefficient), while  $1 = \delta_i$  implies that the decision unit is on the frontier (i.e. it is efficient).

The vector  $\lambda$  is a (n\*1) vector of constants, which measures the weights used to compute the location of an inefficient DMU if it were to become efficient. The inefficient DMU would be projected on the production frontier as a linear combination of its peers using those weights. The peers are other DMUs that are more efficient and therefore used as references.  $\mathbf{1}'$  is a n-dimensional vector of ones. The restriction  $\mathbf{1}' \mathbf{1} = \lambda \mathbf{1}$  imposes convexity of the frontier, accounting for variable returns to scale. Dropping this restriction would amount to admit that returns to scale were constant.

The problem (1) has to be solved for each of the 'n' DMUs in order to obtain 'n' efficiency scores (Afonso and Aubyn, 2005)

### 1.9.2.1.2 Non-Discretionary Inputs and the Tobit Two-Steps Procedure

In the efficiency analysis at the first stage using DEA (as described above) only those variables that are direct inputs into the system and is provided by the DMU (State's education departments) are included. However, social sector outcomes do not depend on the provision of inputs alone. There are various other factors that come in the way of the attainment of outcomes. Especially in a country as heterogeneous as India, the household and individual factors, especially those relating to social, economic, cultural and political aspects do have some influence on the social sector

outcomes. These are nondiscretionary inputs and not really within the control of the activities of concerned departments.

Since the analysis of efficiency and non-efficiency using DEA methods do not take into account these influences, usually two-stage models are suggested and used to deal with such situations.

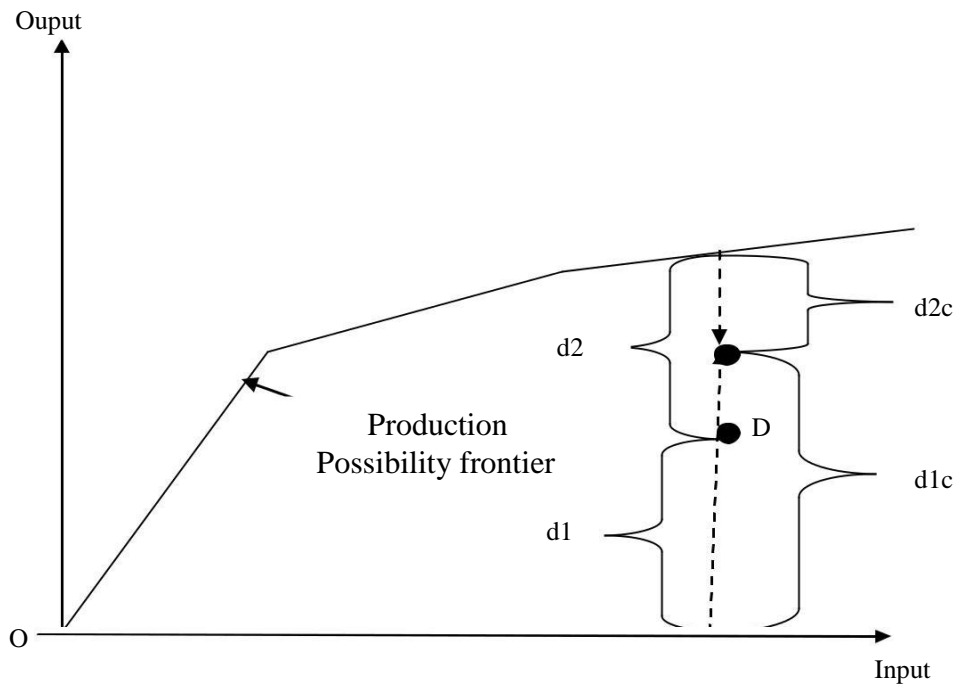
Let  $z_i$  be a  $(1 * r)$  vector of non-discretionary outputs. In a typical two-stage approach, the following regression is estimated:

$$\delta_i = z_i \beta + \epsilon_i \dots \dots \dots (2)$$

Where  $\delta_i$  is the efficiency score that resulted from stage one, i.e., from solving (1).  $\beta$  is a  $(r * 1)$  vector of parameters to be estimated in step two associated with each considered non-discretionary input. The fact that  $1 \geq \delta_i$  has led many researchers to estimate (2) using censored regression techniques (Tobit), although others have used OLS (Afonso and Aubyn, 2005).

