

MID DAY MEAL SCHEME AND UNIVERSALISATION OF ELEMENTARY EDUCATION IN INDIA

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Abstract

India provides free and compulsory elementary education to all children in the age group of 6 years to 14 years of the country. As per Article 21 and the Right of Children to Free and Compulsory Education (RTE) Act, 2009, the Government is obliged to provide necessary infrastructure and ecosystem for completion of elementary education by all children in the country. Mid Day Meal Scheme (MDMS) is one of the welfare schemes run by the government to encourage enrolments in the elementary sections in Government, Government aided, Local body schools recognized as well as unrecognized Madarsas / Maqtabas supported under SarvaShikshaAbhiyan (SSA), Education Guarantee Scheme (EGS) and Alternative & Innovative Education (AIE) centres across the country.

An attempt is made to examine the enrolments in elementary schools (i.e. classes I-VIII) in India and the causality between the Mid Day Meal Scheme (MDMS) and the enrolments in the government schools for classes I to VIII for the period 2003-2015. Tools like Averages, Regression Analysis and Granger Causality Test are used to analyse the data.

The analysis of the data reveals causality between the enrolments in the government elementary schools and the Mid Day Meal Scheme (MDMS). There is a decline in the enrolments in government schools and increase in the enrolments in private schools, pointing to the fact that

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though the Mid Day Meals have a significant role in the enrolments in the government elementary schools there are several factors other than the meal scheme that the parents consider during the enrolment of their child in a school.

Keywords:Mid Day Meal Scheme (MDMS);Granger Causality;Enrolment;Universalisation of Elementary Education;Elementary Schools.

1. Introduction

India is the largest democratic country in the world and a home to 1.2 billion people. Public welfare is one of the basic principles of democracy. Ensuring equal treatment for all inhabitants, and an equal and fair distribution of social benefits is the primary role of the state. India is a strong proponent of this theory and promotes several welfare schemes for the well-being of the society, which is evident from the measures taken by the state for public welfare. Knowledge being one of the major drivers of economic growth; India has laid emphasis on providing compulsory elementary education, strengthening the human capital, leading to higher productivity and living standards. Investments in primary education provide higher returns relative to higher education and considerable productivity differentials between primary graduates and illiterate persons (Psacharopoulos and Patrinos, 2002). Primary education provides the basis for further education. The five key contributors identified by the World Bank policy papers to primary education effectiveness are curriculum, learning materials, instructional time, class room teaching and student's learning capacity. Working in this direction, the Government of India has enacted the Right of Children to Free and Compulsory Education (RTE) Act, 2009.

India provides free and compulsory elementary education to all children of the country. As per Article 21 and the Right of Children to Free and Compulsory Education (RTE) Act, 2009, no child shall be denied elementary education. The government is obliged to provide necessary infrastructure and facilities to ensure admission, attendance and completion of elementary education by all children in the age group of 6-14 years. The curriculum designed is in consonance with the values enshrined in the constitution aiming at an all-round development in children.

Studies provide evidence that there could be significant efficiency and productivity gains by allocating share of public expenditures in the areas of education and instructional materials, Pritchett & Filmer (1999). Education in India is provided by the public and private sectors, regulated by the government. India adopts "10+2+3" pattern of education which is based on the recommendation of the education commission, 1964-66. In this pattern, 10 years of study is done in schools. As on 2015, 76.67% of all recognised elementary schools are government run or supported, reaching out to about 11.89 crore children across the nation, making it the largest provider of education in the country.

2. Mid Day Meal Scheme (MDMS) in Elementary Schools

“Hungry stomach cannot hear”-Jean De La Fontaine, complementing the Right of Children to Free and Compulsory Education (RTE) Act, 2009, is the National Food Security Act (NFSA), 2013, bringing into its ambit the MDMS, covering all students studying in classes I to VIII in Government, Government Aided, Local body schools recognized as well as unrecognized Madaras / Maqtabas supported under SarvaShikshaAbhiyan (SSA), Education Guarantee Scheme (EGS) and Alternative & Innovative Education (AIE) centres across the country.

