Exit at the Bottom of the Pyramid: Empirical Explorations in the Context of Elementary Schooling in Delhi

No. 306
27-May-2020
Sukanya Bose, Priyanta Ghosh and Arvind Sardana

National Institute of Public Finance and Policy
New Delhi

Exit at the Bottom of the Pyramid: Empirical Explorations in the Context of Elementary Schooling in Delhi♣

Sukanya Bose, Priyanta Ghosh and Arvind Sardana*

Abstract

The framework of exit and voice, a la Hirschman, is applied to understand the social phenomenon of exit at the bottom of the pyramid. As the dominant groups vote with their feet, the low fee private school (LFPS) is perceived to be offering parents from disadvantaged groups "school choice". We attempt to establish the size of the LFPS sector, information about which is central to educational planning, regulation and implementation, but invisible in the official database. A methodology based on macro-survey data is formulated and then applied to Delhi that has a substantial underbelly of LFPSs. We find that the estimated size of the LFPS sector accounts for nearly half the share of the overall children attending private schools at the elementary level.

Policy recommendation suggests concrete steps toward expansion of public schools through public investment estimated at 0.3-0.4% of GSDP of Delhi, and upgradation of the existing facilities towards well functional benchmarks as per the RTE design so as to provide a credible alternative to the LFPS sector.

Keywords: Low Fee Private School, Affordability, Exit, Voice, RTE, Elementary Education, Education Policy.

JEL Classification Codes: I21, I24, I28, H75

♣ This study is funded through Azim Premji University's research grant. A preliminary version of the paper has been presented at the CESI conference in Jammu.

* Sukanya Bose (sukanya.bose@nipfp.org.in) and Priyanta Ghosh (priyanta.ghosh@nipfp.org.in) are with National Institute of Public Finance and Policy, New Delhi. Arvind Sardana (arvindewas@gmail.com) is associated with Eklavya, Madhya Pradesh.

1. Introduction

In August 2015, the Allahabad High Court passed an order directing all the government officials and elected representatives to send their children to primary schools run by the State education board. Noting the pathetic condition of the existing government schools (GS), the court argued that there is no real involvement of the administration in these schools. Government officials send their children to schools having better infrastructure and other facilities and not in common man's Schools. The public administration therefore has no actual indulgence to see functioning and requirements of these schools. A greater accountability could be ensured by aligning the stakes of the public functionaries in primary schools run by Uttar Pradesh (UP) state education board.[1]

The Court order – which went largely unnoticed - takes us back to a classic work by Hirschman (1970) on exit and voice. Hirschman had looked at the responses to the decline in quality through the lens of *exit and voice*. A parent dissatisfied with the quality of a school shifts to another uses the market to defend his welfare or to improve his position. The economist thinks of *exit* as the best available option. The problem with exit as the tool of recuperation especially in the school context is the crucial point in Hirschman's analysis. As the most "quality-education-conscious" parents pull their children out and put them in private schools, their exit will result in loss of voice that would likely have a much greater negative impact. Voice, particularly in the Indian context, is deeply embedded in the social structure. Class, caste, gender, religion, education define the social reality within which voice is exercised. With the better-off families voting with their feet and opting for private education, much less parental pressure is left for improvement of the GSs. It weakens the voice of those who are left within the public schooling system and only makes the system less responsive. In this and similar fields (connoisseur goods), Hirschman had clearly suggested a "tight monopoly could be preferable", preventing parents from moving. This would be better for the school by keeping an active "voice" among the parents.

This paper uses the broad framework of exit and voice to explore the contemporary trends in exit from the GSs and understand it as a socio-economic phenomenon. Exit is explored in terms of the categories of class and social groups using all-India data (Section 2). Where are the children exiting to? The perceived non-functionality of the GSs and limited access has found a market response in low fee private schools (LFPS), that have emerged as close substitute. Section 3 reviews the existing literature on LFPS. How large is the LFPS sector? Systematic database for the sector is non-existent. This is one of the main gaps that the paper attempts to fill. A methodology based on the actual behaviour of low-income households is formulated (Section 4), and applied to Delhi (Section 5). A case study based on select interviews of parents in a low-income locality of Delhi unpacks the different layers of exit in a schooling system marked by social inequality and differentiation (Section 6). The

[1] Refer to Justice Sudhir Aggarwal's judgement http://onelawstreet.com/wp-content/uploads/2015/08/allhc-school-govt2015.pdf .

