The private schooling phenomenon in India: A review

by

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Abstract

This paper examines the size, growth, salaries, fee levels and per-pupil-costs of private schools, and compares these with the government school sector. Official data show a steep growth of private schooling and a corresponding rapid shrinkage in the size of the government school sector in India, suggesting parental abandonment of government schools. Data show that a very large majority of private schools in most states are 'low-fee' when judged in relation to: state per capita income, per-pupil expenditure in the government schools, and the officially-stipulated rural minimum wage rate for daily-wage-labour. This suggests that affordability is an important factor behind the migration towards and growth of private schools. The main reason for the very low fee levels in private schools is their lower teacher salaries, which the data show to be a small fraction of the salaries paid in government schools; this is possible because private schools pay the market-clearing wage, which is depressed by a large supply of unemployed graduates in the country, whereas government schools pay bureaucratically determined minimum-wages. The paper shows how education policies can be harmful when formulated without seeking the evidence.

Key words : Private schooling growth; private school fee levels; India JEL code: I21

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1. Introduction

Private schools are a visibly ubiquitous phenomenon in urban and rural India. On the one hand they are in high public demand and growing in numbers, on the other, in public discourse this 'privatisation of education' is lamented. While there has recently been public concern about elite private schools' fee levels and fee hikes, leading to new legislation to regulate fees in several Indian states, there has at the same time also been a recent upsurge in the government-mandated closure of budget private schools in several Indian states due to their non-fulfilment of 'recognition' conditions. The Right to Education Act 2009 co-opts private schools for the delivery of education, mandating that they give at least 25% of their seats to children of 'economically weaker sections and disadvantaged groups' for which the state governments will reimburse them, thus setting up a unique kind of public-private partnership in education.

Despite their preponderance and growth, and new legislation/policy covering private schools, relatively little is known about the nature of private schools in the country. This review unravels the enigma by presenting up-to-date evidence on several important facets of private schools, and benchmarks these.

The paper asks a number of questions: Policy makers' perceptions about private schools are likely to be shaped predominantly by the types of private schools that are prominent and visible in the national and state capitals, but are these schools representative of the wider reality of private schooling in the country? What are the actual numbers of private schools, and just how rapidly are they growing? How diverse are they in terms of their fee levels and costs, and are high-fee private schools the main bulk – or just a small minority – of all private schools? What are their teacher salaries, and how do they compare with those in the public school sector?¹

Given the omnipresence of private schools in India, these are important questions, and it is not possible to make sensible education policies in ignorance of the reality of private schooling in the country. The paper shows that education policy and legislation in India has often been made in ignorance of the trends visible in the government-collected and publicly available education data and that this has resulted in some counter-productive education policies. It concludes that decision-takers must take evidence into account before making education policy and legislation, in order to avoid policy mistakes.

This paper offers evidence on these issues from the official District Education System on Education (DISE) data, National Sample Survey (NSS) household data, the Annual Status of Education Report (ASER) data, and from data presented in a number of existing studies.

Section 2 describes the datasets used, and assesses their strengths and drawbacks. Section 3 examines the size and recent growth of the private and government schooling sectors in India. Section 4 presents evidence on the fee levels of private schools by state. Section 5 presents data on teacher salaries in private and government schools while Section 6 concludes.

¹ In the interests of space, we have not included in this paper any consideration of the achievement levels of their students, the 'value for money' they offer and the implications of the Right to Education (RTE) Act for the existence and spread of private schools. These are covered in Kingdon (2017).

2. The data

There are several challenges in piecing together the picture on private unaided schooling in India to answer the above questions, since there is no single comprehensive data source on private schooling in India. Before the passage of the Right to Education (RTE) Act 2009, in most states private schools were not even required to be registered, let alone be compulsorily government-'recognised'. While officials thus do not have a comprehensive list of all unrecognised private schools, they do informally know of many of these schools, since they are required to serve closure notices to the unrecognised schools. Yet, the official District information System on Education (DISE), which is meant to be an annual census of all schools in the country, generally does not collect data from most of the so-called non-recognised private schools². Moreover, coverage of even the recognised private schools is incomplete in DISE. Finally, to compound matters further, although the DISE questionnaire separately identifies aided and unaided private schools, in the DISE data report cards published annually by the official agency³, unfortunately these two very different types of private schools are often lumped together and treated as a single category 'private schools'.

While the Annual Status of Education Report (ASER) published by NGO Pratham is helpful in generating extensive evidence on private as well as public schools across about 15,000 villages across all Indian districts annually, it is based on a rural survey only and misses out urban India altogether. Moreover, it also lumps together private aided and private unaided schools into a single category 'private'. While for some states, the distinction is unimportant because there are few aided private schools there, in other states with a higher proportion of aided private schools, the distinction matters much⁴. We shall refer to private aided schools simply as Aided schools, and shall refer to private unaided schools simply as Private schools. Thus, for the purposes of this paper, all Indian schools are categorised into three major types: Government schools (whether run by state, central or local government), Aided schools and Private schools; and this paper does not cover Aided schools.

The National Sample Survey (NSS) which is an annual household survey, periodically collects information on education, for example, in 1995-96, 2007-08 and again in 2014-15. While NSS is a household survey and not a school survey, it nevertheless has valuable information on enrolment in different school types, which permits cross-checking the veracity and comprehensiveness of school censuses (such as DISE) and surveys (such as ASER), and it also furnishes data on household expenditure on education in different types of school – government, aided, and private⁵.

This paper draws together evidence from all the above sources, i.e., raw National Sample Survey or NSS data for various years (latest being 2014-15, 71st Round NSS), the ASER data, the annual District Information System on Education (DISE) data, together with data in studies carried out by individual scholars or institutions.

² 'Recognition' is a government stamp of approval for a private school, to certify that it is fit to run as a school. ³ The agency that collates the DISE data nationally from all the states is the National University of Educational Planning and Administration, NUEPA, in New Delhi. The inconsistencies in DISE data have often been highlighted (for one exemple, are NUEPA study by Benerghandow, 2015).

highlighted (for one example, see NUEPA study by Ramachandran, 2015).

⁴ For differences between private and aided schools, see Section 2 of Kingdon (2017).

⁵ One caveat with NSS data is that when householders fill this survey, some may not know whether the school their child attends is private aided or unaided, since this distinction is often not clear to a parent.

3. The size and growth of the private schooling sector in India

This section measures the size and growth of the private schooling sector in India, and charts the extent of abandonment of government schools and migration to private schools over time, in order to build up a fuller picture of the trends in private schooling utilisation in India.

It is useful first to consider the definition of 'private schools' in official DISE data. Published DISE tables typically divide all schools into two types: 'government' and 'private' schools. They inadvertently misestimate the extent of private schooling, for three reasons:

(i) DISE fails to cover all of the so-called 'unrecognised' private unaided schools, leading to a large under-estimation in the true size of the private school sector. Kingdon (2007) reported the findings of five studies from different parts of India to deduce that there were roughly as many unrecognised private schools in India as there were recognised ones⁶. Yet, DISE data report nil or few unrecognised schools in many states (see Table 3 in Kingdon, 2017) e.g. Chhattisgarh, Gujarat, Himachal, Jharkhand, Karnataka, Maharashtra, Rajasthan and Uttar Pradesh, thus missing out probably hundreds of thousands of unrecognised private schools.