On 15th August, 1995 the Government of India launched the National Programme of Nutritional Support to Primary Education (NP-NPSE) popularly known as Mid Day Meal Scheme (MDMS) with an objective of giving a boost to Universalisation of Primary education by increasing the enrolment, attendance, retention and concurrently improving the nutritional levels of children studying in classes I-V of government, government aided and local body schools. In October, 2002 the scheme was extended to cover children studying in the Education Guarantee Scheme (EGS) and Alternative and Innovative Education Centres (AIE).

a) Nutritional Norms of the MDMS

The Mid Day Meal Scheme (MDMS) nutritional norms have been revised from time to time to provide good nutritional food to children. The present norms of the scheme are mentioned in the Table-1.

Table-1. Nutritional Norms of the MDMS

Food Item	Quantity	in	Calories	Protein
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	Grams					
	Primary	Upper Primary	Primary	Upper Primary	Primary	Upper Primary
Food Grains (Wheat/ Rice)	100	150	450	700	12 grams	20 grams
Pulses	20	30				
Vegetables	50	75				
Oil & Fat	05	7.5				
Total	175	262.5				

Source: www.mdm.nic.in

b) MDMS Budget Allocation and Expenditure

The year wise budget allocation and actual expenditure of the Central Government on the MDMS for the period 2003-04 to 2014-15 as presented in Table-2 is an indication of the commitment of the government towards development of its human capital. The actual expenditure during the period has grown at a CAGR of 21.12%.

Table-2. Central Government Year Wise Outlay under Mid Day Meal Scheme (MDMS)

(Rs. in Crore)

Financial Year	Budget Allocation	YoY Growth Budget Allocation	Actual Expenditure	YoY Growth in the Expenditure
2003-04	1375.00		1375.00	
2004-05	2907.00	111.42	2820.54	105.13
2005-06	3345.26	15.08	3186.33	12.97
2006-07	5348.00	59.87	5233.47	64.25
2007-08	6678.00	24.87	5835.44	11.50
2008-09	8000.00	19.80	6688.02	14.61
2009-10	7359.15	-8.01	6937.79	3.73
2010-11	9440.00	28.28	9128.44	31.58
2011-12	10380.00	9.96	9901.91	8.47

2012-13	11937.00	15.00	10868	9.76
2013-14	13215.00	10.71	10927.21	0.54
2014-15	13215.00	0.00	11316.28	3.56

Source: www.mdm.nic.in; MHRD Annual Reports

During the Financial Year 2014-2015, the Central Government of India has allocated Rs.55115 crore to the Department of School Education and Literacy which deals with primary education in India. The budget allocation for the Mid Day Meal Scheme (MDMS) for the year was Rs.13215 crore which indicates no growth in the allocations over the previous year; this is due to the fact that the sharing pattern between the centre and the states had changed the ratio of distribution of the expenditure on MDMS. From April 1st2015 the funding pattern between central and states changed from 75:25 to 60:40 for non-NER States, 75:25 to 100% for UTs, 3 Himalayan States (90:10) and no change for 8 North Eastern States (NER).

3. Review of Literature

Substantial literature on the provision of food and subsidies in educational institutions in India and abroad is available signifying mixed results.

RajshriJayaraman, et.al (2012), studies on the implementation of Mid Day Meal Scheme across Indian States on a panel data of over 500,000 government schools from 2002 to 2004 found that Mid Day Meals result in substantial increases in primary school enrolment.

Patrick J. McEwan, (2012), evaluates the Chilean policy for the impact of higher-calorie meals on the education outcomes in the students of public, rural schools. There is no evidence that additional calories affect these education outcomes of public, rural schools and their students. The researchers suggested that focus should further shift from calorific content to the nutritional composition of school meals.

HarounanKazianga, et.al (2012) studied the impact of food for education schemes on education and child labor outcomes for children from low-income households in northern rural Burkina

Faso. The programs increased enrolments by 3 to 5 percentage points, with increase in the scores among girls.

J. RegiManimagala, (2012) found in studies that the enrolment rate of children in the 5 to 9 age groups are significantly increased in schools that are provided with school development and teaching-learning material grants. The attendance of children in schools increased significantly on the distribution of textbooks, uniforms and attendance scholarships to upper primary school girls.

Alderman et al. (2010), studied the attendance in school in North Uganda, results show that the school meals program increased enrolment for those children who were not enrolled at baseline, but who had reached the recommended age of school entry.