Figure 1 illustrates the basic idea behind a two-stage approach. In a simplified one output and one input DEA problem, A, B and C are found to be efficient, while D is an inefficient DMU. The output score for unit D equals  $(d1+d2)/d1$ , and is higher than one. However, unit D inefficiency may be partly ascribed to a “harsh environment” – a number of disturbing environmental factors may imply that unit D produces less than the theoretical maximum, even if discretionary inputs are efficiently used. In our example, and if the environment for unit D was more favourable (e. g. similar to the sample average), then we would have observed  $D_c$ . In other words, unit D would have produced more and would be nearer the production possibility. The environment corrected output score would be  $(d1c+d2c)/d1c$ , lower than  $(d1+d2)/d1$ , and closer to unity

**Figure 1.2: DEA and Non-discretionary outputs**



Source: Afonso and Aubun, (2005)

### **1.10 Chapter Design**

The study is presented in six chapters. The first chapter deals with introduction, objectives, hypotheses and methodology.

The Second chapter is devoted to the review of literature including both theoretical as well as empirical literature.

The Third Chapter highlights the trends and patterns of public financing of elementary education.

The Fourth chapter focuses on educational expenditure, educational outcomes and the determinant of interstate variation in educational outcomes.

The technical efficiency of various states is estimated and presented in fifth chapter

Transparency and accountability issues at the school level are discussed in the sixth chapter.

Seventh chapter provides summary of finding, conclusions and policy suggestions.

## **CHAPTER - VII**

### **SUMMARY, FINDINGS AND POLICY SUGGESTIONS**

#### **6.1 Introduction**



Education is a basic component of human capital. In recent a remarkable share of funds is being allocated to increase the educational opportunities in India. After the introduction of SSA, the funds flow has increased considerably. But the utilization of these funds is a question to be addressed in order to understand the efficiency of the system. Given the scarcity of resources it is obligatory on the part of the government to improve the efficiency of resources along with improvement in transparency, accountability and ensuring community participation to achieve the goal of UEE. An attempt is made in the present study to analyze the trends in public expenditure on elementary education at the macro level and transparency and accountability issues at the micro level.

The important objective of this research is to analyze inter-state variation in expenditure on education, educational outcomes and identify the factors responsible for the differential performance. The study also estimated the efficiency of various states in utilization of funds released under SSA.

The overall objective of this study is to estimate the efficiency of the existing system of financing of elementary education with a focus on SSA. The supporting objectives are

6. To analyze the trends in public expenditure on elementary education during 20 years i.e. from 1990-91 to 2010-11.
7. To study the interstate variation in financing of elementary education in India.
8. To examine the relationship between expenditure and outcomes of elementary education.
9. To identify the factors responsible for differential outcomes in elementary education.
10. To analyze the technical efficiency of financing of elementary education under SSA.
11. To understand the accountability and transparency issues at the school level in sample districts.

This study is based on both secondary and primary data. Macro analysis is based on the secondary data collected from various sources and micro analysis is based on survey conducted on three sample districts viz., Udupi, Mysore and Chamarajanagar districts. DEA analysis is carried to estimate the efficiency of respective states. Factors influencing differential efficiencies are estimated with Tobit regression. Transparency and accountability issues at the school level and intra-school variation were analyzed with primary data collected from sample schools. The sample covers 117 schools from three districts.

Review of literature presented in chapter two summarizes the existing literature relating to education administration, trends in educational expenditure and outcomes and accountability, transparency and efficiency issues. Though there are several studies in this area, none of the studies analyzed inter-school variation in transparency and accountability issues in school administration. Therefore the present study attempts to analyze these issues besides estimating the efficiency of different states in education expenditure.

The third chapter reviews the development of education policy in India since 1968 and discusses the recommendations of various committees as education policy plays a very crucial role in promoting education. Several policy initiatives were undertaken for improvement in education in India. Some of the early attempts were in the form of National Policy on Education, 1968 which aimed at a 'radical restructuring' and equalize educational opportunities in order to achieve national integration and greater cultural and economic development. The later policies were reflected in the National Policy on Education 1986. The policy aimed at

7. Universal access and enrolment
8. Universal retention of children up to 14 years of age
9. Substantial improvement in the quality of education to enable all children to achieve essential levels of learning.