(ii) In its published tables, DISE does not add even the few unrecognised private schools for which it collects data. Table 3 of Kingdon (2017) calculated by the author from raw DISE data, shows that the included unrecognised private schools constituted less than 2% of all elementary schools in the country in 2016-17; many DISE tables published by NUEPA exclude these schools from the 'private schools' category. This leads to another small underestimation of the true extent of private schooling in the country.

(iii) DISE lumps together aided and private unaided schools into a single category 'private', leading to an over-estimation of the true size of the private school sector. Aided schools are private virtually only in name, since their pupil fee levels and teacher salaries and emoluments are the same as in government schools, and since their teachers are paid directly by the government, and are recruited and appointed by the same body and via the same process as government school teachers. The separate classification of these two school types – aided and private – and separate presentation of data on them, is an important issue that needs serious thought by policy makers. Of course in raw DISE data, one can identify the private and aided schools separately.

In summary, published DISE data over-estimates the extent of private schooling in the country by including aided schools in the category of 'private schools', but seriously underestimates the extent of private schooling by excluding the unrecognised private schools.

For the purposes of this paper, and in contrast with published DISE reports, we use the term 'private school' to include only the unaided schools (both recognised and unrecognised) as these display the conventional defining features of 'private', i.e. schools that have autonomy

⁶ Muralidharan and Kremer (2006) found that in their national survey of 20 states, 51% of all private rural primary schools were unrecognized. Aggarwal (2000) found that in his four surveyed districts of Haryana in 1999, 41% of the 2120 surveyed schools were unrecognized. The PROBE survey of 1996 in 5 north Indian states did a complete census of all schools in 188 sample villages and found that 63% of the private schools were unrecognized. Mehta (2005) found that in 7 districts of Punjab, out of 3058 private elementary schools, 86% were unrecognized. For more evidence based on various data sources, see Kingdon (2007).

in teacher recruitment, dismissal, fixing teacher salary and fixing pupil fee levels, and our definition of 'private' excludes aided schools. Where we present data on government (public) schools, aided schools are again not taken into account, even though they are publicly funded and controlled.

Extent of private schooling (from NSS data 2014-15)

Table 1 shows the pattern of private school attendance in India in 2014-15. It shows that private schooling is about twice as widespread in urban as in rural areas. It shows strikingly that in urban areas, in the primary school age group (6-10 year olds), 49% or nearly half of all the children, attended private schools. In the upper primary age group (11-14 year olds), 40.7% attended private unaided schools, and in the secondary school age group, the percentage further shrank to 36.1%. This seems perverse from an equity point of view because the children of the poor are the most well represented in the primary school stage, and because it implies that many children who were willing and able to pay for their *primary* education (by attending private schools) end up going to free government or aided schools for their *upper primary and secondary* education.

Apart from wide rural-urban disparity seen in Table 1, there are also pronounced inter-state variations, as seen in Table 2. States with high prevalence of private schooling are Andhra, Haryana, Punjab, Rajasthan, Telengana and Uttar Pradesh, with Telengana being the highest private penetration state, where 62% of children attended private schools (though not shown in Table 2, the figures are 78% in urban and 45% in rural Telengana). The states with particularly low prevalence of private schooling are Assam, West Bengal, Maharashtra, Gujarat, Odisha and Bihar.

Change in private schooling, over time

How has the extent of private schooling changed over time? Here we use official DISE data to compare 2010-11 with 2016-17. Appendix Table 1 shows the number of (government and private) schools in both years, the absolute change in the number of schools, and the percentage change, by state, and for India as a whole. Appendix Table 2 shows the same information but for total student enrolment in government and private schools. For ease of understanding, Graph 1 shows the temporal *change* in the number of government and private schools, and Graph 2 shows the change in their total enrolment, based on the author's analysis of raw DISE data on 21 major states of India. These states between them constitute 97.01 percent of the total population of India, and could thus be seen to represent virtually the whole of India. Telengana (which split off from Andhra Pradesh in 2014) is included as part of Andhra Pradesh in order to maintain comparability between 2010 and 2016 – thus the number of states listed is 20, but they refer to 21 major states. For the sake of simplicity, when we talk about these 21 states, we simply refer to India.

Graph 1's inset box (based on Appendix Table 1) shows that, in the six year period 2010 to 2016, the total stock of government schools in India rose by a mere 8,337 government schools. By contrast the number of private schools rose nearly 12 times as much, by 96,416 schools. Despite the modest increase in the number of government schools, Graph 2 (based on Appendix Table 2) shows that total *enrolment* in government schools over this period actually fell by 18.3 million students (i.e. by 14.5%), whereas total enrolment in private schools rose by 17.1 million students (i.e. by 38.5%), over the same period.

In some states the growth of private schooling was very pronounced. In Graphs 1 and 2, Uttar Pradesh is an outlier, where the total stock of private schools rose by 42,874 over this short six-year period, and where private school enrolment rose by nearly 6.7 million students (or by 65.0%), and government school enrolment fell by 4 million students (or by 20.5%) in this short period. Thus the increase in private school enrolment in this single state constitutes 41% of the total increase in private schools in the country as a whole. Maharashtra, Rajasthan, Bihar, Haryana, Gujarat, Kerala and Karnataka together accounted for an increase in private school enrolment in government schools fell from 19.69 million to 15.66 million, and in private schools it rose from 10.28 million to 16.97 million, i.e. private school enrolment, between 2010 and 2016.

Graph 2 shows that in some states, the great decrease in government school enrolment is not matched by anywhere near a corresponding increase in private school enrolment, most notably in Madhya Pradesh, West Bengal, Andhra, etc. This is neither due to any increase in aided-school enrolment (which fell in all states) nor due to a fall in elementary-age child population in these states. It is either due to a large downward-adjustment in (previously) inflated government school enrolment numbers, or due to a big increase in enrolment in the *unrecognised* private unaided schools, which are not covered in DISE data. Equally, there are some states in which the apparent increase in private school enrolment is much larger than the observed decrease in government school enrolment, e.g. most notably Uttar Pradesh. This discrepancy is explained partly by an increase in the child population but probably largely due to government schools not reporting the actual fall in enrolment, i.e. reporting inflated enrolment. The Comptroller and Auditor General's report 2016-17 (CAG, 2017) estimates a 20% inflation in government elementary school enrolment in DISE.

Table 3 shows that the average size of government elementary schools in India fell from 122 students per school in 2010 to 103 students per school by 2016, a decline of 19 students per government school, or about 16% over the six year period. While the average size of private schools was significantly larger than government school size in 2010 the baseline year (202 instead of 122), this also fell from 202 to 194 students (by 4%) in the period, perhaps because the total stock of private schools rose strongly over the period, by around 96,000 private schools, and many of these came up in more sparsely populated rural areas.

In many states, the average size of government schools fell sharply. In Madhya Pradesh, it fell from an already low of 95 students in 2011 to only 66 students (or 8.3 pupils per class) in 2017, a reduction of 30%. In Uttar Pradesh, average government school size fell from 130 to a mere 97, a decline of 33 students per school (or 25%) in just 6 years. Other states with a heavy reduction in mean government school size were West Bengal, Maharashtra and Haryana. The average 'enrolment per government school' in the hilly states fell from an already low 49 in Himachal, 54 in Uttarakhand and 55 in Jammu-Kashmir, to 36, 41 and 41 respectively, in six years. An average size of 36 students per government school means an average of 4.5 students per class (for elementary schools, with classes 1 to 8) or 7 students per class (if it is primary schools with classes 1 to 5 only). Thus, the government schools in these three hilly states are both pedagogically and economically unviable.