Bundy et al. (2009), suggests that transition to sustainable national programs depends on mainstreaming school feeding into national policies and plans, especially education sector plans.

OrazioAttanasio, et.al, (2005) studied on conditional subsidy in Colombia; suggest that the programme has been effective at increasing enrolment, particularly amongst 14 years to 17 years in both urban and rural areas. Further, males benefited more than females from the programme.

Kremer and Vermeersch, (2004), reveals that the meals program in the schools in Africa led to higher curriculum test scores, subject to the relatively experienced teachers manning the class. The school meals displaced teaching time and led to larger class sizes.

AysegulSahin, (2004) studied the impact of subsidy in fees in higher education. It was found that although subsidizing tuition fees increases enrolment rates, it reduces student effort. Because a high subsidy, low-tuition fees policy causes an increase in the percentage of less able and less motivated college graduates, underlining the fact low-tuition policies have both disincentive effects on students' study time and adverse effects on human capital accumulation.

Caucutt and Kumar (2003), argues that a policy that aims to maximize the fraction of college-educated labor by sending as many children as possible to college, results in little or no welfare gain. They show that if the government subsidizes children without making the subsidy contingent on the child's ability, the subsidy can actually decrease educational efficiency.

Mingat& Tan (1992, 1998) find that there is insignificant relation, if any, between public spending and educational outcomes.

4. Research Gap

Empirical literature on fees subsidies, subsidised/ free meals for students in the education sector and their relationship with the educational outcome is available, but the causality of Mid Day Meals Scheme (MDMS) to the enrolments in government elementary schools in India has not been studied. This paper attempts to fill the gap by studying the causal relationship of Mid Day Meal Scheme (MDMS) and the enrolments in the government elementary schools in India from 2003-04 to 2014-15

5. Objectives

The objectives of this study is to examine

1. The enrolments in the government and private elementary schools in India for the period 2003-2015.
2. The causality between Mid Day Meal Scheme (MDMS) and the enrolments in the government elementary schools for classes I to VIII for the period 2003-2015.

6. Methodology

(a) Period of the Study: The period of the study is for twelve years from 2003-04 to 2014-15 as the Mid Day Meal Scheme (MDMS) was revised in September, 2004 by the government to provide Cooked Mid Day Meal with 300 calories and 8-12 grams of protein to all children studying in classes I-V in Government, Government aided schools, local body and Education Guarantee Scheme (EGS) and Alternative & Innovative Education (AIE) centres.

(b) Sample: The study examines the data of the elementary school students studying in Government and Government aided schools.

7. Sources of Data

The study examines the data provided in District Information System for Education (DISE), the yearly data collected by the government, which is a school-level data set covering all schools, a joint initiative of the Government of India, UNICEF and the National University of Educational Planning and Administration (NUEPA). Various Acts, journals, newspaper and magazines articles have also been referred in writing this paper.

8. Parameters

Parameters chosen for the analysis are Enrolments in Government Schools (Classes I-VIII), Total Population (6-14 years), Total Number of Government Schools, Total Number of Private Schools and Total Expenditure on Mid Day Meal Scheme (MDMS),

9. Hypothesis

The Hypothesis is framed as below

Null Hypothesis: Total Expenditure in Mid Day Meal Scheme (MDMS) cannot granger cause enrolments in government elementary schools

10. Tools for Analysis

To analyse the enrolments in the elementary schools and to verify its causation, the following tools have been employed.

- a. Averages
- b. Regression
- c. Granger Causality

11. Enrolments in Elementary Schools

As seen in the Table-3 the total enrolments in the government elementary schools exhibits a positive growth from 2004 to 2008 and thereafter the government schools have shown a falling trend in its enrolments, whereas the private schools have exhibited a positive growth in enrolments year on year throughout the period. The government schools had 11.2 crore students in the elementary sections in the year 2003-04, which constituted 79.9% of total enrolments, while the year 2014-15 witnessed 60.19% of total enrolments in that year which was at 11.89

crore, indicating a fall in the proportion of the population they cater. The private managements were seen increasing their share of enrolments from 3.07 crore in 2003-04 to 7.35 crore in the year 2014-15, which accounted to a 39.81% of the elementary section students of the country.