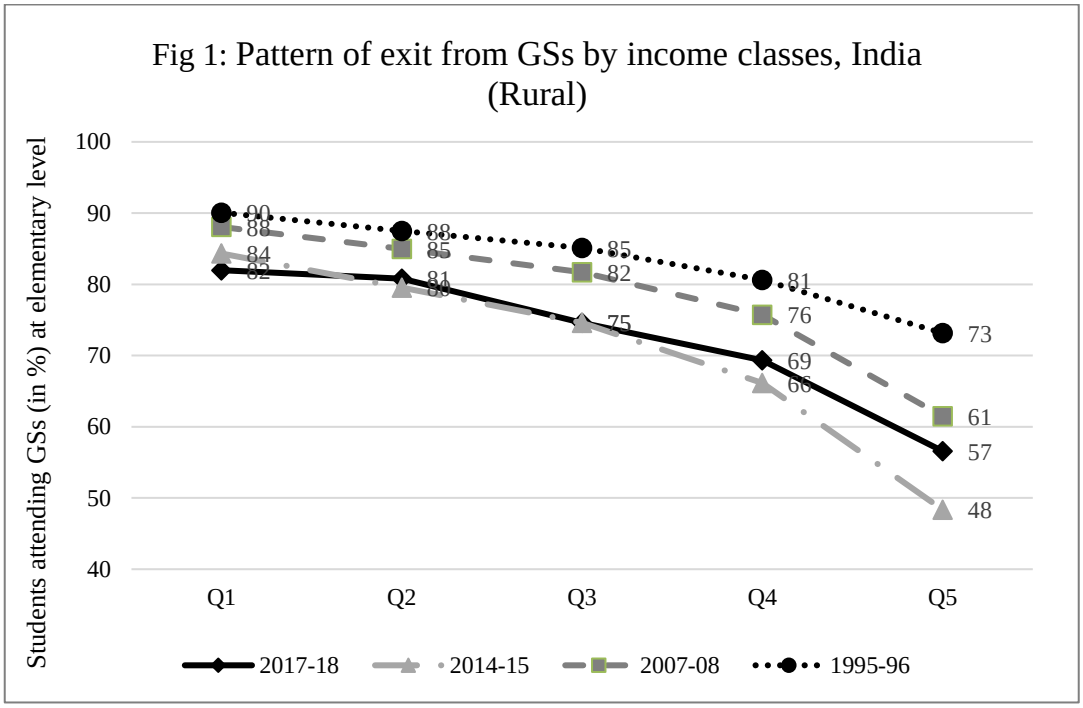
necessary public policy actions, with a focus on public investment, are discussed (Section 7) followed by conclusion.

