Per Child Funding Formula in Indian education: Analysis and Applications

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Researching Reality Summer Internship 2014
Working paper: 315

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ABSTRACT

Computation of per child funding in education in India is done in the most dubious of ways, by pre-determining the total allocation and then dividing it by the total enrolment in the country. This is highly problematic as the allocation rarely acts as a guiding factor for the actual expenditure, and the total enrolment in the country is a highly inflated and unreliable estimate. This, in turn, implies that there is a great deal of inefficiency in calculating and dispersing the funds in education.

This paper looks into the feasibility of reforming the "funding formula" as followed by the Government of India, and proposing an optimal funding strategy. It also examines the international practices in public allocation and expenditure.
Further, it aims to test the sufficiency of the cash voucher programmes in Chile and Netherlands and corroborate the findings with the Indian scenario; and shed light on the sporadic compensation of funds under the RTE for the 25% reservation for disadvantaged students.

ACKNOWLEDGEMENTS

This paper would not have been possible if not for the constant support and assistance of the team at the Centre for Civil Society. I would also like to extend my gratitude to the very resourceful Shantanu Gupta, who surpassed his role of being a research guide by giving me valuable insights into the education system that prevails in India today.

ABBREVIATIONS

ASER: Annual Status of Education Report (as published by PRATHAM)
GDP: Gross Domestic Product
NGO: Non-governmental organization
NSDP: Net State Domestic Product
MHRD: Ministry of Human Resource Development, India
PCFF: Per child funding formula(referring to the formula used)
PCFS: Per child funding statistic (referring to the amount calculated)
PAISA: Planning, Allocations and Expenditures, Institutions: Studies in Accountability (as published by Accountability Initiative India)
RTE: Right to Education; Right to Free and Compulsory Education Act 2009
SMC: School Management Committee
SSA: Sarva Shiksha Abhiyan

RESEARCH QUESTION:

IS THE GOVERNMENT'S "PER CHILD EDUCATION FUNDING FORMULA" APPROPRIATE TO DETERMINE AN OPTIMAL LEVEL OF SUBSIDY FOR THE SUCCESS OF GOVERNMENT CASH VOUCHER PROGRAMME AND THE 25% REIMBURSEMENT SCHEME?

INTRODUCTION

It has been observed that the global average in expenditure in education is approximately 6% of GDP, while India lags behind with a 3.4% (% GDP) allocation for expenditure. (World Bank, 2014)

However, when we look in absolute terms (relative to other countries), this is a considerable sum and studies conducted by NGOs have shown that it isn't the amount allocated that lacks, but the implementation thereof. In fact, it has been observed that between the financial years 2007-08 to 2012-13, the elementary education budget allocation has doubled; rising from Rs. 68,853 crores to Rs. 147,059 crores.(PAISA report 2012: Do schools get their money, 2012 paisa_report_2012.pdf)

In the same time frame, independent studies also found that there has been a steady decline in the learning outcomes and performance of both the teachers and the students in the publicly funded schools. (ASER,2013)

Further, there have been leakages observed within the system which threaten the efficiency and outcomes. The funds dispersed from the top do not make it to those who need them. By the time the money reaches the rightful beneficiaries, the sum dwindles down to 0.2% of what was intended to be spent. (Ibid.)

A study conducted by Clara Delavallade of the University of Paris concluded that corruption leads to an increase in the total government spending but also coincides with a reduction in the government spending to all budget items (both as a proportion of GDP)(Delavallade,2006)

This, sadly, is true in the Indian context as the education budget has been swelling, but there seems to be no link between increase in the budgetary expenditure and the performance of the students. (ASER,2013)

A shocking observation is that there is only one non-governmental survey (Pratham-Accountability Initiative ASER and PAISA reports) in the entire country which focuses on keeping track of public expenditure in education vis-à-vis the performance of the students. Herein lies the pressing need to make the Indian education system more transparent and accountable.

We find the need to devise an all-India per pupil statistic- a statistic that is the combination of all the heads under which expenditure is calculated.

Although attempts have been made in the past to determine the optimal expenditure there are many different aspects that have been excluded. For instance, the infrastructure costs are not included in the per child allocation (PAISA,2012). This has both positive and negative repercussions. While one economist might say that infrastructure costs need not be included as the infrastructure costs are highly varied across different parts of the country and there exists ambiguity as to what one may wish to include as an infrastructure cost; another might be of the opinion that if the government really wants to compensate the private schools for the cost incurred in educating the underprivileged sections of society, then it must also include the capital and infrastructure investment incurred by the private school owners.

In India, the logic of the former prevails. We observe that ambiguity exists in most of the categories that should be included in the optimal PCFF, and this is further exaggerated across different regions of the country.

1. OPTIMAL LEVEL OF SUBSIDY:

1.1. WHAT IS PER CHILD FUNDING STATISTIC AND WHY IS IT A BETTER STATISTIC THAN THE TOTAL ALLOCATION?

The per child funding statistic, in laymen terms, can be understood to be the amount that the government should ideally spend per pupil in the country, which includes all the different heads under which the expenditure is distributed.

There are various definitions available for this statistic. The Government of India follows the formula that can be defined as below:

"Current expenditures for public elementary and secondary education in a state divided by the student membership"

$$\text{PER CHILD FUNDING} = \frac{\text{TOTAL BUDGETARY ALLOCATION}}{\text{TOTAL ENROLLMENT}}$$

CONTEXT AND NEED FOR PCFS:

The Sarva Shiksha Abhiyan flagship programme became operational in 2001-2002 with the aim of universalization of elementary education in India. Over the years, it has been observed that under the SSA, the share of expenditure by the Centre has been dramatically high. It currently accounts for 67% of the total elementary education allocation.(SSA,2013)
As recently as 2009-2010, it was observed by the NGO Accountability Initiative India, that the State governments contributed as much as 74% towards the education budget. But this has given way to the grants and government aid coming from the SSA allocations.(PAISA, 2012)
Thus, we are starting to observe a trend of increasing involvement of the Centre in education.

While it remains general perception that decentralization would assist in increasing the educator participation in making relevant policies which in turn will assist by increasing the standard of learning outcomes, India is yet to adapt to this system. (ECDOE,2004)

One of the proposed solutions to this issue is reforming the budgetary allocations by switching to per child funding statistic (PCFS), and popularizing the amount to the masses. This would greatly simplify the budget computation as one would simply need to multiply the PCFS with the number of students enrolled to get the figure which needs to be spent.
Further, with each individual school now faced with the need to get more students in order to get more funding, the schools will be indirectly incentivized to focus on performing better.

WHY IS PER CHILD FUNDING STATISTIC BETTER?

The PCFS is a more efficient statistic as compared to the total allocation for the following reasons:

- When we look at the total allocation instead of the per child allocation, we ignore the denominator, which is the total enrolment. If the aim is to gather a better idea of how much funding is actually being allocated, it is a more prudent figure to take this enrolment into account. Hence, for a clearer picture, the PCFS is a better statistic.
- If the entire education funding is done on the basis of the PCFS, the result would be an incentive for each school to perform better. This works in two ways: One, the school would be incentivized to perform better in order to increase the number of students enrolled and induce more students to enroll. Two, with the increased amount of funding, the autonomy would be extended to the Principal of the school to decide how

and under which head to spend the money attained from the SSA. With this increased autonomy, comes the accountability as to how the money was spent since the SMCs and other parents can now hold the Principal directly responsible should there be any misappropriation of funds or decline in standards.