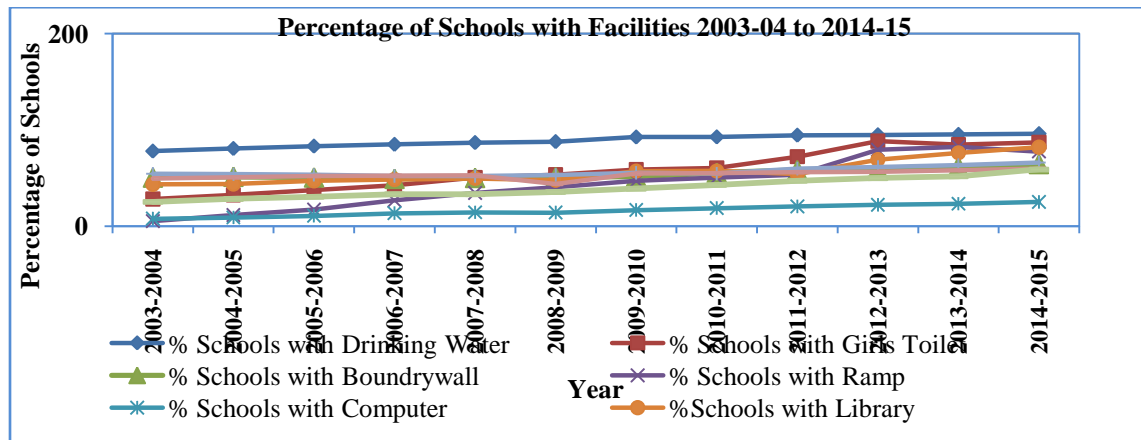
Table-3.Total Enrolments in Classes I-VIII – Government & Private Schools

Financial Year	No. of Enrolments in Govt. Schools	YoY Growth Govt. Schools Enrolments	No. of Enrolments in Pvt. Schools	YoY Growth Pvt. Schools Enrolments
2003-04	112764486	--	30771234	--
2004-05	120988091	7.29	35025939	13.83
2005-06	125634235	3.84	42582426	21.57
2006-07	129063690	2.73	50032482	17.50
2007-08	133652079	3.56	51090375	2.11
2008-09	133208411	-0.33	54455996	6.59
2009-10	130591503	-1.96	57154825	4.96
2010-11	130089841	-0.38	59118176	3.44
2011-12	129395848	-0.53	64864069	9.72
2012-13	125059229	-3.35	69747073	7.53
2013-14	121960862	-2.48	71231794	2.13
2014-15	118923680	-2.49	73555385	3.26

Source:www.dise.in

12. Infrastructure Facilities in Schools

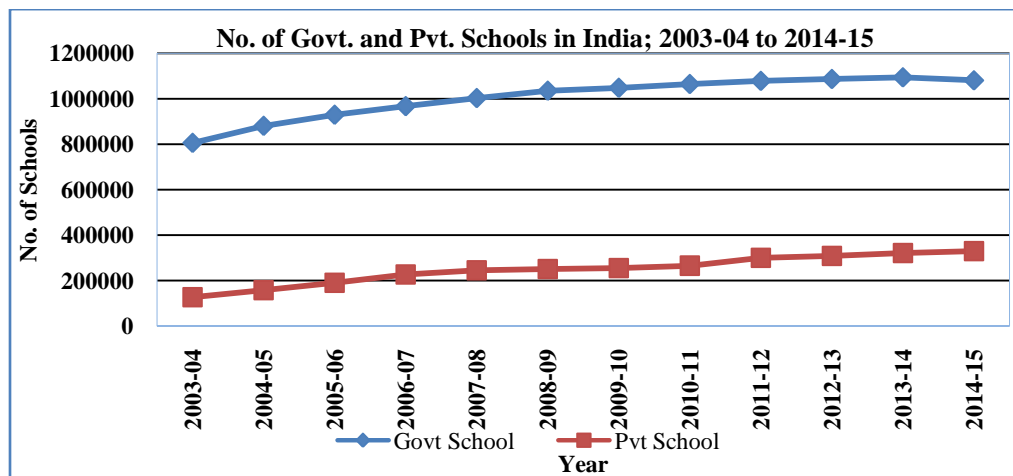
The shrinking of the enrolments in the government schools as compared to the private schools is an indication that the parents prefer to enrol their children in private schools when compared to the government schools, which might be largely related to factors like medium of instruction, infrastructure facilities i.e. availability of drinking water, toilets, library resources, playground, medical checkup, computer resources etc. as presented in Graph-1 which the parents consider while enrolling their children in a school.