In continuation of this, National Policy on Education 1992 and Programme of Action 1986 were introduced. For the first time the inter connections between the problems of low school attendance, poverty and dependence of households on girls involvement in household work. During 1977-78 Non-formal education was

introduced with a focus on out of school children in the age of 06-14 years of age. Operation of Black Board was introduced in 1987 with central assistance to provide minimum essential facilities in all schools. National Literacy Mission was initiated in 1988 to provide adult education facilities. District Primary Education Programme was launched during 1994 with international assistance from international agencies. Mid Day Meal scheme was introduced in 1995 to provide nutrition and encourage school enrollment. Despite all these policies and programmes initiated as part of the policies literacy rate in India didn't show much progress. To achieve the objective of UEE the GOI introduced SSA in 2002 by combining all the existing programmes during that period. SSA is time bound integrated project in partnership with the states. There is a paradigm shift in school administration introduced under SSA. The strategy adopted was decentralization of education management and encouragement to community participation. SSA aimed at reaching UEE by providing access to education and infrastructure facilities besides improving the quality of education.

Important issues relating to financing of elementary education such as share of education in GDP, allocation under Five Year Plans have been discussed in detail in this chapter. The Expenditure on education in various plans reflects significant changes and the inter-sector competition among different levels of education. The testing of hypothesis shows that there is a significant reduction in the inter-state variation in expenditure on elementary education after the introduction of SSA.

The educational expenditure and educational outcomes across states in India is analyzed in fourth chapter. Before the introduction of SSA there was wider inter-state variation among states in terms of expenditure on education and educational outcomes. The introduction of SSA reduced the regional imbalance and increased the participation of educationally backward regions, states and social groups in the national commitment of UEE. The budgeted expenditure on elementary education at all India level substantially improved.

Multiple regression models are employed to understand the factors influencing educational outcomes across states in India. Enrolment, literacy and poverty are considered as proxy variables for educational outcomes. The results show that literacy, utilization of funds and poverty are found to be significant determinants of the educational outcomes.

The fifth chapter evaluated the technical efficiency in the Indian education system using panel data for 35 states and Union Territories for the period 2006-07 to 2010-

□ Besides this, factors influencing the Total Factor Productivity (TFP) and Technically Efficiency (TE) of the states are analyzed. The summary of Malmquist result of Model 1 indicates that mean TFP is 0.834. It indicates that the TFP of inputs at all India level for 5 years period decreased by 17%. The model 2 estimated actual outcomes, targeted outcomes and potential for improvement. The result of Tobit regression model shows that among other variables, the economic status and literacy status are positively associated with TFP, while the size of the population and poverty are negatively associated with TFP. On the other hand economic status of the state has positive association with technical efficiency and size of the state is negatively associated with technical efficiency of the state.

Analysis of issues relating to transparency, accountability and governance are presented in sixth chapter.

## **6.2 Summary of the Findings**

Important findings emerged out of the secondary data analysis and from primary data analysis are presented below.

### **6.2.1 Findings based Secondary Data Analysis**

- Gross Domestic Product, expenditure on education and expenditure on elementary education have increased by more than 10 times during 1990-91 and 2010-11.
- During the pre-liberalization period, the CAG of expenditure on elementary education is higher (16.25) than the CAG of education (15.60) and GDP (15.26). In the post-liberalization period CAG of GDP (14.46) is higher than the growth rate of expenditure on elementary education (11.41) and education (13.84) in general. The overall CAG (1990-91 to 2010-11) in GDP (13.42) is higher than growth rate of expenditure on education (13.22) in general and expenditure on elementary education (12.82) in particular.



Regression model relating expenditure on education and GDP suggested that on an average Rs. one crore increase in GDP leads to Rs. 3.7 lakh increase in general educational expenditure per year. Multiple regression model proved that on an average Rs. one crore increase in total educational expenditure leads to Rs. 21 lakh increase in expenditure on elementary education. On the other hand Rs. one crore increase in GDP increases expenditure on elementary education by Rs. 70,000 per year.



During the first decade CAG of expenditure on elementary education (16.25) grew faster than secondary (15.61) and higher education (14.62). Where as in the second decade the CAG of expenditure on higher education is higher (25.26) than secondary education (15.18) and elementary education (13.19). Considering overall CAG the expenditure on higher education has grown faster than the expenditure on other two levels. The state's share in expenditure on elementary education has declined from 97% to 77.6% during 1990-91 to 2010-11. Simultaneously the centre share has increased from 3.00% to 22.67% during the same period.