- With the attached accountability pressure on each Principal, one can safely assume that there will be a decline in the level of leakages from the system. (There is sufficient data from the UK to support this claim which will be further analyzed in the later sections of this paper).
- As was observed by Accountability Initiative India, the issue at hand is the rising level of the budgetary allocation with a simultaneous decline in the learning outcomes of the students. Here, PCFS could in fact decrease the spending by the government in terms of budgetary allocations, and liquidate resources for other sectors. This would in turn make public expenditure overall more transparent and efficient.
- The PCFS, if rightly calculated, could also greatly affect how the money is spent. With the schools concerned more with learning outcomes, Principals are most likely to spend on teachers and inputs which translate into better performance of the students over other channels.

1.2. HOW DOES THE INDIAN GOVERNMENT CALCULATE THE PER CHILD ALLOCATION AND PER CHILD EXPENDITURE? WHAT IS THE AVERAGE PER CHILD EXPENDITURE IN INDIA? HOW DOES IT DIFFER FROM STATE TO STATE?

For the purpose of this paper, 5 applications were filed under the Right to Information Act to the Directorates of Education in Delhi, Maharashtra, Rajasthan and Gujarat, and the Ministry of Human Resource Development. The questions included were as follows:

1) What is the optimal per child government expenditure in government schools?
2) How is this amount computed?
3) What is the formula used to compute this amount?
4) What are the components of this formula? (eg: Teachers salaries, infrastructure cost, maintenance cost etc)
5) Is this the same amount that is used to reimburse private schools with under the RTE for admission of 25% of the underprivileged children?

However, the responses so far are all absent or evasive in nature. With majority of the departments assigning and re-assigning the burden to reply to each other, none of them have a clear picture as to what the components of the funding formula really is or ought to be.

Further, a similar RTI was filed by the School Choice Campaign team at the Centre for Civil Society in April 2012, which also faced a similar dry response from the departments.

The NGO Accountability Initiative, however, shed some light as to how the PCFS is determined by the Government of India. **It is done in a retrospective manner, where the cost per head is gauged after the entire financial year is complete. Then, the total budgetary allocation for the whole year is divided by the total enrolment in the schools to gather what the amount spent per child was for the time frame.**

The issue still remains that there is little to no relationship between the budgetary allocation and the amount that is actually spent on the students.

The average per child allocation at an all India level is reported to be **Rs. 4,269** for the year 2011-2012, as per the calculations of the team at Accountability Initiative.

But for a clearer picture one must consult the figures across different states. It has been reported that the PCFS for Bihar is **Rs. 4,705** (Dropping down to as low as Rs. 878 in the case of Nalanda and Purnea districts of Bihar), while the PCFS for Meghalaya is **Rs. 27,451** for the year 2011-2012. (Accountability Initiative, 2012)

There exists a great deal of disparity in the level of funding across different states. We do not have access to the actual per child spending figures (Expenditure figures) of the government, however, the SSA directorates are legally bound to publish a per student cost that will be used to reimburse the private schools under section 12.1 (C) of the RTE Act (even though many states are yet to decide on this statistic). This figure is meant to be a reflection of the average expenditure incurred by the government in running government schools. However, as discussed earlier, it does not incorporate the cost of infrastructure.

TABLE 1: Reimbursement allocations across the focus states

States	Amount determined for reimbursement by SSA (PCFS per year)
Delhi	Rs. 14,280
Maharashtra	Per child cost yet to be determined
Rajasthan	Rs. 9,748
Uttarakhand	Rs. 16,596
Gujarat	Per child cost yet to be determined

Data Source: SSA portal for different states

We can observe from Table 1, that the reimbursement amounts as determined by the SSA directorates across different states are uneven. Thus, there arises a need to standardize and universalize one statistic that can be used for all the states.

For this we need an optimal per child funding formula (PCFF) to get the PCFS figure. Before we get to the listing of all the divisions of the PCFF, one needs to delve into the structure of the education subsidy in India as proscribed in the RTE 2009.

1.3. HOW DOES THE EDUCATION SUBSIDY WORK IN INDIA? WHAT IS SECTION 12.1 (c) OF THE RTE?

The RTE states in Part V, "Responsibilities of schools and teachers", 12 (1) titled "Reimbursement of per-child expenditure by the appropriate Government"

(1) The total annual recurring expenditure incurred by the appropriate Government, from its own funds, and funds provided by the Central Government and by any other authority, on elementary education in respect of all schools referred to in sub-clause (i) of clause (n) of section 2, divided by the total number of children enrolled in all such schools, shall be the per-child expenditure incurred by the appropriate government.

Explanation: **For the purpose of determining the per-child expenditure, the expenditure incurred by the appropriate Government or local authority on schools referred to in sub-clause (ii) of clause (n) of section 2 and the children enrolled in such schools shall not be included.**

Further, the Guidelines Under Section 35(1) of the Right of Children to Free and Compulsory Education Act, 2009 regarding procedure for admission in schools under section 13(1) and section 12(1) (c) of the RTE Act:

"(i) With regard to admissions in class 1 (or pre-primary class as the case may be) under section 12(1)(c) of the RTE Act in unaided and 'specified category' schools, schools shall follow a system of random selection out of the applications received from children belonging to disadvantaged groups and weaker sections for filling the pre-determined number of seats in that class, which should not be not less than 25 per cent of the strength of the class.

(ii) For admission to remaining 75 per cent of the seats (or a lesser percentage depending upon the number of seats fixed by the school for admission under section 12(1)(c), in respect of unaided schools and specified category schools, and for all the seats in the aided schools, each school should formulate a policy under which admissions are to take place. This policy should include criteria for categorization of applicants in terms of the objectives of the school on a rational reasonable and just basis. There shall be no profiling of the child based on parental educational qualifications. The policy should be placed by the school in the public domain, given wide publicity and explicitly seated in the school prospectus. There shall be no testing and interviews for any child/parent falling within or outside the categories, and selection would be on a random basis. Admission should be made strictly on the basis".

These are the clauses and sub-clauses included in the RTE Act which govern the computation of per-child expenditure and the reimbursement of the 25% reservation of seats. It is primarily this law which governs the subsidies provided to the underprivileged section of the students.

1.4. HOW MUCH MONEY IS ALLOCATED PER CHILD BY STATE?

As noted earlier, there is a significant variation in the expenditure across the different states in the country. In addition, there is variation observed in the budgetary allocation of each state from year to year.