Graph-1. Infrastructure Facilities in Schools

Source: www.dise.in

13. Number of Schools in India

The private management schools increased their foot print rapidly as compared to the government management schools as can be seen in Graph-2. The number of schools established during the period of study, indicates that the private managements have grown at CAGR of 9.13% from 125829 schools in the year 2003-04 to 328845 in the year 2014-15, while the government school numbers grew at a CAGR of 2.71%. The introduction of the Mid Day Meal Scheme (MDMS) in the government run schools may have prompted the private school managements to improve the quality, enhance the infrastructure and facilities to attract enrolments and retain the students. The increase in the number of schools by the private managements also indicates the demand for schools in this sector.

Graph-2. Total No. of Government and Private Schools in India

Source: www.dise.in

In order to test whether the population in the age group of 6-14 years is significantly associated with the enrolments in the government elementary schools, OLS regression analysis is performed with the Year on Year growth in enrolments in the government elementary schools and the independent variable being the population in the age group of 6-14. The assumptions are checked before the analysis has been performed in order to ensure that they are not violated. The first difference of the year on year growth in the enrolments in the government schools in the classes I to VIII, and the growth in population in the age group of 6-14 years is analysed.

The result shown in Table-4 indicates that the growth in population has no relationship with the enrolments in the government elementary schools. The popularity of the private management schools and their efforts to reach the parents during the admissions season may have helped the growth in the enrolments in the private schools during the period of study.

Table-4

Dependent Variable: Enrolments in Govt Schools I-VIII				
Method: Least Squares				
Sample (adjusted): 3 12				
Included observations: 10 after adjustments				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.115500	0.578725	-1.927513	0.0901
Population 6 to 14 years	1.40E-07	9.48E-08	1.480833	0.1769

Source: www.dise.in, MHRD Annual Reports

To test the causality of the total expenditure on the enrolments in the government schools a Vector Auto Regression is modeled. The result of VAR Granger Causality/ Block Exogeneity Wald Test given in Table-5 reveals that the results are significant at 5% level, rejecting the null hypothesis. Hence the expenditure on the Mid Day Meal Scheme (MDMS) does granger cause the enrolments in government schools. This result is consistent with previous study of with RajshriJayaraman, et.al, (2012)

Table-5

VAR Granger Causality/Block Exogeneity Wald Tests			
Sample: 1 12			
Included observations: 8			
Dependent variable: Enrolments in Govt Schools I-VIII			
Excluded	Chi-sq	Df	Prob.
No. of Govt Schools	79.28057	2	0.0000
Total Expenditure (MDMS)	56.37124	2	0.0000
All	129.0889	4	0.0000

Source: www.dise.in, MHRD Annual Reports

14. Findings

1. The government schools and private schools have grown at a CAGR of 2.71% and 9.13% respectively.
2. The growth in the enrolments in the government elementary schools is showing a negative trend.
3. The change in the population in the age group of 6-14 years has no relationship with the enrolments in the government schools.
4. The Mid Day Meal (MDM) granger cause the enrolments in the government elementary schools.
5. Most of the parents give priority to quality of education and other infrastructure facilities over free meals

15. Conclusion

The objective of this study is to examine the causality between Mid Day Meal Scheme (MDMS) and the Enrolments in the Government schools for classes I to VIII for the period 2003-2015. The empirical results reveal that there is no relation of population growth with the enrolments in government schools. There is Causality between the Mid Day Meal Scheme (MDMS) and enrolments in the government elementary schools. The gradual decline in the enrolments in the government schools and increase in the enrolments in private schools might be due to the

infrastructure facilities offered and the pace with which the private managements are establishing the schools. Though providing of free meals to the students is a sort of a subsidy to the parents which can encourage them to send their children to the school, but there are other factors which the parents consider during enrolling their children in a school, which include the facilities like the drinking water availability, toilet facility, pupil teacher ratio and etc. Attention towards the calorific value provided in the meals may be paid along with hygiene for the enrolments in government elementary schools to improve.

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17. Web Links

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