Graph 1 shows that in some states, the rise in the number of private schools has resulted in the closure of government schools, e.g. Rajasthan, Andhra and Maharashtra, but that in others, e.g. to some extent in Madhya Pradesh but in a pronounced way in Uttar Pradesh, despite the dramatic increase in the number of private schools and despite the falling enrolments in government schools and despite the 25% reduction in mean government school size, the government has opened a lot more new government schools⁷. Indeed over the short six year period, if it were not for the 9967 new government schools established in Uttar Pradesh, the total stock of government schools in the country would have fallen by 1630 rather than rising by 8337!

Abandonment of government schools, migration to private schools

The shift towards private schools and the abandonment of government schools is also visible when we examine how the number of government schools that are 'small' or 'tiny' has grown over time.

We define a 'small' school as one in which total enrolment – in the school as a whole – is 50 or fewer students: this means 10 or fewer students per class in a primary school (which has classes only from grade 1 to 5), or it means 6 or fewer students per class, in an elementary school (classes from 1 to 8). We define a 'tiny' school as one in which total enrolment is 20 or fewer students, which means 4 or fewer students per class in a primary school or less than 3 students per class in an elementary school.

Table 4 illustrates the phenomenon of the abandonment and emptying of government schools by highlighting the rapid growth of government schools that have become 'small' and 'tiny'. It shows that in 2010, India had 313,169 small government schools, which constituted 30.2% of all government schools. By 2016, this number sharply increased to 417,193 small schools (40.0% of all government schools), signifying a rapid emptying of government schools in a six year period.

Correspondingly, the average number of pupils fell from 30.4 pupils in 2010 to 28.4 pupils per small government school in 2016. Pupil teacher ratio also fell from 15 to 12. The government's average teacher-salary-expense-per-pupil increased from Rs. 1,952 per pupil per month in 2010 to 3,138 pppm in 2014 and further to 3,972 pppm in 2016.

The number of 'tiny' government schools i.e. with a total enrolment of 20 or fewer students, also increased over time, from 71,189 in 2010, to 100,409 tiny government schools in 2014, and further to 116,307 tiny government schools in 2016. The average teacher-salary-expense-per-pupil in these tiny government schools rose from around Rs. 4,397 per pupil per month in 2010 to 6,111 pppm in 2014 and further to 7,774 pppm in 2016.

Older DISE data shows that in 2005-06, there were 60,033 tiny government schools (with \leq =20 pupils) and 231,989 small government schools (with \leq =50 pupils) in the same 21 major states, indicating that the emptying and decline of government schools is a long term trend. It also shows a great acceleration in the rate of emptying of government schools in the 6 years after 2010, compared to the five years before 2010. Graphs 3 and 4 show the emptying government schools phenomenon by state, for the period 2010-11 to 2016-17. They show that Madhya Pradesh and Andhra had the greatest abandonment of government schools.

⁷ Uttar Pradesh government is in 2019 trying to consolidate many primary and upper primary schools that run in the same one premises but which were historically bifurcated and designated as different schools in order to create new headmaster posts to benefit some politically-connected teachers. But its order to consolidate this has been legally challenged in the courts by the teacher unions.

The emptying of government schools is largely the result of an exodus of students from government schools and migration towards private schools, since there has been no drop in the child population. On the contrary, over just a part of the period under consideration, there has been a substantial increase of 4.3% in the absolute primary-school-age population of 6-10 year olds in India between 2009 and 2014 (IMRB Surveys 2009, 2014).

The drivers of the transition from government to private schools are not known with certainty. Some analysts have suggested the demand for an English-medium education as one factor, which is plausible since the labour market rewards English language skills with very substantial economic returns (Bedi 2020; Azam, et. al., 2013). Others suggest the reduction in poverty over time, which permits affordability and choice. A third potential driver may be a perception that private schools provide better quality education. The drivers may also differ across states somewhat. For instance, it has been suggested that in Uttar Pradesh, private school growth is driven importantly by the perceived low quality of the available government schools, whereas in some other states, e.g. Andhra Pradesh, the desire for an English medium education is an important driver, and this is reflected in Andhra's decision in late 2019 to convert all its government schools into English medium schools.

Implications of government to private transition for human capital formation

The observed large movements from government to private schools in India could impact human capital formation through multiple channels. While small(er) government schools could lead to greater prevalence of multi-grade teaching which is considered detrimental to learning, smaller class size could also improve learning. Further if it is the more talented students who move, weaker students may receive more attention from their teachers, though learn less from their peers. Moreover, learning levels would be affected if the quality of private schools is on average different to the quality of government schools.

The Annual Status of Education Report (ASER, various years), the only source of learning data that covers both private and public schools, shows that raw learning achievement levels are significantly higher in private schools. Econometric evidence on India⁸ shows that when home background is controlled for, the large raw learning-gap between private and public schools falls but, in most studies, it does not disappear: typically an achievement advantage of 0.10 to 0.35 standard deviations remains. This literature suggests that children's learning levels in private schools are no worse than, and in many studies better than, those in government schools. If so, the transition from government to private schools could raise learning attainment. However, if increased demand for private schools raises their class sizes (increases pupil-teacher-ratios) because, for instance, private school supply is constrained by government policy, then learning achievements could fall due to the movement from government to private schools.

⁸ The literature uses either simple regression analysis (Tooley and Dixon, 2005; Wadhwa, 2014), or use a variety of elaborate econometric techniques to correct for the problems of 'selectivity' and 'endogeneity', namely the problem that more able or more motivated students may self-select into private schools, techniques such as household fixed effects, village fixed effects, propensity score matching methods, panel data approach and randomised control trials. These studies are by Kingdon (1996), Desai et al (2008), Goyal (2009), French and Kingdon (2010), Chudgar and Quin (2012), Muralidharan and Sundararaman (2013), Singh (2015) and Azam et. al. (2016).

Table 1 Percentage of children studying in private unaided schools in India, by age and area, 2014-15

Age	Rural	Urban	Total		
6-10	20.8	48.9	31.8		
11-14	17.5	40.7	27.0		
15-18	24.5	36.1	29.6		
Total	20.8	42.1	29.6		

Source: Author's calculations from National Sample Survey (NSS) raw data, 71st Round, 2014-15. **Note**: ASER (2014) data show that 30% of rural 6-14 year olds attended private schools in rural India in 2014 which is higher than the numbers given here, but ASER included aided and unrecognised private schools while the above table is for purely recognised private schools.