Out of 35 states and UTs, 16 states have shown a decrease in share of expenditure on elementary education between 2003-04 and 2010-11. States like A & N, Bihar, Delhi, A.P, Lakshadweep, Nagaland, Rajasthan and U.P. have considerably increased their share in expenditure on elementary education during 2003-04 to 2010-11. The CV of expenditure on elementary education across states has decreased from 32.60% in 2003-04 to 27.09% in 2010-11. The hypothesis testing confirms that the inter-state variation in expenditure on elementary education has decreased after introduction of SSA.



In total national expenditure on elementary education, 36% represents plan expenditure and 64% is non-plan expenditure. States like Uttar Pradesh, Bihar, Rajasthan, Maharashtra, Gujarat, Karnataka, Odisha, Madhya Pradesh and Assam have been allocating consistently higher share in their budget. Though they are educationally and economically backward, they have spent good share on education.



Utilization of funds varies considerably across states. Lakshadweep which utilized only 17.12% in 2005-06 improved to 82.08% by 2009-10. There is a continuous increase in the utilization of funds in subsequent years compared to the initial year of SSA. The CV of utilization of fund decreased from 45.2% to 22.23% during 2005-06 to 2009-10 periods. The hypothesis testing of utilization of funds and economic status indicates that economic status of the state does not have significant influence on the utilization of funds.



Expenditure on quantitative items increased from Rs. 13016.28 in 2005-06 to 40441.56 by 2010-11. The range was very high in 2005-06 and it reduced in subsequent years. Similarly expenditure on qualitative improvement of the education increased from 12180.09 to 16991.90. The increase is low compared to the expenditure on the items which improves the quantitative requirements of the elementary schools. The range also decreased substantially. Management expenditure increased from 849.70 to 1589.83 between 2005-06 and 2010-11.



The SD value of enrolment, qualitative expenditure have increased while the SD value of dropout, GPI, quantitative and management cost have shown fluctuation over a period of time. It indicates the regional disparity or interstate variation in terms of the providing service is not decreasing.



The hypothesis testing of factors influencing the dropout rate shows that literacy, poverty and expenditure on education are negatively associated with dropout rate. However the influence of literacy rate and poverty levels is significant and the influence of expenditure on education is not significant.



Educational outcomes measured in terms of enrolment and GPI appear to be positively associated with literacy rate and utilization of funds; whereas poverty (0.36) is negatively associated with enrolment and GPI.



The summary of Malmquist result of Model 1 indicates 0.834 of Total Factor Productivity (TFP) of resources in elementary education. It indicates that on an average the overall productivity of the system is decreased at 16 per cent during the five years period. The analysis shows that only in six out of 35 states and UTs (17 per cent), the Total Factor Productivity (TFP) increased

between 2006-07 and 2010-11. The states with positive TFP are A & N, Dadra and Nagar Haveli, Chhattisgarh, Himachal Pradesh and Manipur. Positive TFP denotes improvement in productivity of inputs in these states.



States such as Haryana, Punjab, Tripura, Mizoram and Uttarakhand have near to unity (efficiency frontier). These states have to concentrate on effective utilization of available resources for better educational outcomes. While states like Lakshadweep, Jharkhand, Diu and Daman have very less TFP and poor educational outcomes of these states suggest that technological changes are needed to produce good outcomes. Further, states such as Kerala, T.N., Pondicherry, Arunachal Pradesh and Andhra Pradesh have to concentrate more on utilization of their resources. The states which already have better performance have shown a decrease in TFP after the introduction of SSA. States like Bihar, Uttar Pradesh, and West Bengal are far way from unity score.



The Tobit analysis with total productivity as dependent variable suggests that independent variables such as GSDP and literacy rate have positive influence on the productivity. It shows that the states which have better economic status and higher literacy rate have achieved greater productivity of the resources. On the other hand density of population and poverty are negatively associated with productivity of the state, which indicates the states which have higher density of population and poor economic condition have low productivity of the resources.



The Tobit regression model of technical efficiency suggests that increase in GSDP is likely to increase the technical efficiency while density of population is likely to reduce technical efficiency.