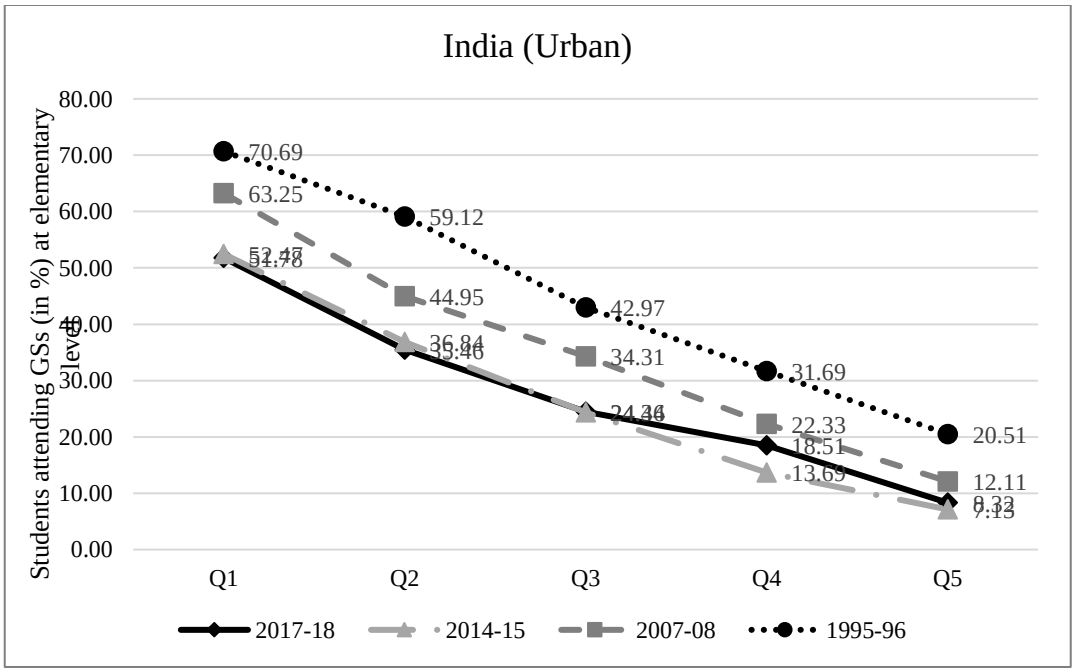
2. Patterns of Exit and Rising Inequality

With increased demand for schooling and considerable expansion of the GS system across the country, the access to GSs has increased manifold. The hitherto excluded masses now find school education within their reach. But with the expansion of the system and inclusion of children from disadvantaged backgrounds, and as the deficiencies of the GS system have grown, the privileged sections have decided to `exit' the GS system in favour of private schools. This in turn has propelled an all-round exit as the following surveys reveal.

Fig 1 plots the proportion of children in GSs at the elementary level in each income class (defined in terms of five consumption quintiles) across four National Sample Survey (NSS) rounds on educational participation in India. Each line corresponds to a particular time point, whereas the different quintiles are represented along the line. The downward movement of the curve over the years indicates the extent of exit. For rural India, the share of children in GSs for quintiles 4 and 5 have declined by 12 and 16 percentage, respectively, between 1995-6 and 2017-18. Further, as the dominant classes exit the GSs, the lowest quintiles have followed suit. Still, more than 80% of the children attending school from the lowest income groups are in GSs. In urban India, the decline in participation of the two lowest quintiles in GSs is sharper. From about 71% of elementary age children in quintile 1 attending GSs in 1995-6, the share has fallen to 52% (19 percentage point decline) in the latest round. For quintile 2, the decline is again a significant 14% over the comparable period. In the urban context, participation of the top quintiles in GSs has fallen to negligible levels as the Allahabad High Court judgement observed.[2]

[2]The 2017-18 round data on school attendance indicates a small reversal of exit and a relative shift towards the GSs in the top quintiles in rural India. ASER (2018) had reported a trend towards plateauing of growth in private school enrolment beyond 2014. The all-India trends mask different movements across different states, so what one observes is the net effect. The reversal of exit, if it is an enduring trend rather than a temporary blip, indicates that the state sector may be making a comeback. In the recent years, a variety of policies have been tried to attract children back to GSs. English medium instruction including semi-English models have been introduced by several states. Recruitment of teachers, though still far short of norms, has restored a semblance of functionality in government schools. School consolidation, despite having some serious flaws and negative implications for equity, has perhaps served as a positive signal for the image of government schools. Governments have leaned towards model schools and residential complexes (not a new phenomenon though) that would typically attract the rural elite. Simultaneously, disillusionment with the promise of better quality by the private schools, could be a factor explaining the trend. Disaggregated trends and correlation with state policy would be necessary for a conclusive argument. Notice that the reversal of exit is not seen for the bottom quintile groups, either in rural or urban India.