State	Age 6-10	Age 11-14	Age 15-18	Total
ANDHRA PRADESH	47.9	35.4	60.2	47.8
ASSAM	8.7	9.1	9.4	9.0
BIHAR	20.7	16.8	16.3	18.2
CHHATTISGARH	23.2	22.7	21.0	22.4
DELHI	34.0	29.0	24.3	29.4
GUJARAT	14.9	13.1	18.4	15.4
HARYANA	57.6	48.0	47.1	51.2
HIMACHAL PRADESH	39.0	25.9	21.4	28.7
JAMMU & KASHMIR	49.6	40.1	20.0	37.1
JHARKHAND	20.8	23.4	27.7	23.5
KARNATAKA	26.3	22.4	25.1	24.6
KERALA	41.3	26.0	29.3	32.0
MADHYA PRADESH	31.7	28.5	32.9	31.0
MAHARASHTRA	16.3	11.1	11.8	13.1
NORTHEAST STATES*	25.2	22.4	22.8	23.6
ODISHA	14.6	10.1	25.0	15.8
PUNJAB	49.9	45.3	37.7	44.4
RAJASTHAN	50.5	51.2	51.0	50.9
TAMIL NADU	44.5	26.7	40.2	37.0
TELENGANA	64.1	55.8	65.9	62.0
UTTAR PRADESH	48.2	48.5	44.5	47.2
UTTARANCHAL	32.7	31.6	26.6	30.6
WEST BENGAL	13.1	7.2	10.1	10.2
India Total	31.8	27.0	29.6	29.6

Table 2Percentage of children in private unaided schools, by state, 2014-15

Source: Author's calculations from the raw data of the NSS, 71st Round, 2014-15.

Notes: *The average of Northeast states; these are Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura.





Table 3
Average enrolment per school,
In Government and Private schools, by state (2010-11 to 2016-17)

		Governme	ent schools			Private	schools	
	2010-11	2016-17	Change	% change	2010-11	2016-17	Change	% change
Andhra Pradesh*	78	71	-7	-9.0	185	192	7	3.8
Assam	92	83	-9	-9.8	76	90	14	18.4
Bihar	287	281	-6	-2.1	284	172	-112	-39.4
Chhattisgarh	82	71	-11	-13.4	166	180	14	8.4
Gujarat	176	167	-9	-5.1	315	314	-1	-0.3
Haryana	140	109	-31	-22.1	235	272	37	15.7
Himachal Pradesh	49	36	-13	-26.5	124	141	17	13.7
Jammu-Kashmir	55	41	-14	-25.5	160	138	-22	-13.8
Jharkhand	138	109	-29	-21.0	315	198	-117	-37.1
Karnataka	99	88	-11	-11.1	227	230	3	1.3
Kerala	217	175	-42	-19.4	414	312	-102	-24.6
Madhya Pradesh	95	66	-29	-30.5	195	168	-27	-13.8
Maharashtra	108	85	-23	-21.3	249	257	8	3.2
Odisha	99	85	-14	-14.1	138	169	31	22.5
Punjab	107	98	-9	-8.4	162	228	66	40.7
Rajasthan	92	91	-1	-1.1	177	160	-17	-9.6
Tamil Nadu	118	109	-9	-7.6	306	282	-24	-7.8
Uttar Pradesh	130	97	-33	-25.4	245	200	-45	-18.4
Uttaranchal	54	41	-13	-24.1	128	159	31	24.2
West Bengal	170	127	-43	-25.3	132	107	-25	-18.9
India (21 states)	122	103	-19	-15.6	202	194	-8	-4.0

Source: DISE raw data, from <u>www.dise.in</u>

Note: *Andhra Pradesh here includes Telengana for 2016-17, in order to permit comparison with 2010-11. Thus reduction in government school enrolment in Andhra Pradesh by 2016-17 here is not due to the removal of Telengana. The increase in private school enrolments does not exactly mirror the decrease in government school enrolment because children may also shift to unrecognised private unaided or to aided schools and because the child population of elementary school age increased/decreased in many states. Over the 6 year period 2010-2016, average size of government schools fell by 16%; the average size of private schools fell by 4%, reflecting the large increase in the number of private schools.

 Table 4

 The emptying of government schools: Change over time in the number of 'small' and 'tiny' government schools

Total number of pupils in the school as a whole:	Number of Schools	Percentage of total govt. schools	Number of Teachers	Total Enrolment	Average pupils per school	Pupil teacher ratio	Teacher Salary Expenditure (Rs. Crore)	Govt. Annual Per-pupil Salary Exp. (Rupees)	Govt. Monthly Per-pupil salary Exp. (Rupees)
<u>2010-11</u>									
Zero	4,435	0.43	14,304	0	0	0	503		
5 or Less	8,675	0.84	21,277	15,333	1.8	0.7	748	4,88,101	40,675
10 or Less	21,008	2.03	42,843	1,18,166	5.6	2.8	1,507	1,27,530	10,628
20 or Less	71,189	6.87	1,38,033	9,20,254	12.9	6.7	4,855	52,760	4,397
50 or Less	3,13,169	30.24	6,33,323	95,10,902	30.4	15.0	22,277	23,422	1,952
All govt. schools	10,35,602	100.00							
<u>2016-17</u>									
Zero	6,714	0.64	11,791	0	0.0		677		
5 or Less	14,991	1.44	26,043	29,638	2.0	1.1	1,495	5,04,256	42,021
10 or Less	36,365	3.48	68,586	2,04,421	5.6	3.0	3,936	1,92,539	16,045
20 or Less	1,16,307	11.14	2,38,213	14,65,423	12.6	6.2	13,670	93,285	7,774
50 or Less	4,17,193	40.00	9,85,051	1,18,59,775	28.4	12.0	56,529	47,664	3,972
All govt. schools	10,43,939	100.00							

Source: www.statereportcards/rawdata/201011 Data analysed here is for 21 major states (counting Telengana as a separate state).

Note: Data on government school teachers' salary for 2014-15 is from Ramachandran (2015) and included as Table 8 here, where mean government primary school teacher salary (averaged across new and experienced teachers) was 40,623 per month. For 2016-17/2010-11, it has been inflated/deflated by 8.5%, assuming a salary inflation rate of 8.5% per annum (based on salary escalation in Uttar Pradesh, see Annex Table 2 in Kingdon (2017). Thus, mean primary teacher salary is taken as Rs. 29,312 in 2010-11 and 47,822 in 2016-17. Note that some of the small and tiny schools are middle/junior schools, and their teachers earn salaries that are about 30% higher than primary school teachers' salaries (see Table 8), but we have assumed that all the schools are 'primary' and thus taken only primary teacher salary rates to calculate the per pupil salary expenditure. However, we assume that all teachers are regular and not para teachers.





4. Fee levels of private schools

What are the fee levels of private unaided schools, and is it possible to benchmark them as 'high' or 'low'? While there is no official data collected from private schools on fee levels, fortunately the questionnaire of the 71^{st} Round National Sample Survey (NSS) of 2014-15 included – in its Section 6 – detailed questions on education expenditure on each individual person aged 5-29 years old in the sample households. The variable we take as the measure of school fee is named in the survey as: "Course fee (including tuition fee, examination fee, development fee and other compulsory payments)". The survey also asks separately for expenditure on "books, stationery and uniform", on "transport", and on "private coaching", which we have not taken into account, as we were interested in isolating only the course fee including all compulsory payments that parents *pay to the school* as fee.

To find out the fee levels of private schools, we took the sub-set of children who report studying in private unaided schools and are aged between 6 and 14 years old, the elementary school age group. The mean and median 'total course fee' in private unaided schools, computed from the NSS data, are presented in Table 5, but before turning to that, it is worth noting how this total course fee is distributed.

Although the kernel densities are not shown here for space reasons, total fee is log-normally distributed, with a pronounced rightward skew, rather than normally distributed with the standard Gaussian bell-shape. When a quantity is log-normally distributed, the median is a better measure of central tendency than the mean since it down-weights the undue importance of the few very high values, i.e., it does not permit undue influence of the extremely high fee levels of the few children who study in the very high-fee elite schools. Hence in Table 5, although we present both private unaided schools' mean and median fee levels, it is preferable to focus on the median fee levels.