States such as Assam, Chandigarh, Goa, Haryana, Himachal Pradesh, J & K, Jharkhand, Karnataka, M.P, Nagaland, Orissa, Pondicherry, Punjab, Tripura and Uttarakhand states could significantly improve their outcomes while using same level of inputs, because all these state are below the frontier (inefficient in utilization of funds.)



Results of Model II shows that Bihar should invest further expenditure to increase its outcomes because Bihar was found to be efficient state in available resource, but inefficient in outcomes. In this state there is no scope for improvement with given current level of inputs. The model shows the average technical efficiency is 0.96, indicating that the average inefficiency across states is only four per cent. This indicates that with the given resources majority of the states and UTs have reached the maximum attainable levels of outcomes and to improve the outcomes the only way is increasing the allocations. Five states (14%) are at a Scale Efficiency of 100 per cent implying thereby that they had the Most Productive Scale Size (MPSS) at the given level of inputs. The remaining 30 (86 per cent) states were found to be scale inefficient, with a mean SE score of 25 per cent (SD =19 per cent). This implies that on an average the scale-inefficient states could reduce their input size by 75 per cent without affecting their current output levels. Sixteen states in model 2 are inefficient and are located below the frontier line. These inefficient states could potentially reduce their current input endowment by nine per cent while producing same level of outputs.

## 6.2.2 Findings based Primary Data Analysis



It is observed that more female HMs are working in rural schools compared to male HMs. More number of HMs with the qualification of SSLC+TCH are found in Mysore and Chamarajanagar districts, whereas Udupi district has 55.6% of HMs with PUC+TCH qualification. Majority of the HMs in Chamarajanagar district have less than 10 years of experience as HMs where as Udupi district has highest number of HMs with 10 to 20 years of experience as HM. Same is the case with Mysore and majority of the HMs are in the group of 10 to 20 years.



Ninety nine per cent of teachers said that trainings are very useful in teaching. Only very small numbers of teachers, i.e. one from Chamarajanagar district and one from Mysore district said that training is not useful.



Most of the teachers (67.9%) used TLM money for purchasing teaching aids and drawing materials. It is important to observe that around 90% of teachers



in all districts said that TLM has a positive impact on their teaching by increasing their teaching quality and reducing their burden and inconvenience in teaching. As against this only 7.3% of teachers said TLM based teaching is not useful. Around 38.0% of teachers are unhappy with Rs. 500, and they expressed that an amount in the range of 1000 to 2000 per academic year would be more meaningful



It is observed that around 97% of teachers in all districts expressed the need for computers training and computer based teaching.



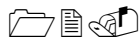
Teacher shortage is more in rural schools (52.4%) in Mysore and urban schools (75.0%) in Udupi district. In case of excess of teachers, the numbers of urban schools are more in Mysore district but C.H. Nagar districts shows equal share of excess teachers in urban and rural schools.



It is important to observe that more than 39% TLM was allocated through cash, followed by 38% through Cheques and 23% by money transfer to concern teachers' bank account.



It appears that majority of SDMC members (55%) have completed only elementary education. Only in Udupi district 48 percent have studied up to high school. The share of illiterates is high in SDMCs of Chamarajanagara schools. It was observed that 10.1% in SDMC members in Chamarajanagar and around 7% of SDMC members in Mysore district are illiterate and none of the SDMC members in Udupi district are illiterate and 48 percent studied up to high school.



Udupi district has highest number of members (81%), who have received proper SDMC training. SDMC training helps the members to understand their rights and duties, functioning of education system, release of funds, functions of HMs and Teachers. This enables their effective participation in the committee and school management.



It is important to observe that out of 1053 SDMC members 437 (41.5 percent) are housewives and 318 (30.2%) are agriculturists.



The data reveals that the schools in Udupi district are more frequently visited by BEO whereas DEO visits were less in this district. About 77.8% of rural schools in Mysore district were visited by DEO. It is observed that compared to BRPs, the CRPs visited more frequently both urban and rural schools in all districts except in Mysore (rural schools). The BRPs frequently visit urban schools than rural schools



The data reveals that in 88% of schools, SDMCs meet frequently (about ten times per academic year) in all the three districts. While 100% of rural schools in Udupi district reported meeting of ten times, only 90.0% of schools in Chamarajanagar district reported ten meetings. In 16.6% of rural schools and 10% of urban schools HMs have reported non cooperation of SDMC members in financial matters. One out of 12 rural schools in Chamarajanagar districts reported that SDMC members expect commission in civil works. Three schools out of 38 rural schools and 2 schools out of 39 in urban schools in Mysore district and one school out of 12 rural schools in Chamarajanagar have reported that SDMC member are not supporting in financial matters relating to the expenditure on the school activities. However HMs in 74.8% of urban schools and 74.1% of rural schools opined that SDMC members are interested in school performance and participate very actively in school functions.