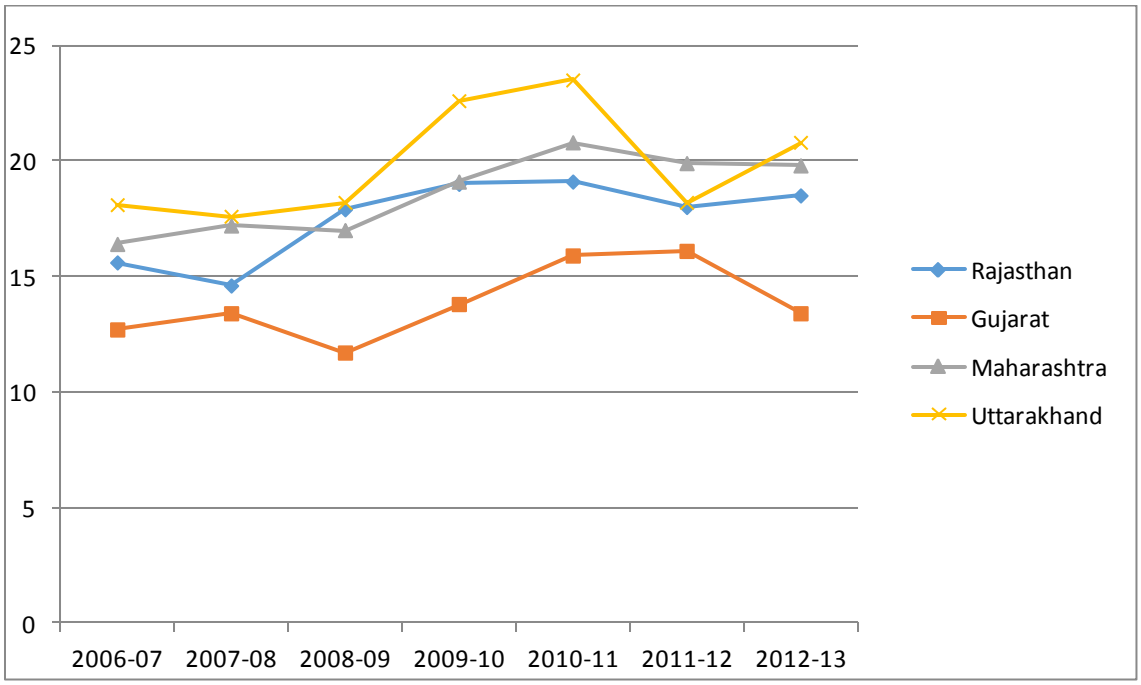
From the graph given below, we can observe the trends in budgetary allocation in the four focus states chosen for the research paper. The four focus states are:

- Maharashtra
- Rajasthan
- Gujarat
- Uttarakhand

The amount allocated by the states for education as a percentage of their Net State Domestic Product (NSDP) has been changing from year to year. The primary reason for surge in expenditure in a particular year can be related to the elections within the state. Thus, in the form of a populist measure the education budgets swell in the year that the government is up for scrutiny by the populace.

The graph below scans the budgetary allocation in the focus states between the years 2006 and 2013.

TRENDS IN BUDGETARY ALLOCATION (% NSDP)



Data Source: PRS Legislative Research

1.5. WHAT ARE THESE STATES SPENDING ON? DOES THIS REFLECT LEARNING IN EACH STATE?

As we have observed in the section above, the states are allocating a significant portion of their NSDP to education and these figures are increasing (in absolute terms and percentage figures). Therefore, it is important to determine where this money is being spent.

Although, the government does not release any information as to what the actual division is under the budgetary heads, there is a percentage allocation amount gauged with a fair degree of accuracy by Accountability Initiative. (PAISA,2012)

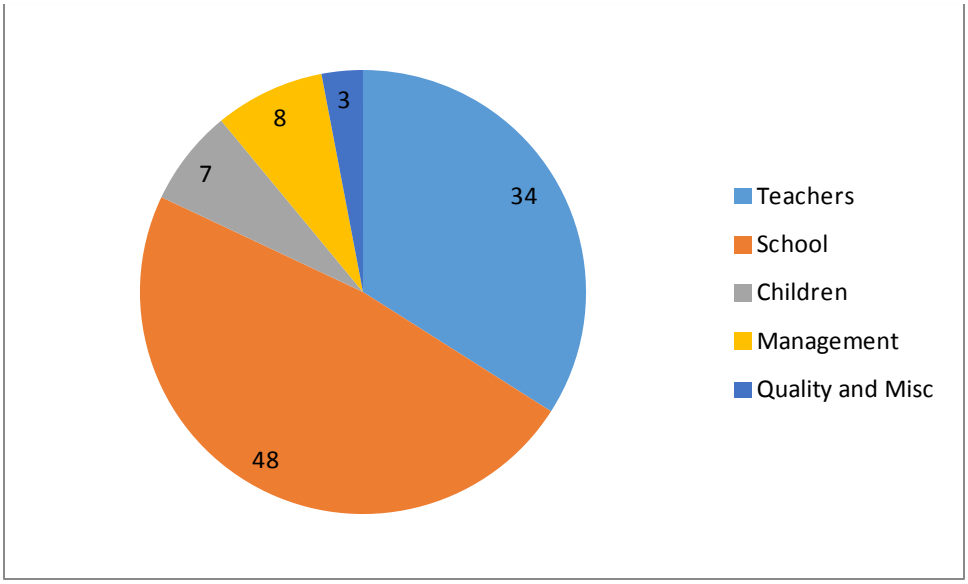
These components then go on to form the PCFF. They do not include the infrastructure costs, but take into account most of the operational expenditures that a school faces on a day-to-day basis.

This division is given as below:

"**Teachers**: Teacher salaries, training and teaching inputs such as Teaching-Learning Material, Teaching-Learning Equipment and the School Development Grant.
School: Civil works and School Maintenance Grant.
Children: Entitlements, mainstreaming out-of-school children, remedial teaching, etc.
Management: BRCs, CRCs, management and MIS, and research and evaluation.
Quality: Innovation and Learning Enhancement Program (LEP).
Miscellaneous: Community mobilisation and community training."
Data Source: PAISA report 2012, Accountability Initiative India, paisa_report_2012.pdf

The charts below examine the state-wise split in the public expenditure in education over the categories defined:

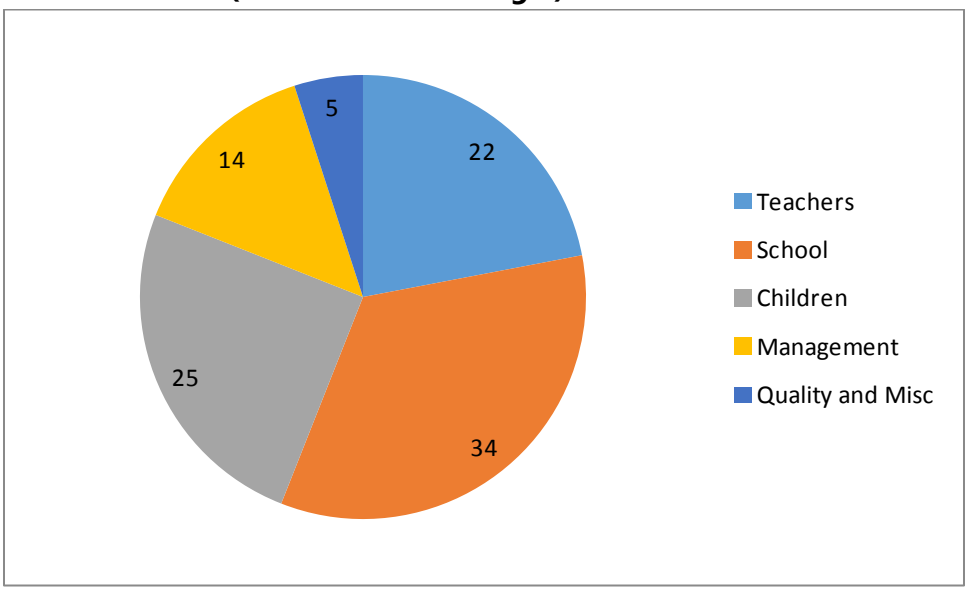
GUJARAT (% of education budget)



Key observations:

In the case of Gujarat, we can observe from the chart above that a major chunk (48%) of the budgetary allocation is going directly into enhancing the infrastructure and other civil works projects, instead of investing the amount in inputs like teaching and focusing on mainstreaming out of school children. (It is possible that less % is being spent on teachers' salaries as it is being observed that Gujarat is setting in place a framework for hiring contractual teachers, further research is being conducted by other organizations)