Table 5 shows that median private unaided school fee level in urban India was Rs. 500 pm and in rural India Rs. 275 pm. Taking all India (rural and urban), the median fee was Rs. 417 per month (or Rs. 5000 per annum).

However, there is a great deal of inter-state variation in private school fee levels. For example, from Rs. 117 pm in rural Uttar Pradesh to Rs. 692 pm (six times higher) in rural Punjab; or from Rs. 250 pm in urban UP to Rs. 1800 pm (seven times higher), in urban Delhi.

		Mean		Median			
State	Rural	Urban	Total	Rural	Urban	Total	
Andhra Pradesh	595	858	783	500	708	667	
Assam	459	754	622	354	475	417	
Bihar	539	560	553	300	392	350	
Chhattisgarh	181	738	639	167	417	358	
Delhi	800	2098	2017	667	1800	1563	
Gujarat	602	709	688	333	475	450	
Haryana	786	1118	1010	667	708	700	
Himachal Pradesh	709	800	738	520	700	558	
Jammu & Kashmir	408	624	522	333	467	417	
Jharkhand	473	671	617	208	567	446	
Karnataka	662	1011	926	583	750	683	
Kerala	736	897	833	642	745	700	
Madhya Pradesh	355	548	485	250	375	308	
Maharashtra	775	1133	1053	563	750	667	
Northeast States*	513	714	616	361	599	507	
Orissa	299	632	503	250	417	333	
Punjab	824	919	882	692	600	658	
Rajasthan	413	632	535	333	417	375	
Tamil Nadu	1006	1022	1016	885	900	900	
Telengana	681	902	838	583	708	667	
Uttar Pradesh	189	525	342	117	250	150	
Uttarakhand	704	792	768	333	650	600	
West Bengal	381	1384	1124	192	1000	596	
Total (weighted mean)	450	801	663	292	542	417	

Table 5Mean and Median Monthly Fee Level in Private Unaided Schools
for Children Aged 6-14, by state, 2014-15

Notes: *The average of the Northeast states; these are Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura.

Source: The author's own calculations on raw data from the National Sample Survey (71st Round).

State	<=Rs.100 per month	<=Rs. 200 per month	<=Rs. 500 per month	<=Rs. 750 per month	<=Rs.1000 per month	<=Rs 1500 per month	<=Rs 2000 per month	<=Rs 2500 per month	Govt. RTE reimburse- ment amount (Rs. per month)	% pupils whose fee level is < RTE reimbursement amount
Andhra Pradesh	2.2	5.6	38.9	61.1	73.5	91.7	96.6	98.2		
Assam	5.7	15.7	58.5	74.8	87.4	93.7	95.6	98.1		
Bihar	7.4	21.8	68.4	76.4	85.9	93.1	95.6	96.4	465.0	86.2
Chhattisgarh	9.1	30.0	60.5	69.5	75.5	81.4	84.1	90.0		
Delhi	3.4	5.5	14.3	26.5	34.9	49.2	59.7	69.3	2225.0	61.8
Gujarat	4.9	21.8	61.2	74.2	85.8	90.5	93.2	96.3		
Haryana	1.6	5.1	36.6	56.4	68.6	85.9	92.2	95.1		
Himachal Pradesh	2.0	6.1	46.7	66.5	78.2	90.4	97.5	99.0	1593.0	91.9
Jammu & Kashmir	3.1	12.1	71.1	85.9	92.5	96.9	98.5	99.3		
Jharkhand	9.2	24.5	55.0	70.9	82.3	95.0	98.9	99.3		
Karnataka	3.4	9.9	38.5	53.7	70.7	81.8	89.7	94.7	1333.0	79.4
Kerala	1.7	4.6	31.7	54.6	73.5	90.6	96.3	97.5		
Madhya Pradesh	9.9	27.7	70.7	81.4	90.1	95.7	97.3	98.7		
Maharashtra	7.6	13.7	42.4	54.0	66.9	79.9	85.5	90.2	1444.0	78.1
Northeast States*	4.1	10.5	51.1	79.8	92.5	96.9	97.7	98.0	2288.0	94.7
Orissa	12.2	30.4	69.2	85.7	90.3	94.9	96.6	97.0		
Punjab	2.7	7.9	40.8	57.6	71.4	84.9	90.3	95.2		
Rajasthan	3.9	18.0	68.5	80.6	88.6	93.8	96.1	97.9	1252.0	92.4
Tamil Nadu	0.7	2.4	20.8	40.5	59.8	83.4	92.7	96.7	2351.0	95.7
Telengana	1.0	3.6	30.5	58.5	78.0	92.3	95.2	97.6		
Uttar Pradesh	32.7	61.2	83.2	88.2	91.5	95.2	96.5	97.4	450.0	80.8
Uttarakhand	2.4	14.2	43.8	62.7	81.7	87.0	92.3	98.2	1380.0	85.8
West Bengal	11.7	27.4	46.3	54.9	62.0	75.1	83.7	88.6		
India Total	11.4	25.1	57.3	71.4	81.5	90.7	94.2	96.4		

Table 6% of 6-14 year old Private Unaided School attendees who pay fee below given thresholds, by state, 2014-15

Source: for Fee information, National Sample Survey data. Note: Table 5 defines Northeast States.

	Private s anı (201	school fee, nual 4-15)	State per capita GDP (2014-15)	Ratio of private school fee to State GDPPer pup expenditu (PPE) in G funded sch (2014-15)		PPE in private schools as a % of PPE in govt. funded schools	% private schools whose fee is lower than Govt funded schools' PPE	Minimum Daily wage 2014 (for MNREGA rural workers)	Annual Private sch median fee as a % of the annual minimum wage*	% rural pvt school pupils whose <u>monthly</u> fee is < Minimum <u>Daily</u> wage
	Mean (a)	Median (b)	(c)	(d) = (a/c)*100	(e)	(f) = (b/e)*100	(g)	(h)	(i)	(j)
Andhra Pradesh	9398	8000	90517	10.4	14087	56.8	81.1	169	15.8	7.3
Assam	7470	5000	49480	15.1				167	10.0	15.5
Bihar	6633	4200	36143	18.4	5298	79.3	62.6	158	8.9	12.8
Chhattisgarh	7667	4300	64442	11.9	16151	26.6	85.7	157	9.1	36.2
Delhi	24198	18750	251267	9.6						
Gujarat	8260	5400	122658	6.7	17106	31.6	89.8	167	10.8	14.1
Haryana	12119	8400	148563	8.2	27163	30.9	94.2	236	11.9	4.3
Himachal Pradesh	8859	6700	101542	8.7	39343	17.0	99.5			
Jharkhand	7406	5350	52589	14.1	8020	66.7	65.2	158	11.3	33.8
Karnataka	11112	8200	93703	11.9	16914	48.5	81.1	191	14.3	20.2
Kerala	9990	8400	117713	8.5	19419	43.3	91.5	212	13.2	5.3
Madhya Pradesh	5823	3700	59770	9.7	11927	31.0	86.8	157	7.9	21.6
Maharashtra	12630	8000	125833	10.0	14712	54.4	71.1	168	15.9	15.8
Odisha	6032	4000	59229	10.2	9367	42.7	86.7	164	8.1	34.0
Punjab	10589	7900	101529	10.4	9142	86.4	58.8	200	13.2	5.3
Rajasthan	6416	4500	71537	9.0	19391	23.2	95.2	163	9.2	11.4
Tamil Nadu	12197	10800	128366	9.5	14229	75.9	70.0	167	21.6	1.6
Uttar Pradesh	4104	1800	40373	10.2	13102	13.7	92.9	156	3.8	66.8
Uttaranchal	9219	7200	115632	8.0	26236	27.4	95.3	156	15.4	8.9
West Bengal	13482	7150	78903	17.1	7001	102.1	48.3	169	14.1	42.9
India (Weighted Mean)	7671	5000	83285	9.2	11523	47.4	79.4	172.2	10.2	26.5