Among the issues discussed in the meetings civil work is the most priority issue for all SDMCs where 82.9% of SDMCs gave top priority to civil work. Next is admission or increasing enrolment of the school (60.7%) and around 50% of SDMCs discussed about school progress in all three districts. It is also observed that compared to rural schools, more number of urban schools received contributions from donors.



More number of rural schools (56.9 %) has experienced delay in receiving school funds. It is disturbing to observe that both rural (80.0%) and urban schools (75.0%) of Chamarajanagar district experienced delay in receiving funds. Compared to urban schools more number of rural schools in all districts have experienced delay in receiving SSA funds. While in Chamarajanagar 66.7 % of rural schools experience delay of more than two

months, around 62.5 % of rural schools in Udupi districts experienced maximum two months delay.



Compared to urban schools, more number of HMs (29.3 %) in rural schools visited higher authority for releasing funds. Compared to Mysore and Udupi districts, more number of schools HMs in Chamarajanagar both in urban (50.0%) and in rural (33.3%) visited higher officials for releasing funds.



It is observed that most the contractors (an average 97 %) for civil work were selected through SDMC committee, which is strictly followed by SSA norms. It can be said that there is transparency in selection contractors by SDMC members in order to complete the civil work. 95% of HMs in both rural and urban schools used cheques as main mode of payment to the contractors. Civil work in most of the schools (an average 67%) in three districts is approved by the SSA engineer, while 26% of schools reported that the quality of civil work is not good.

### 6.3 Policy Suggestions



Despite enormous increase in expenditure on education it is still far away from recommended 6 per cent of GDP. It is important to increase expenditure on education so that it leads to expenditure on elementary education.



It is observed that 64 per cent of expenditure is non-plan expenditure. In order to increase the quality of infrastructure efforts should be made to increase plan expenditure.



A positive association between teacher facility and educational outcomes was observed. But the sample survey revealed shortage of teachers in several schools. It is important to increase the appointment of teachers immediately.



The study revealed a positive association between the literacy levels in general and the technical efficiency of the educational spending. Therefore it is important to concentrate on improving the literacy status through various measures.

- ❖ The study revealed that poverty is negatively associated with productivity of the state. This reinforces the need to reduce poverty. It is important to reduce the level of poverty to increase the productivity of the resources utilization.
- ❖ Based on the study it is observed that the present system of allocating money according to the prescribed norms applicable to all states does not lead to efficient allocation of resources. For example in some states there is a possibility of attaining the same outcomes with reduced expenditure. It is important to initiate a nationwide study to understand the reasons based on primary data and differential allocations are to be made based on the states specific requirements. Greater flexibility in spending money according to the local requirements is essential. This also brings synergy in different development programmes at the micro level.
- ❖ Data from sample districts showed that there is delay in sanction of funds leading to delay in activities to be undertaken. This needs to be addressed immediately.
- ❖ It is observed that SDMCs are playing an important role in ensuring accountability and transparency in majority of the schools. However, the structure of SDMC needs to be modified giving more representation to teachers and parents.
- ❖ Majority of the teachers expressed the need for computer training to help them in teaching. When the economy is moving towards e-governance, introduction of computer based education at the elementary level proves to be productive in long run. Therefore training programmes are to be arranged for teachers.
- ❖ Under the present system HM and president of SDMC are co-signatories' for management of the funds at the schools level due to inherent conflicts between the role of HM and the elected president, some of the HMs reported frictions in discharging their roles. Therefore it is important to have much more clarity in the roles and responsibility.

- ❖ The system of TLM introduced under SSA proved to be very useful. Many teachers expressed that this has helped in preparing teaching and learning materials. But according to them there are two main problems. One is very low amount of money and the other one is the process of accounting this small amount. However, assistance under TLM is removed from the 2013-14. But since this is very useful in improving quality of teaching this has to be re-introduced with an increase in the amount per teacher to Rs. 1000 to Rs. 2000 per year.

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