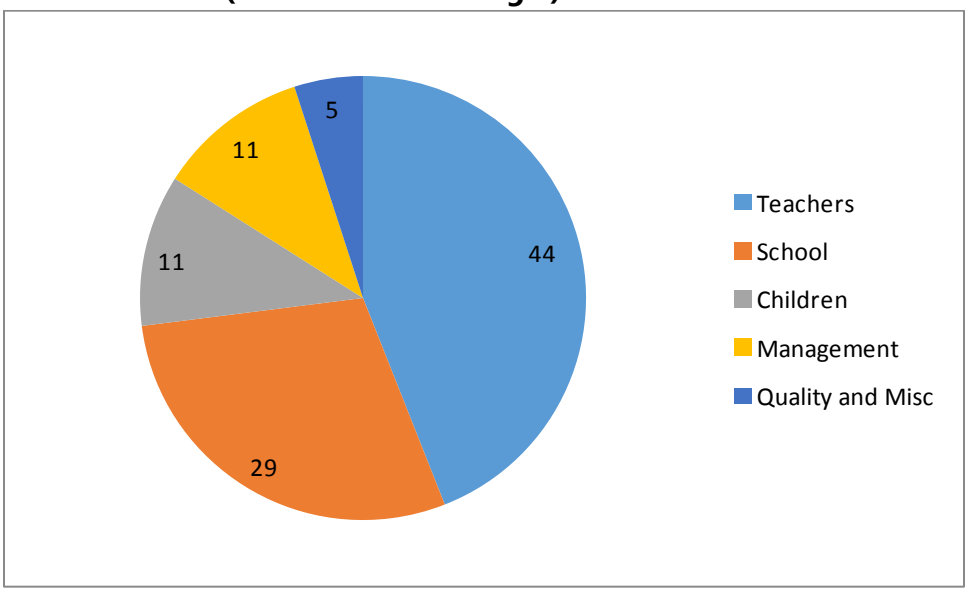
MAHARASHTRA(% of education budget)



Key observations:

In Maharashtra, we observe that there is a significant amount of budgetary allocation being spent on "Children" category which is a positive indicator as there are efforts being made to integrate out of school children with the others in the classroom. Furthermore, there is sufficient contribution to the "Management" and "School" categories.

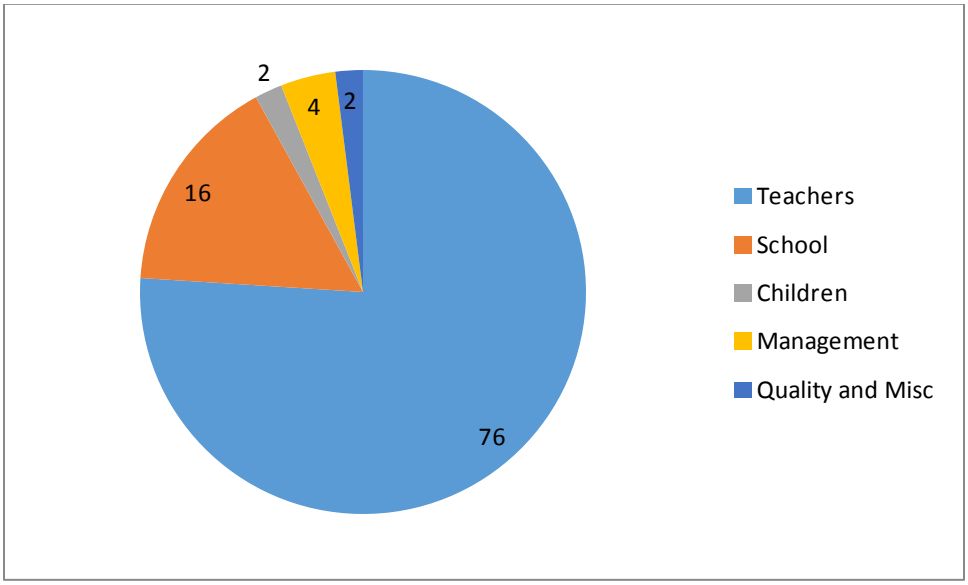
UTTARAKHAND(% of education budget)



Key observations:

In Uttarakhand, we observe that there is a significant portion of budgetary allocation being spent on "Teachers" and "Schools" categories. However, this significant contribution to the direct classroom-level inputs may or may not be translating into better performance of the students.

RAJASTHAN (% of education budget)



Key observations:

In Rajasthan, there is a lopsided division within the budgetary allocation. A huge proportion of the funds has been allocated to the "Teachers" category, which greatly surpasses the allocation to this category in all the other focus states. It is a concern to see that a meager 2% is being allocated to the "Children" category which implies that there is a need to focus more on mainstreaming out of school children, and other student related activities.

1.6. WHERE DOES INDIA STAND VIS-A-VIS THE REST OF THE WORLD IN PER CHILD EXPENDITURE (% GDP)?

TABLE 2: "Public expenditure per pupil as a % of GDP per capita. Secondary is the total public expenditure per student in secondary education as a percentage of GDP per capita. Public expenditure (current and capital) includes government spending on educational institutions (both public and private), education administration as well as subsidies for private entities (students/households and other privates entities)."

Data Source: UNESCO Institute for Statistics

COUNTRY	%PC-GDP spent on education (taking the latest statistics available)
United Kingdom	33.8
France	28.0
Germany	24.7
China	(NA)
Russian Federation	(NA)
Japan	25.8
Chile	17.9
Netherlands	25.8
India	13.3
South Korea	24.9
South Africa	20.1
Bhutan	31.5
Sri Lanka	6.9
Bangladesh	13.9
Pakistan	(NA)
Saudi Arabia	(NA)
Nepal	12.2
Singapore	17
United States of America	24.3

Data Source: World Bank

On the basis of the table above, we can easily conclude that the Indian expenditure in education (expressed as a proportion of the per capita GDP) ranks lower than most nations that would be considered in the same category.

It depicts the priority of the Indian policymakers, as they clearly do not rank education as one of the top priorities for public expenditure.

In most of the developed countries of the world, (USA, UK, France, Germany and Japan) we notice that education expenditure is usually greater than one-fourth of the PC-GDP, whereas in

the underdeveloped parts of the world, it lies between 10-15% of the PC-GDP. India is set right in the middle of this category with a 13.3% of the per capita GDP equivalent expenditure in education.

However, while according to global standards, Indian public expenditure in education is lagging behind both as a total allocation and a per capita GDP allocation, there have been studies conducted (as the report by *Ambrish Dongre, Vibhu Tewary; Has the relationship between Allocations and Outcomes broken?)* that explore the possibility if there is little to no link between increasing the budgetary allocation and the performance of the students. This is especially true for developing countries like India. (PAISA,2012)
Hence, until the link between outcomes and allocations is reestablished, expanding the education budget may not be the best policy action for India to take.