 Table 7

 Benchmarking private schools' fee levels against (1) state per capita income, (2) Government funded schools' PPE, and (3) Minimum wages

Source: For columns (a) and (b), NSS data; for column (c) state per capita income (PCI), see http://pib.nic.in/newsite/PrintRelease.aspx?relid=123563. For a few states, the 2014-15 state PCI was not available so it has been extrapolated from the previous two years' trend growth rate. For Column (e), Dongre and Kapur (2016)'s PPE in Government & Aided schools. For column (g), Ministry of Rural Development eands.dacnet.nic.in/Graphs.xlsx (accessed 1.11.2016). *We assume 300 days of work a year.

Benchmarking private school fee levels

Is the private unaided schools' fee observed in Table 5 low or high? First, we examine in Table 6 what percentage of private-school students pay fee below given threshold levels. It shows that in states such as Bihar, Madhya Pradesh, Rajasthan, Uttar Pradesh and Orissa, about 70 to 85 per cent of children studying in private unaided elementary schools are paying fee of less than Rs. 500 per month (about UK pounds 5.50 pm or US dollars 7.20 pm). Only a minority (15% - 30%) of private school attendees pay fees above Rs. 500 pm.

Benchmarking with respect to state per capita income

One way of benchmarking the size of the private school fee is to see its ratio with respect to the *state per capita income*. Here, since government reports mean (rather than median) per capita income, we use the *mean* private school fee level rather than the median. Column (d) in Table 7 shows that nationally, private schools' mean fee is around 9.2% of the state per capita income.

Benchmarking with respect to the per pupil expenditure in government schools

A second way of benchmarking whether private school fee level in a state is 'high' or 'low', is to compare it with the state's per pupil expenditure (PPE) in the government school system. Column (e) of Table 7 shows the estimates of PPE in the government schools in the different states of India estimated by Dongre and Kapur (2016). Column (f) shows the private unaided schools' median fee levels as a percentage of the PPE in the government funded school system, statewise and for India as a whole⁹. It shows that in India as a whole, private schools fee is just under half of the government schools' per-student-expenditure. However, the true figure could be much lower. This is because Dongre and Kapur's (2016) calculations of government PPE appear to be much lower than the true government PPE¹⁰. If so, private schools' fee would be a much smaller proportion of the per-pupil-expenditure in government schools than the 47% shown in column (f) in Table 7.

Column (g) in Table 7 shows that in a large number of states, more than 90% of private school students paid fees lower than the estimated PPE in the government funded schools. Overall just under 80% of the private-school-going children study in those private schools where the fee is below the government schools' PPE. This proportion is likely to be even higher since the government schools' PPE is larger than that shown in Dongre and Kapur (2016).

Benchmarking with respect to the minimum wage of daily wage labourers

A third way of benchmarking private school fee is to see to what extent the poorest paid workers can afford private school fee. The last three columns of Table 7 attempt to do that.

⁹ The weighted average across the states for which the PPE data is available. The estimate of government PPE on education includes government expenditure on books and uniforms, but our private school's PPE (proxied by the school's fee) does not include expenditure on books and uniforms. However, the PPE estimates for public schools presented here are likely to be under-estimates of the true PPE of public schools (see next note).

¹⁰ Government of Tamil Nadu's own estimate notified in GOTN (2017) shows the government's PPE to be just over Rs. 28,000 in 2016-17, i.e. about double of Rs. 14,229 in Dongre & Kapur's (2016) for Tamil Nadu. Similarly, Table 4 in Kingdon and Muzammil (2018) estimate Uttar Pradesh government schools' PPE to be Rs. 18,180 in 2014-15, and Bose, et. al. (2017) estimates it as Rs. 18,348 for UP in 2015-16, both higher than the Rs. 13,102 in Dongre & Kapur (2016). For a more detailed analysis, see Annex 1 of Kingdon (2017).

Srivastava (2013) suggests that a useful way of defining 'low fee' schools is schools where the monthly fee is equal to one day's wage of the daily wage labourers, one of the lowest paid worker groups, who get the minimum daily wage as announced annually by the Ministry of Rural Development. Column (h) of Table 7 shows the officially mandated minimum daily wage of April 2014 for each state. We take it that daily wagers work 300 days a year and thus predict the annual wage for daily-wagers. Expressing the median annual private school fee as a percentage of this annual minimum wage in column (i) shows that, on average, private schools' median annual fee is around 10.2% of the annual minimum wage of daily wagers. Uttar Pradesh is an outlier, in that private school annual fee is only 3.8% of the annual earning of daily-wagers in the state, suggesting that even very poor people can access private schooling in Uttar Pradesh, and this is consistent with the high utilisation of private schooling there.

Another variant for benchmarking is to ask: for what percentage of rural private school pupils is their actual *monthly* fee below the *daily* minimum wage of their state. Column (j) shows that, on average, 26% of rural private school pupils' *monthly* fee is below their state's *daily* minimum wage. While UP is again an outlier (with 67% rural private school pupils' monthly fee being below the minimum daily wage of UP in 2014), in states such as West Bengal, Orissa, Jharkhand and Chattisgarh, the proportion is higher than one-third; it suggests that one third or more of the private schools in these states are 'low fee' schools by this definition, i.e. schools that educate the poorest children.

In summary, the above evidence is surprising and at odds with popular perceptions, as it shows that a good proportion of private schooling caters to the very poor. The evidence suggests that most private schools in India can be considered "low fee" in the sense that their fee is below the government schools' PPE.

5. Teacher salaries in private schools

The major factor behind the lower unit-cost of producing education in private than public schools – and thus behind the 'low' fee of a large proportion of private schools – is the much lower teacher salaries of private schools compared with government schools. Unfortunately, there is no systematic documentation or evidence collected by any agency nationally on individual teacher salaries, either for government or private schools. One has to rely on the few sporadic small-scale surveys and studies from individual states. However, fortunately, the National University of Educational Planning and Administration (NUEPA) carried out a two year study of government school teachers across nine Indian states in 2014-15, in collaboration with the State Councils of Educational Research and Training (SCERTs) of these nine states, in which they also collected information on teacher salaries in government school teachers' salaries. For evidence on private school teachers' salaries, we turn to individual small-scale studies of 2014 from two districts of Punjab (CCS, 2014) and also extrapolate to 2014 from a 2008 survey of five districts each of Uttar Pradesh and Bihar (SchoolTELLS, 2009).

Firstly, in the first four columns of Table 8 we show evidence on teacher salaries in government schools across 6 Indian states reported in Ramachandran (2015). She reports the take-home salary levels of three types of teachers: newly appointed teachers, teachers with 15 years' work experience and teachers with 25 years' experience, at the primary and secondary

levels. These are shown in Graph 5. For simplification, in Table 8 we take only the salary of a teacher with 15 years' experience as representing the *average* salary of teachers in government schools. The teachers of junior/upper-primary – classes 6, 7 and 8 – are paid salaries equal to secondary school teachers in India, thus the salary shown for secondary teachers is also the salary-level of the upper-primary teachers. These salaries do not reflect the other pecuniary benefits that teachers in government schools enjoy, such as pension and gratuity at the time of retirement.