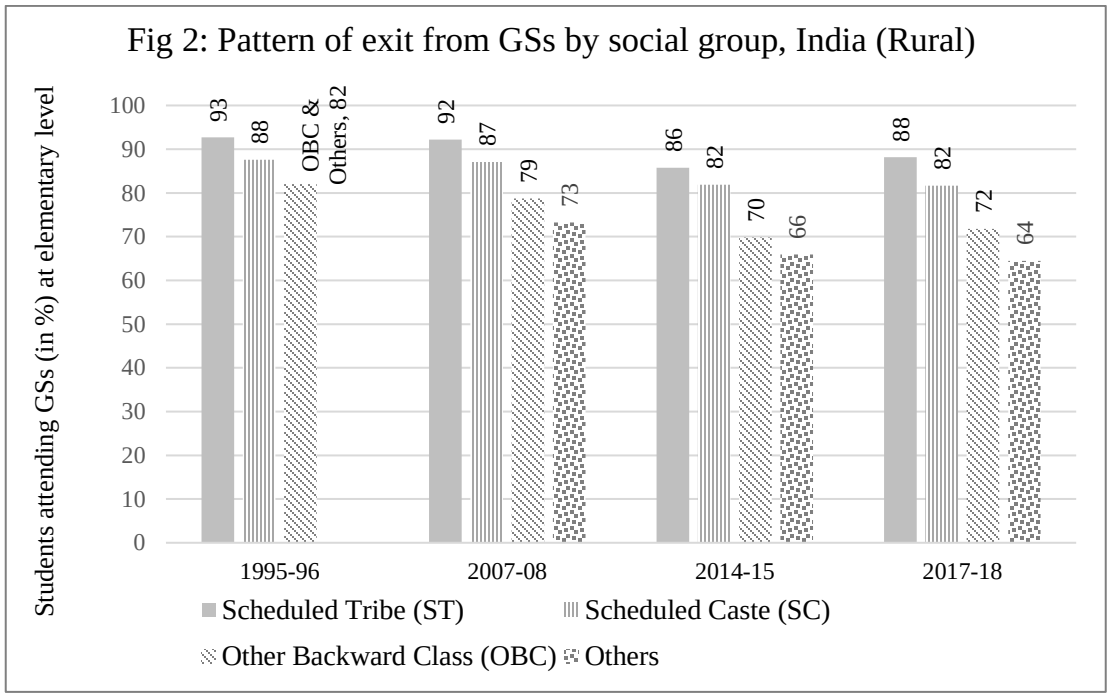


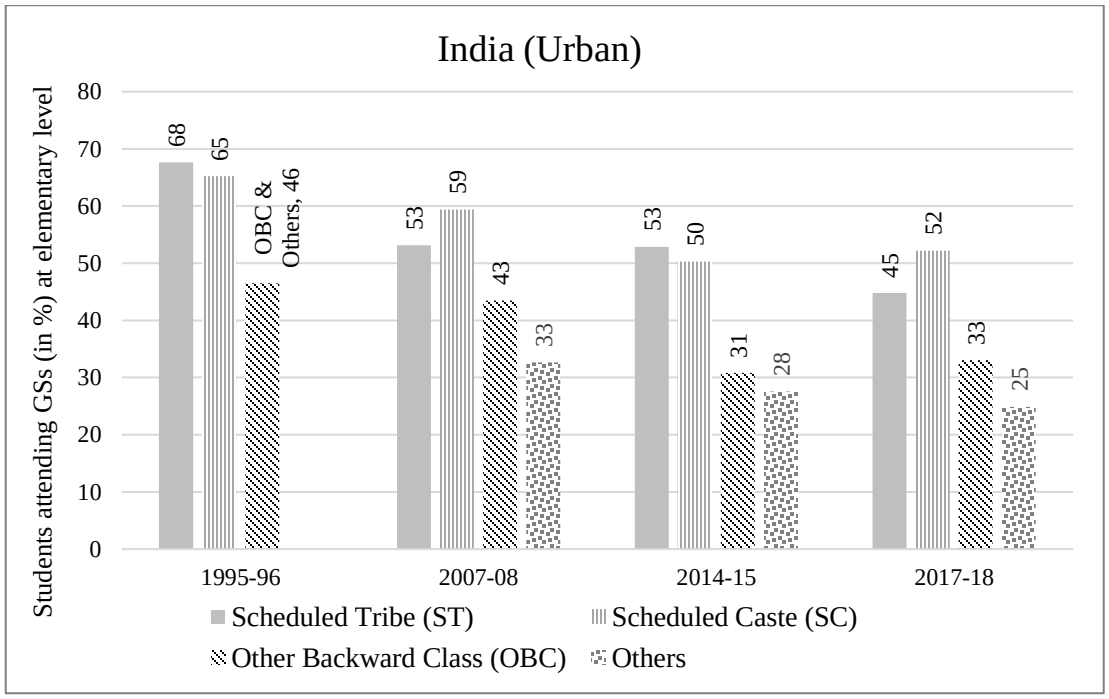
Source: Own calculation based on NSS

Note: To maintain expenditure parity between the states, per capita expenditure of the households in each state is weighted by the ratio of all-India average per capita expenditure to the average per capita expenditure of the respective state. The income quintiles are drawn based on the weighted per capita household expenditure.

A similar pattern of exit is observed for social groups vis-à-vis participation in GSs (Fig 2). GSs are seeing an overrepresentation of poor and marginalised communities as a result. Social scientists have used the term social streaming to

describe the pattern of school choice. There is a clear streaming of students into public and private educational institutions depending on their economic status and location in the social hierarchy (Majumdar, 2004). The rising inequality and reproduction of pre-existing social in equalities, at the lowest elementary level, is of deep concern from the equity and social justice perspective.





Source: Same as Fig 1.

What is more, the dominance of the exit strategy has produced very negative outcomes for those who appear to be trapped in a GS. The social environment categorises those remaining at GSs as unfortunate and hapless. For groups who are forced to remain in the public system, the participation in schools is new and they are unequally placed in the social hierarchy in relation to teachers & administrators. There has been an overall erosion of voice in public schools leading to further neglect of these schools, and still further pressures for exit. *Exit begets exit.*

3. Exit at the Bottom of the Pyramid

A key feature of the elementary education in India post-2000 is the rapid spread of LFPSs. These are schools that are projected as responding to the growing demand of low-income families for good quality private education. Typically, these schools are run at a low cost with minimum infrastructure and resources. It is the flexibility in costs and the unregulated nature of their functioning that allows these schools to charge a low fee, even while maintaining a profit margin.

Notably, there is little conclusive evidence on the "better quality" of these schools. The quality question in the context of LFPS is focused exclusively on school effectiveness rather than a holistic perspective integrating rights, social justice and equity. But even in that limited frame, the evidence shows quality of LFPS and GSs are not significantly different. Tooley's work (Tooley et al., 2007; Tooley and Dixon, 2007; Tooley et al., 2010) has