2. REIMBURSEMENT OF 25% RESERVATION IN PRIVATE SCHOOLS:

On April 12, 2012, the Supreme Court passed a judgment that upheld the RTE section 12 (1) (C) which details the 25% reservation of the underprivileged section of society (Accountability, 2012). However, the sub-clause of the RTE Act which explains the calculation of this reimbursement amount as a per-child statistic is somewhat open to interpretation by the state's SSA directorate. Hence each state has a different cost determined. Another interesting finding is the fact that the state governments of the focus states have all determined different per-child expenditures, in spite of the fact that infrastructure costs are not factored in and the teachers are being remunerated as per the Sixth Pay Commission guidelines. (RTE, 2009, *PIB*)

Furthermore, the state governments of Maharashtra and Gujarat have not released the per child expenditure figures on the SSA portal in spite of the date for finalizing it being July 2013. (The RTIs filed by the author should ideally clear out the ambiguity, in case the directorates are responsive)

2.1. IS THIS A GOOD POLICY MEASURE? ARE THESE FIGURES BEING DEVALUED?

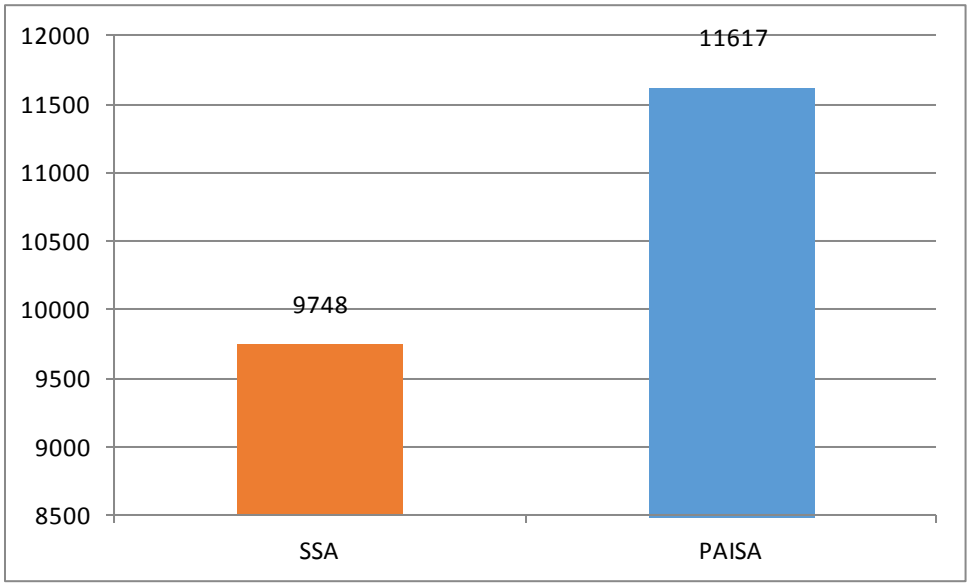
Out of the four focus states that were analyzed, Maharashtra and Gujarat were yet to release publicly the per child expenditure calculated by them. However data was readily available for the states Rajasthan and Uttarakhand.

Also, in the PAISA 2012 report, per child budgetary allocation has been calculated by taking the total education budget of the state and dividing it by the total number of students enrolled. This led to an interesting finding. **There was a significant amount of difference observed in the amount calculated per child by the SSA directorates and by Accountability Initiative.** This difference basically indicates that either the SSA directorates have not computed the same amounts since they have not factored in all the costs; or this figure has been determined arbitrarily to compensate the private schools.

Ideally, this difference should not exist given the nature of the input costs.

- A large expense, which is the teachers' salaries and compensation, has been streamlined as per the guidelines set by the Sixth Pay Commission.
- Infrastructure costs, costs of land acquisition, rent, construction of schools, etc are not factored in as it was realized that they are highly varied from region to region.
- Mid-day meal expenditures have been factored in for both figures.

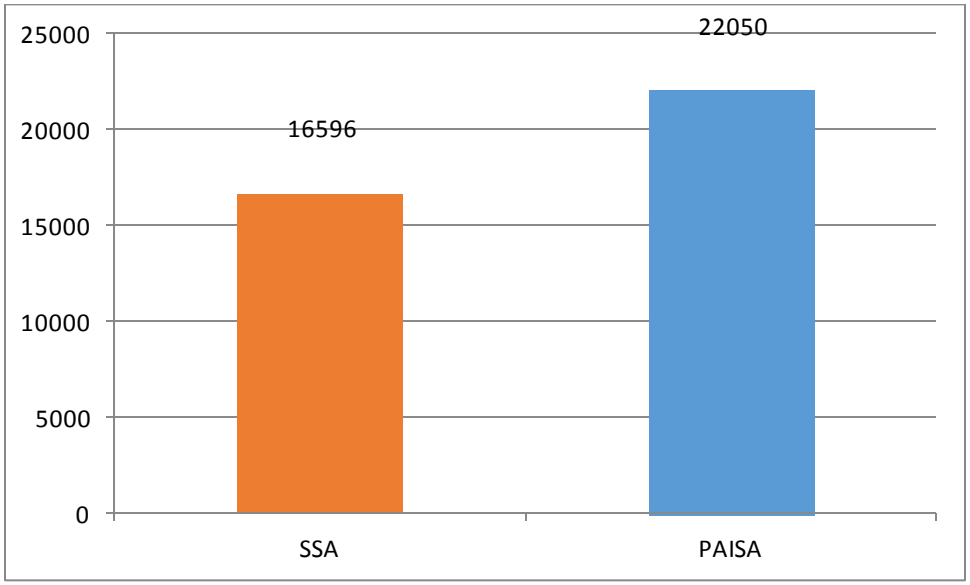
RAJASTHAN



In Rajasthan, the SSA determines the cost to be Rs. 9,748 and the PAISA report gauges this figure to be Rs. 11,617.

The difference is determined to be Rs. 1,869 per child per year. This implies that while the budget allocated Rs. 11,617 for each child in Rajasthan, the SSA directorate is willing to compensate only Rs. 9,748 to the private schools.

UTTARAKHAND



In Uttarakhand, the SSA determines the cost to be Rs. 16,596 and the PAISA report gauges this figure to be Rs. 22,050.

The difference is determined to be Rs. 5,454 per child per year. This implies that while the budget allocated Rs. 22,050 for each child in Uttarakhand, the SSA directorate is willing to compensate only Rs. 16,596 to the private schools.

ANALYSIS:

A report by EY-FICCI determined that there are approximately 1.4 million schools in India which have approximately 250 million students enrolled.
The report goes on to state that *"54% of all 1.46 million K-12 schools in India, are managed by the Central Government/ state governments and 21% are managed by local bodies/municipal corporations. Private schools account for 25% of the total number of K-12 schools in India."*(Jhingan, 2014)

In addition, it also states that while the private schools account for 25% of the total schools in the country, they are responsible for educating 40% of the total students enrolled. This figure then supports the argument that the private sector is performing better than the government sector schools. Private schools face a greater degree of competition from not only other private schools, but also the heavily funded government schools. Thus, if they want to enroll more

students, they must out perform their competitors. The EY-FICCI findings demonstrate that the since the private schools are educating nearly half of the students in the country, their performance must be better (Jhingan, 2014). This argument has also been carried forward in PRATHAM's ASER report.

Thus, on one hand we gather that private schools are educating the children better, yet on the other hand (from our analysis of Rajasthan and Uttarakhand budgets) we realize that the allocation made for the private schools is not as much as is being spent on government schools.

Hence, there is a great loss being incurred to the private schools. They are forced to guarantee admission to underprivileged students by the RTE Act. Yet at the same time, they are not being compensated adequately (or at least at the same level as the government schools are). As states earlier, even the infrastructure costs, rent, construction etc are not considered while determining the amount which needs to be paid to the private schools.
Another issue, some private schools do not have the facilities to provide the mid-day meals as they are obligated to do for the 25% underprivileged students. In Uttarakhand, this amount is then put into the accounts of the parents of such students by the private schools.