We present two ways of benchmarking whether this government school salary level is high or low: one is to compare government teacher salaries with teacher salaries in the private school sector, and the other is to compare government salaries with the 'state per capita income' (PCI) of the respective states (shown in column (e) of Table 8), and then see whether that ratio (of mean teacher salary to PCI), which is shown in the last cell of Table 8, is higher than in other comparator countries.

Benchmarking salary against state per capita income

Columns (f) and (g) of Table 8 shows that government primary school teacher salary is, on average, about 7 times (and government upper-primary teacher salary is about 9 times) the per capita income of the respective states. To simplify, one could say that in India government elementary school teachers' salary is – on average – around 8 times the country's per capita income. Table 9 (reproduced from Dreze and Sen, 2013) confirms that this ratio of 8 is very much higher than in China, Pakistan, Indonesia, Bangladesh etc. where the ratio is typically between 1 and 2. In other words, when seen in relation to the various countries' respective per capita incomes, government school teachers in India are 4 to 8 times higher paid than teachers in the other shown countries, a striking finding!

Benchmarking salary against private school teachers' salary

Table 10 presents the meagre evidence on private school teachers' salaries available from various parts of India in different years. In Kansal's study of Delhi schools in the late 1980s, the average salary of private school teachers was 47% of the average salary of government school teachers, i.e. just under half. In the early 1990s, it was also similar, between around 40-49% in Delhi, Madhya Pradesh, Tamil Nadu and Uttar Pradesh. By the early 2000s however, in Uttar Pradesh and in (21 states of) India, the ratio of private to government teachers' salary had fallen to 20%, i.e. private school teachers were paid, on average, only one-fifth the pay levels of government school teachers. This was largely the result of the implementation of the Fifth Pay Commission recommendations, which greatly raised the bureaucratically-set teacher salaries in government-funded schools. Kingdon and Banerji found that by 2008, private school teacher salaries constituted only 8% of government school regular teachers' salaries, in Bihar and Uttar Pradesh.

After implementation of the Sixth Pay Commission's recommendations in 2009, government school teachers' salaries roughly doubled in one go (see Kingdon, 2010) and, again, private school teachers' market-determined salaries saw only incremental change. Thus, by 2014, Antony & Chaudhury (2014) report that in rural Punjab, mean private school teacher salary was Rs. 1925 per month and we know from Ramachandran (2015) – as reported in Table 8 – that average government primary school teacher salary in rural Punjab in 2014 was Rs. 59,654 per month, i.e. private school teachers pay was only about 3.2% of government school teachers' pay !

The reason private schools can pay a small fraction of the government school salaries is that, whereas government teachers' pay is a bureaucratically-set high 'minimum wage', which may also be influenced by political pulls and pressures and teacher union lobbying, private schools generally pay their teachers the market-determined wage i.e. the wage level determined by the demand and supply of educated persons in the labour market. The Indian labour market is characterised by an excess supply of graduates, with a 10.5 per cent graduate unemployment rate; this means that many unemployed graduates are willing to take teaching jobs at low salaries in private schools, and private schools take advantage of this low marketclearing wage.

Table 8

state per capita GDP, 2014-15 **Primarv** Junior Govt. Primary school Govt. Junior school teacher teacher State salary as a salary as a Take home Take home Take home Take home Domestic multiple of multiple of Product salary salary salary salary state per State state per per month per annum per month per annum per capita capita capita (2014-15)**July 2014** July 2014 July 2014 July 2014 income income (f) = b / e(g) = d / e(a) (b) (c) (d) (e) Tamil Nadu 28.660 343.920 48.750 585.000 128.366 2.7 337,776 3.3 Karnataka 28,148 37,298 447,576 101,594 Jharkhand 41,520 498,240 706,104 52,147 9.6 13.5 58,842 319,908 5.4 Odisha 26,659 37,806 453,672 59,229

4.6

4.4

7.7

14.2

8.1

8.7

11.8

7.2

6.7

Government primary school teachers' mean salary as a multiple of

Source: For teacher salary data, Table 6.3 in Vimala Ramachandran, 2015, NUEPA. We have taken teacher salary after 15 years' experience as the 'mean teacher salary'. For state per capita SDP of 2014-15, see Ministry of Statistics and Programme Implementation, http://statisticstimes.com/economy/gdp-capita-of-indian-states.php

572,592

809,760

40,373

99,578

47,716

67,480

Uttar Pradesh

Simple mean

Punjab

39,683

59,654

476,196

715,848

Estimates of primary-school teacher salaries as a multiple of per capita GDP									
Country / state	Reference year	Estimated ratio of	teacher salary to:						
		Per capita GDP	Per capita SDP						
OECD average	2009	1.2							
Asian countries									
China	2000	0.9							
Indonesia	2009	0.5							
Japan	2009	1.5							
Bangladesh	2012	~1.0							
Pakistan	2012	~1.9							
India									
Nine Indian states	2004-5	3.0	4.9						
Uttar Pradesh	2006	6.4	15.4						
Bihar	2012	5.9	17.5						
Chhattisgarh	2012	4.6	7.2						

Table 9

Source: Table 5.4 in Chapter 5 of Dreze, Jean and Amartya Sen (2013) "An Uncertain Glory: India and its Contradictions". Allen Lane, London.



 Table 10

 Teacher salary in private unaided (PUA) schools as a percentage of teacher salary in government and aided schools, various years

Study	Region	No. of private school teachers sampled	Private pay as a proportion of govt. teacher pay	Govt. school teacher pay as multiple of private pay	Private school pay as a % of aided schools' salary
Jain (1988)	Baroda district, Gujarat	NA	0.47	2.1	-
Kansal (1990)	City of New Delhi	233	0.39	2.6	39
Govinda & Varghese (1993)	5 districts of Madhya Pradesh	111	0.49	2.0	66
Bashir (1994)	Many districts of Tamil Nadu	419	0.47	2.1	50
Kingdon (1994)	Lucknow district, Uttar Pradesh	182	0.42	2.4	43
Singh & Sridhar (2002)	2 districts of Uttar Pradesh	467	0.2	5.0	-
Muralidharan & Kremer (2006)	20 states of India	NA	0.2	5.0	-
Kingdon & Banerji (2008)	11 districts of Bihar & UP (Jan. 2008)	734	0.08	12.5	-
Goyal and Pandey (2009)	12 districts of Madhya Pradesh & Uttar Pradesh (data Jan. 2007)	1103	0.08	12.5	
Antony & Chaudhury (2014)	2 districts (Barnala & Mansa) of Punjab	612	0.03	33.3	-

Source: Jain (1988); Kansal (1990); Govinda & Varghese (1993); Kingdon (1994); Bashir (1994); Singh & Sridhar (2002); Muralidharan and Kremer (2008); Goyal and Pandey (2010); Kingdon & Banerji (2008); Antony & Chaudhuri (2014).

6. Conclusions

This paper has sought to bring together evidence on Indian private schools in one convenient place. It has some surprising and some policy-relevant findings.