consistently found LFPSs outperforming GSs, while a number of studies present a more complex picture. Karopady's (2014) findings based on a 5-year large scale longitudinal survey indicates no significant difference in test scores between GSs and LFPSs by the time of primary completion, though initially the LFPS scores are better. The author argues that overall learning levels is at a very low level, for both GS and LFPS. Pratham (2010) based on ASER, 2009 large scale survey of rural-India shows that once characteristics other than the type of school are controlled for, the learning differential across state run and private schools fell very substantially, and even reversed for some subjects and regions. The resources in LFPSs and GSs also present mixed results. On some attributes such as building infrastructure, playground, teacher qualifications and trainings, the GSs generally perform better. Pupil-teacher ratio (PTR) is more favourable in case of LFPS and there is greater surveillance of teachers which reflects in high teacher activity. Whereas GSs suffered from teacher absenteeism and non-teaching duties of teachers is greater, a large section of the teachers in the LFPSs have not received teacher training and do not meet the necessary standards for teacher qualifications (Härmä, 2009). Thus, it would be hard to say that LFPSs is a school offering an educational advantage to its pupils; neither the GSs nor the LFPSs meet benchmarks of acceptable quality. Competition has not produced an improved product. The presence of a number of competing schools, however, fosters the perpetual illusion that an escape from defectiveness is possible through purchase of the competitor's product (Hirschman, 1970).

In most cases, the parental choice for LFPSs is based on "common perception" of superiority of private rather than an understanding of its quality per se (Ohara, 2012). Where quality cannot be ascertained and there is asymmetric information, herd behaviour is natural. What others are doing influences ones' choice. One may doubt the quality of the alternative available, but there is no way to know about it in a tangible manner since the failure at school is generally blamed on the child. Furthermore, a range of sociocultural factors interface with mobility strategies and mediate parental decision-making on schooling for their children (Nambissan, 2012). The aspiration associated with English medium instruction drives the demand for LFPSs to a significant extent in India, since GSs do not offer English medium instructions generally. Parents know that the alternative is not the absolute best, but it is all that they can afford.