Essentially, what we observe is that this clause of the RTE Act is increasing the burden on the private schools greatly without adequately incentivizing and compensating them for it. Either a higher figure must be calculated or it should be standardized to the PCFS that is proposed in this paper.

2.2. IS THE GOVERNMENT COMPENSATING PRIVATE SCHOOLS ON TIME? WHO IS BEARING THE BRUNT OF DELAYED PAYMENTS?

It is not sufficient to just calculate the reimbursement per child expenditure figures or the PCFS. It is also important to ensure that the money is reaching the private schools in a timely fashion. The first section dealt with whether or not the amount is sufficient. This section answers the question whether the government is keeping up it's end of the bargain by paying the private schools. And if in case, the payments are not coming through, who is bearing the cost for educating the children.

The Times of India reported on November 23, 2013 that schools in Goregaon, Mumbai are facing difficulties adhering to the RTE norms and are shifting the burden by hiking fees by 30-60%.

It went on to report how the Maharashtra State Commission for Protection of Child Rights Commission remained passive on the fee hike.

> "The Maharashtra State Commission for Protection of Child Rights (MSCPCR) this June took suo motu cognizance of VPM International School, Airoli, hiking fees between 30-60% in different classes and asked parents to either pay up or take their children elsewhere. Later, it washed its hands of the issue citing the HC order. "
>
> Thus, the burden of admitting underprivileged students is being passed onto the other students of the private schools. This will cause a lot of drop-outs as the fee hike amounts reported are not small by any means.

In Tamil Nadu, the association of private matriculation and higher secondary schools decided against admitting students under the RTE 25% quota. The political leaders of DMK and PMK condemned the move and demanded strong action against these schools. But so far, no action has taken place against these institutions.

In Indore, it was observed that the government is yet to deliver on payments from 2011-2012 to 185 schools. There is substantial backlog with the payments, and as is typical of the Indian bureaucracy, there is little to no effort to hurry these payments. Meanwhile, schools are left in the lurch and take matters into their own hands by shifting the burden of these payments on to the other students by hiking fees. (TOI, 2013)

The only redressal system that is available to the parents of these students are the State Commissions for Protection of Child Rights which are evasive and have no inclination to be of assistance, as observed by Shantanu Gupta of the Yuva Foundation.

Even though most of the private schools submit their applications for grants and bills in a timely fashion, the state mechanisms take a long time to process these and make the payments. This acts as a huge disincentive for private schools to adhere to the RTE norms. This has led to two repercussions. One, private schools avoid giving admission to the underprivileged section. (Most parents are unaware of the provisions of the law even today). Two, it has led to a host of illegal evasive activities by the private schools such as fudging the documents, including false names in the list of students enrolled, etc. (Shah, 2012)

One line of argumentation says that the RTE 25% reservation should be an opt-in system, where some of the private schools can choose to adhere to the norms in exchange for a higher compensation per child.

In their study titled "The Private School Revolution in Bihar: Findings from a survey in Patna Urban", Baladevan Rangaraju, James Tooley and Pauline Dixon, make the following observation:

> **"Even if they manage to increase their enrolment to the maximum level allowed by RTE (PTR of 40:1), they will have to increase their average fees by 294% to meet the increased salary expenses"**

Private schools, not only need to adhere to the RTE norms, but also need to ensure they are paying their teachers salaries that are in keeping with the Sixth Pay commission guidelines. This is highly problematic since most schools do not earn enough out of the fees they charge to remunerate each teacher with a salary of Rs. 25,000.
This stands true especially for Budget Private Schools, which typically charge an amount lower between Rs. 300-800 per month. This amount is too meager for the school to keep pace with the salary norms, and thereby forces the school to push up the fees. While the SSA is meant to have taken this into account while preparing the per-child expenditure, it doesn't seem to be reflective in the amounts actually published.

2.3. HOW DOES PER PUPIL FUNDING WORK IN UNITED KINGDOM? HOW DOES ONE MAKE PRINCIPALS ACCOUNTABLE?

In the United Kingdom, a new reform was introduced in April 2011 called "the Pupil Premium". The aim of this reform was to "raise the attainment of disadvantaged pupils and close the gap between them and their peers" (Government of UK, Pupil premium: funding for schools and alternative provision, 1 May, 2014).

It functions by giving both mainstream and non-mainstream schools (special schools and referral units) additional funding on the basis of each disadvantaged student admitted.

Over the years, the spending has been increasing as is the impact of the scheme. The scheme not only caters to the tuition fee of the disadvantaged student, but also guarantees them a Free School Meal (there exists some opposition and apprehensions to this aspect of the policy, mostly limited to the quality and the quantity of the meals provided).

The pupil premium allocation was £953 (for each primary aged child) and £900 (for each secondary aged child) in the year 2013-2014. This amount has been revised to £1300 (for primary aged child) and £935 (for secondary aged child).

The means to identify which child is eligible for the pupil premium is the eligibility for the Free School Meals. All the allocations are made in January, which is when there is a nationwide

school census. During the census, the eligibility of the disadvantaged students is cross-referenced and the conditions of the grants are reviewed. The pupil premium allocation is then dispersed to the local authorities from the Department of Education on a quarterly basis. Local authorities then gauge when and which schools they need to dispatch the funds to. In the case of free schools and non-mainstream schools, an organization called the Education Funding Agency (which falls under the Department of Education) oversees the allocation of funds. (Department of Education UK, 2014)

To a great degree the Principals and head teachers of the schools are free to decide what to spend the pupil premium allocation amounts on. In some cases, the local authorities may give guidelines as to where this extra amount should ideally be spent.

The issue then arises as to how the Principals are spending these funds and whether it is aligning with the objectives of the Department of Education. Thus, an elaborate checks and balances mechanism was put into place to keep track of the decisions made by these head teachers. The system of accountability is in place on the basis of these three prongs:

- Comparison of performance of disadvantaged pupils vis-à-vis their peers (performance tables are released for the same)
- Mandatory publication of the utilization of pupil premium funds and how these funds are having an impact on the disadvantaged pupils achievement enrolled in the schools
- Inspection of schools along the lines of the Ofsted inspection framework, where everything from the attainment of pupil groups to the achievements of the pupil groups are looked into.

This system is functioning relatively well in the United Kingdom.(Carpenter et al, Evaluation of Pupil Premium, July 2013) It was realized that out of the schools surveyed, 98% primary schools were using additional staff to teach the disadvantaged students. Without the pupil premium, it was recorded that this figure would have become 76%. Hence, as an intervention the pupil premium was considered to be very effective from the view point of the schools.

2.4. HOW DOES THE SOUTH KOREAN EDUCATION SYSTEM FUNCTION? WHAT ARE THE REASONS BEHIND IT'S SUCCESS?

The education firm Pearson released data and rankings about which countries are performing well in education. (The Learning Curve: Index of cognitive skills and educational attainment, Pearson, January 2014). According to this index, South Korea is currently top ranked in the

world, as a cumulative of cognitive skills and educational attainment. Hence, for the purpose of this paper, South Korea was chosen as the ideal country from which best practices could be drawn.