The data show a rapid migration of students towards private schools, and an emptying of government schools which has rendered a high proportion of the latter economically unviable, with very high 'per pupil expenditures'. Perhaps in response to this, several state governments have been closing down government schools: three states (Rajasthan, Maharashtra and Chhattisgarh) alone reportedly closed down nearly 24,000 government schools in 2015-16. The abandonment of government schools is a longer term trend visible in DISE data from 2005, yet education policy and legislation has historically ignored this trend. For example, section 6 of the RTE Act 2009 legally obligates States to create more government schools – i.e. more of the kind of schools that the public has been deserting. An important policy lesson therefore is that decision-takers must take evidence into account before making education policy or legislation.

The paper discovered that a major reason for the rapid growth of private schools is their affordability. It showed that the vast bulk of private schools in India are 'low' fee schools, when benchmarked against the state per capita income, against the government's per pupil expenditure on its own schools, and even to some extent against daily wagers' incomes. This evidence discredits the belief that much of private schooling in India is high-fee, elite and non-inclusive. It is significant because perceptions about the nature of private schools have important implications for the making of policy towards private schools. It is useful if policy on how to utilise, support and regulate private schools can take into account these realities, to avoid unintended counterproductive effects such as the closure of the low-fee private schools many of which may be successfully imparting learning but which lack the resources to fulfil the infrastructure and other conditions of government recognition.

The third major finding is that private schools are able to run on low fee or low per-studentcost compared to government schools mainly because their teacher salaries are low due to India's high graduate unemployment rate of 10.5%; these salaries are a small fraction of the salaries in government schools which are very high not only in relation to private schools but also compared with those in other countries.

It is hoped that this paper will assist in the formulation of more evidence-based education policy and legislation in India, rather than policy that may be formulated on hunch, ideology or expediency.

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		Government	schools		Private schools				
	2010-11	2016-17	change	% change	2010-11	2016-17	change	% change	
Andhra Pradesh*	79,314	73,674	-5,640	-7.1	24,823	26,185	1,362	5.5	
Assam	44,371	50,165	5,794	13.1	13,144	12,066	-1,078	-8.2	
Bihar	67,930	71,615	3,685	5.4	1,423	9,143	7,720	542.5	
Chhattisgarh	46,390	44,421	-1,969	-4.2	4,552	6,380	1,828	40.2	
Gujarat	33,531	33,834	303	0.9	6,405	9,987	3,582	55.9	
Haryana	14,955	14,446	-509	-3.4	5,549	8,070	2,521	45.4	
Himachal Pr.	15,126	15,489	363	2.4	2,285	2,707	422	18.5	
Jammu Kashmir	22,180	23,348	1,168	5.3	4,915	5,366	451	9.2	
Jharkhand	40,517	39,335	-1,182	-2.9	2,949	6,231	3,282	111.3	
Karnataka	46,522	45,003	-1,519	-3.3	10,259	13,885	3,626	35.3	
Kerala	4,958	4,851	-107	-2.2	906	4,752	3,846	424.5	
Madhya Pradesh	111,943	114,326	2,383	2.1	23,710	28,373	4,663	19.7	
Maharashtra	68,691	66,946	-1,745	-2.5	9,775	16,383	6,608	67.6	
Odisha	57,171	57,760	589	1.0	4,347	6,154	1,807	41.6	
Punjab	20,238	20,524	286	1.4	10,139	7,728	-2,411	-23.8	
Rajasthan	77,529	67,930	-9,599	-12.4	26,760	37,506	10,746	40.2	
Tamil Nadu	36,120	38,299	2,179	6.0	10,622	11,301	679	6.4	
Uttar Pradesh	151,448	161,415	9,967	6.6	41,961	84,835	42,874	102.2	
Uttaranchal	17,345	17,514	169	1.0	4,823	5,598	775	16.1	
West Bengal	79,323	83,044	3,721	4.7	10,227	13,340	3,113	30.4	
India (21 states)	1,035,602	1,043,939	8,337	0.8	219,574	315,990	96,416	43.9	

Appendix Table 1 Change in the number of Government and Private elementary schools, by state (2010-11 to 2016-17)

Source: DISE raw data, from <u>www.dise.in</u>

Note: *Andhra Pradesh here includes Telengana, even in 2016-17 (after it became a separate state), in order to permit comparison with 2010-11. Thus the reduction in the number of government schools in Andhra Pradesh by 2016-17 here is not due to the removal of Telengana.

		Government	t schools			Private s	chools	
	2010-11	2016-17	change	% change	2010-11	2016-17	change	% change
Andhra Pradesh*	6,186,492	5,167,974	-1,018,518	-16.5	4,592,255	4,934,540	342,285	7.5
Assam	4,082,132	4,163,695	81,563	2.0	998,944	1,085,940	86,996	8.7
Bihar	19,495,910	20,123,815	627,905	3.2	404,132	1,572,596	1,168,464	289.1
Chhattisgarh	3,808,619	3,153,891	-654,728	-17.2	755,632	1,148,400	392,768	52.0
Gujarat	5,901,456	5,650,278	-251,178	-4.3	2,017,575	3,135,918	1,118,343	55.4
Haryana	2,093,700	1,574,614	-519,086	-24.8	1,304,015	2,195,040	891,025	68.3
Himachal Pradesh	745,712	557,604	-188,108	-25.2	284,026	381,687	97,661	34.4
Jammu-Kashmir	1,213,246	957,268	-255,978	-21.1	786,400	740,508	-45,892	-5.8
Jharkhand	5,591,346	4,287,515	-1,303,831	-23.3	928,935	1,233,738	304,803	32.8
Karnataka	4,624,287	3,960,264	-664,023	-14.4	2,328,793	3,193,550	864,757	37.1
Kerala	1,075,886	848,925	-226,961	-21.1	375,084	1,482,624	1,107,540	295.3
Madhya Pradesh	10,634,585	7,545,516	-3,089,069	-29.0	4,623,450	4,766,664	143,214	3.1
Maharashtra	7,418,628	5,690,410	-1,728,218	-23.3	2,433,975	4,210,431	1,776,456	73.0
Odisha	5,659,929	4,909,600	-750,329	-13.3	599,886	1,040,026	440,140	73.4
Punjab	2,165,466	2,011,352	-154,114	-7.1	1,642,518	1,761,984	119,466	7.3
Rajasthan	7,132,668	6,181,630	-951,038	-13.3	4,736,520	6,000,960	1,264,440	26.7
Tamil Nadu	4,262,160	4,174,591	-87,569	-2.1	3,250,332	3,186,882	-63,450	-2.0
Uttar Pradesh	19,688,240	15,657,255	-4,030,985	-20.5	10,280,445	16,967,000	6,686,555	65.0
Uttaranchal	936,630	718,074	-218,556	-23.3	617,344	890,082	272,738	44.2
West Bengal	13,484,910	10,546,588	-2,938,322	-21.8	1,349,964	1,427,380	77,416	5.7
India (21 states)	126,202,002	107,880,859	-18,321,143	-14.5	44,310,225	61,355,950	17,045,725	38.5

Appendix Table 2 Total enrolment in government and in private elementary schools, by state and year

Source: DISE raw data, from <u>www.dise.in</u>

Note: *Andhra Pradesh here includes Telengana for 2016-17, to permit comparison with 2010-11. The increase in private school enrolments does not exactly mirror the decrease in govt. school enrolment because children may also shift to unrecognised private unaided or to aided schools and because the child population of elementary school age increased/decreased in many states