The funding in the South Korean education system still remains largely centralized and mostly within government control. In his study "Success and Education in South Korea", Clark W Sorenson gives credit to the ethos in South Korea as a contributing factor to making learning outcomes what they are today. He implies that the average South Korean would pursue higher education even when they have job security guaranteed. This Confucian culture of education is the backdrop for stellar performance of Korean students in Mathematics and Science. (Sorenson, 1994)

Even though there are public and private schools in the country, they both are funded largely by the government. The Ministry of Education has a budget that is approximately 20% of the total central government expenditure, which comes out to be around $29 billion. The government of South Korea has consistently been increasing investment in the social sector. It has grown to six times of what it was in 1990. Education itself accounts for nearly 10% of the GDP expenditure, when we take into account government schools as well as the private and informal schooling sectors. Another important finding is that teachers are a key part of the investment made by the Ministry of Education. According to the OECD statistics, Korea has placed in the top 10 countries for entering teacher salaries and goes on to become the third highest globally, after 15 years of service. (NCEE,2013)

An interesting phenomenon in South Korea is the prevalence of Hagwons or private educational institutions which are for-profit in nature. Since hagwons are businesses, they treat each student like a customer and focus on increasing the performance of the students. Some of the teachers at hagwons even earn million dollar salaries. (Best example is Kim Ki-Hoon, who has become world famous for earning $4 million dollar salary). But another interesting aspect is that, most government school teachers in South Korea earn more than private school teachers. An article published in the Wall Street Journal suggested that public schools have reason to be inspired by the performance of the hagwons- dealing with students the way businesses deal with customers. (Ripley, 2013)

2.5. WHY DID THE CHICAGO PUBLIC SCHOOLS CHANGE THEIR FUNDING STRATEGY?

In the United States in the city of Chicago, the public schools underwent a change in their funding strategy in March, 2013. They shifted to a method called the Student-Based Budgeting system. As a result of adopting this policy, there is a shift in the way the money is allocated. The

justification for this shift in funding policies was released in a press release by the CPS CEO. The press release stated:

"In previous years, principals received per-position, not per-pupil, allocations from the Central Office based on an outdated formula that dictated specific numbers and types of positions to fill within their schools. The formula often did not adequately tailor resources for the student body that principals and teachers were working with every day.

By moving to a Student-Based Budgeting funding model, CPS is ensuring that principals will no longer be limited in their ability to invest resources in a way they believe will best meet their students' needs. The pool of newly flexible funding will represent about 50 percent of a school's budget and include money for core staff, educational support personnel, supplies and additional instructional program. This new funding model will also create more equitable core funding across all schools in the District."
(CPS Press release,2014)

Thus, there was a shift in the strategy for calculating the funding. It should be noted that Chicago was not the first district to switch to this strategy. It was tried in Cincinnati, Milwaukee and Houston. In a study titled "First Steps to a Level Playing Field: An Introduction to Student Based Budgeting", Ogilvy et al take note that if school principals are equipped with the necessary support systems Student-Based Budgeting could bring about a powerful systemic reform. (Ogilvy et all, 2013)

3. CASH VOUCHER PROGRAMMES:

In most developing countries, the demand for education has risen dramatically. As the government is the primary provider of education in these countries, it must make sure that education reaches all sections of society in an equitable manner. In order to do so, several policy measures have been put in place. One of the policies that has not been tested on a large scale in India is the cash voucher programme, where the funds are directly dispatched to the students and parents who utilize their vouchers to choose an optimal school.

3.1. HOW DO CASH VOUCHERS WORK? HOW MUCH MONEY SHOULD BE PROVIDED TO STUDENTS?

Cash vouchers work in a manner similar to cash transfers directly to the consumers. They are considered to be a more effective measure since they promote competition amongst the schools. In a report by the World Bank, it was noted that "competition will lead to efficiency gains, as schools – public and private – vie for students and try improving quality while

reducing expenses. The idea is that when private schools are encouraged to attract students, they become innovative and thereby bring improvements to the learning process. Likewise, public schools, to attract students and the resources that come with them, seek to improve themselves to provide an education at par with the private schools." (Harry A. Patrinos, , 2012)
There are two kinds of voucher programmes that exist- targeted and universal vouchers. Both of these vouchers can be successful in the Indian scenario as the ethos is suited to it.

The question that remains to be determined is what should be the value of the ideal voucher in India. Is it possible to have a universal standard? Or should it be deemed on the basis of the average fees charged by private schools? Or should there be a gradation of vouchers for students in primary and secondary sections?
These questions can all be answered if there exists a system of an ideal PCFS that is both correctly calculated and accepted by the schooling system as a whole. Then, the cash vouchers can be determined according to the standardized PCFS.

3.2. WHICH COUNTRIES HAVE EXPANDED THEIR EDUCATION SYSTEMS BY UTILISING CASH VOUCHERS?

The World Bank study details the voucher programmes of both targeted and universal type. The three countries that have voucher systems in place are Colombia, Chile and Netherlands.

Colombia:

There is a targeted voucher system in place in Colombia called the Program for the Expansion of Education Coverage or the PACES. It was launched in 1991 to provide the disadvantaged section of the population a fair chance to get education. However, it was soon oversubscribed and it was converted to a lottery system for the students. The programme ran for 6 years and was relatively successful. The beneficiaries of the vouchers were found to be performing better than other students in standardized tests and were less likely to repeat a grade. These findings prove the success of the voucher schemes and validate them based on the achievement of the students. (World Bank,2012)

Chile:

Chile has had a universal cash voucher program in place since 1980 in which the funds are directed through the municipalities. The funds are dispatched on a monthly basis. The formula used for deciding the level of funding is directly linked to the number of students enrolled in the schools. Like in India, under the RTE, in Chile the private schools are also subsidized to allow admittance to disadvantaged sections of society. However, the Chilean model has faced a

great deal of backlash as well. There has been a wave of widespread protests engulfing the country since there are allegations of leakages from the system. Further, there aren't any sufficient monitoring and evaluation measures in place in Chile. (Ibid., 2013)

Netherlands:

In the Netherlands, there is universal voucher system in place which is working fairly efficiently. This conclusion can be drawn since 70% of the student enrolments are in publicly funded private schools. It has also been observed in Netherlands that the voucher students are out-performing the other students. The competition amongst different schools is the primary reason that the private schools are incentivized to keep improving. (Ibid., 2013)

However, it should be noted that while in these countries the voucher programs have had a positive impact on the students and the schools, there are also other examples where voucher programs have failed. This is true for certain districts in the United States, where increasing the choice for the students did not necessarily lead to better learning outcomes and performance of the students. The success of the voucher programmes are linked to the context in which they are set. And the state of the students and the education that persists in the country within which it has been launched.

3.3. WHY DID THE VOUCHER SCHEMES FAIL IN MILWAUKEE? WHAT LESSONS CAN BE DRAWN FROM THIS?

The oldest voucher program in the United States, the Milwaukee Parental Choice Program has started to show that expanding school choice may not be the best idea. Even though vouchers are essentially supposed to attack the shortcomings of the system in theory, it may or may not be able to do so in every case. The proponents of the voucher program state that it will fix the problem of excess capacity, create new and improved schools as a result of the competition and encourage the high-quality schools to expand and do better. However, these are largely theoretic concepts that may or may not find grounding in reality.
In Milwaukee and Louisiana, it has consistently been observed that voucher students are performing worse than the other students. This has a lot to do with the background of these students and the fact that they haven't been adequately mainstreamed with the rest of the class. These students who are the beneficiaries of the voucher systems are more likely to be from the African-American and Hispanic communities, and tend to perform worse than other students.

Another concern raised was that in USA, the private schools charge a lot more than is spent in public schools. Thus the amount that is spent to put students in private schools, is probably better spent in strengthening the public school systems.

There was a certain degree of backlash that was faced against the programme, since the Deomcrats believed that the taxpayers money would be better spent strengthening the existing public school infrastructure rather than pumping money into the hands of the private players.

This backlash might be observed in other countries as well, especially countries like India, where there exists an ethos of socialistic ideals. The proponents of the voucher system must take into account this probability of backlash against the programme, and establish awareness mechanisms and popularize the concept of privatization amongst the populace before rolling out the scheme on a large scale.

4. POLICY RECOMMENDATIONS:

4.1. COMPUTING PER CHILD ALLOCATION AND EXPENDITURE AND MAKING IT TRANSPARENT

An intuitive policy measure that was realized during the course of writing this paper was the need to change the method in the way the PCFS is calculated in the country. A possible suggestion is to calculate the PCFS using the method that is employed by Accountability Initiative. Using the 5 categories (see above), an optimal PCFS can be determined. However, these categories are by no means exhaustive and there needs to substantial debate and discourse generated which can then determine what should be included in these categories. Since we have already discounted the infrastructure costs and we are considering uniform teachers' salaries, there should be a standard all India PCFS that holds true in all the states across the country.

In addition to fixing the optimal PCFS, the entire process needs to be made more transparent and available to the public. If, for instance, the PCFS is determined to be Rs. 2000, it should be publicly declared by the MHRD how much money is spent under Teachers category, or Schools category etc. These estimates if known publicly will provide something of a deterrence factor to the bureaucrats to keep them for engaging in corrupt activities. This will also ensure that teachers will know how much to expect in return for each student that they teach, how much there should be contributed to learning materials etc. The simple logic that holds is that once you know how much should be spent per child, you can easily calculate the figure for a class of 20 or 30 or any other figure easily.

It is absolutely crucial that the per child allocation, per child expenditure and the per child reimbursement figures are all streamlined and equated to ensure that the system is transparent and functioning well.

4.2. POPULARIZING THE PER CHILD STATISTIC AND THE REIMBURSEMENT OF THE DISADVANTAGED SECTIONS

A measure that was first proposed by the Centre for Civil Society in Viewpoint 10.1, it was deemed necessary to ensure that the population is aware of the PCFS measure and they should also be made aware of the reimbursement of the 25%. The report states there should be a notification in local newspapers as well as public broadcasting measures like community radio announcements and local tv advertisements. The idea is to ensure that every citizen is as aware of this right guaranteed to him/her the same way that they are aware of the right to speech and other fundamental rights.

There needs to be a link between the expectations of the people and the expenditure made by the Government of India. Here now the general perception is that since the education given by the government schools is "free", thus it is justified for the government schools to extend sub-par education. But as is known, the government schools have a much higher per child expenditure than most of the private schools. Thus, in order to make sure that the citizens are well aware of the level of provisions that the government makes on their behalf and yet fails to deliver, will assist in creating the unrest that will eventually bring about change. This environment needs to be brought about for any long lasting policy change to be introduced in the country.

4.3. DECENTRALIZATION

Another essential policy recommendation must be to remove the consolidation of decision making power and resource allocation at the Centre and distribute this to the local municipalities and the local authorities. In their work which maps the process of decentralization in the health sector in African nations, Bossert and Beauvais utilize the four category typology framework that was devised by Rodinelli in 1981. Essentially, these four categories of deconcentration, devolution, delegation and privatization can be applied extensively in the Indian education system. (Bossert and Beauvais, 2002)

This is also an outcome which can be strengthened if there is the adoption of the PFCS and the complete right and authority to utilize these funds is extended to the Principals of the schools. After the planning stage is over and the budget is released the dispersion of the funds from the centre should then be given over directly to the municipalities instead of the Block Resource Centres and the Cluster Resource Centres. Though the Indian education system is said to be decentralized on paper, it is not actually so. Thus, the optimal way to combat the problem of lack of decision making power at the local level is to increase the role which is played by the educators themselves. Then the accountability systems can be strengthened adding on to the change in the funding and flow format. These accountability systems can be like the type discussed above in section 2.3. The United Kingdom have been successful in implementing the policy measures and setting up the checks and balances mechanism in just 2 years. This system could also then be discussed further in the Indian context. Release of information to the public should be accompanied by the release of details as to who should be held responsible for failure to dispatch

This measure may seem utopian, but has seen much success in the United Kingdom. (Department of UK, 2014)

4.4. PUPIL PREMIUM PROGRAMME

As discussed in section 2.3, the pupil premium program which was adopted by the United Kingdom to assist disadvantaged students and bring them up to par with the rest of the students, has been succeeding fairly (Carpenter et al, 2013). It can be induced to function in the Indian context fairly easily as an alternative to subsidies that are given in the present system. India has a great number of out of school disadvantaged students who would benefit as this system shifts the onus to educate from the students themselves onto the schools. There is a competitive and incentivized structure that works really well in drawing in more students into the system. The schools have an incentive to innovate and improve the quality of education offered by them so as to draw more students in. This builds on Student-Based Budgeting which was followed by the Chicago Public schools, and has a plus-one benefit arising in this case since the schools are now incentivized even further to target the disadvantaged students, if they want to receive funding.

This should first be tested out in pilot projects before it is pitched to the MHRD. The Centre for Civil Society is already advocating for student vouchers, this can be given a greater edge if the funding increases more per head for disadvantaged students.

There is great potential of this policy to increase the social inclusion of the underprivileged students as well as decrease the number of out of school children.

4.5. REIMBURSEMENT FUNDS

In an article published in the Indian Express, Parth J Shah writes: "The Centre should create an independent special purpose vehicle to manage the reimbursement, which could be called the India Inclusive Education Fund. The central government would commit to make contributions but more importantly, it would raise extra money from corporations, foundations and individuals. These non-government funds could be used to bridge the gap between the reimbursement amount calculated on the basis of the actual per-student cost in government schools, and the fees of private schools. Private schools would be free to raise their own funds to bridge the gap through donations, charity events like music concerts, cultural fairs and other annual events, but they would also get support from the fund. The fund could also offer inclusion awards for schools that do well in social integration and holistic learning of the 25 per cent opportunity students. These awards could help cover a part of the gap for private schools as well as incentivise them to take the challenge of inclusion more seriously." (Parth Shah, 2012)

Here then the problem of mismatch between the allocations and the expenditures can be easily rectified using the fund as is proposed. This policy measure can tackle the issues that were raised in the first 3 sub-sections under the reimbursement of funds. (Shah, 2014)

4.6. PRIVATIZATION AND VOUCHERS

It has been noted in this study and several others before this that the laws (including the RTE Act 2009) are predatory in nature towards the private sector in education. They force the private schools to comply to norms that are essentially pushing them out of business. As observed in the South Korean system of hagwons, there needs to be a better environment created that will foster the growth of business-minded private schools which treat the students like clients and maintain a professional attitude towards them.

Further, while there are both cases for and against the voucher systems it can be safely concluded that the voucher programs do work to a great degree in increasing the competition and increases the role of the private sector. It encourages the government to ensure that their schools remain at par with the private sector.

5. CONCLUSION

In conclusion, this paper set out with the aim to provide basic groundwork into establishing a per child funding statistic on the basis of a formula. It went on to examine the formula used by the government and the formula that has been proposed by the non-governmental entities. The paper looked into the areas where this statistic can be applied, and recommended international best practices that could greatly change the Indian education system.

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