In several contexts, LFPSs perform the function of enhancing the provision of schools where the state-run institutions are absent, and that explains significant part of the demand. This is peculiar to developing countries, where the public coverage for universal enrolment is incomplete. Public schools are non-existent in many outlying areas in urban settlements and, particularly, in the slum clusters where the working poor live. This is demand stemming from families who would have preferred to enter the free public-school system but are crowded out due to limited public spending in their neighbourhood (Baird, 2009; Oketch et al, 2010). Following James (1993), this may be called 'excess demand' for private schooling. This is to be distinguished from the "differentiated demand" for private education which typically arises from wealthier segments of the society for more differentiated and exclusive schooling options.

Despite its label of low-fee or affordable private schools, most research shows that the presumed affordability is overstated. The costs of LFPS schools set a constraint on who can access it. The most disadvantaged socio-economic groups are excluded. The 25% free seats in private schools for disadvantaged sections under the Right to Education Act, 2009 (RTE) has been accessed by the more advantaged amongst this group, and the latter incur substantial expenditure on other expenditure related to schooling (Srivastava and Noronha, 2016). Poor households often have to take loans from friends, schools, sell assets to pay private school fees for their children (Akyeampong and Rolleston, 2013).

On the supply side, LFPS model is in extricably linked to two conditions, the first one being the availability of low-cost labour in abundance and the informal status of the workforce. Informal employment has been a growing feature of the economy, nationally and globally. In India, it accounts for more than 90% of the workforce. While informal employment is large and heterogenous category, lack of social and legal protection is what defines the status of informal workers. Teachers in LFPSs are generally employed without written contracts, with very little paid leave and negligible social security benefits. All the studies on LFPSs concur that these schools could only keep their fees at comparatively lower rates by paying low teachers' salaries and by their overwhelming use of female teachers because of their positioning as the cheapest source of labour.

The second condition associated with the emergence of LFPS is the deregulation of the official norms for schooling. In India, fee paying private schools have existed in the urban situation for a long time; the LFPS emerged rapidly as the state norms controlling this market were deregulated. From strict norms for opening a school it came to a situation where classes conducted in two to three rooms were given recognition as schools. De et al. (2002) note that at primary level little investment is needed and regulations are easily flouted. Their study of private schools for less privileged brings out the failure of regulatory mechanism of recognition norms to ensure a minimum acceptable norm of quality schooling, while norms have been diluted to an almost poverty line level.

The emergence and rise of the LFPS sector can thus be traced to a set of factors on the demand side, the supply side in combination with state policy.

4. Size of LFPS Sector: Methodology and Data for Estimation

Macro-level estimates of the LFPS sector are difficult to obtain as a large number of LFPSs are officially unrecognised. Since District Information System for Education (DISE), the official database on schools, has a self-reporting format, unrecognised schools neither report, nor are accounted in this database. Research on LFPS has thus been based on micro studies of schools in specific geographies and communities. In addition, most researchers have framed their own definition of LFPS since there is no official definition. In the context of rural Uttar Pradesh, Srivastava (2013) operationalised the LFPS as those targeting disadvantaged groups; that were entirely self-financing through fees; that were independently run; and that charged a monthly tuition fees not exceeding about one day's earning of a daily wage labourer at primary and upper primary levels and two day's earnings at secondary and higher secondary levels. Stern and Heyneman (2013) defined LFPS as schools charging tuition fees that were less than 50% of the minimum wage.

Our point of departure is in using the NSS's educational round data. Household level information on the structure of the school fees and other expenditure is tapped to estimate the size of the LFPS sector. A limitation of the NSS data is lack of detailed information on the schools attended, its amenities, motivation of promoters of the schools, etc. Also, NSS being an all-India survey, one sample household represents a substantially large population. On the positive side, estimates based on the scientifically designed NSS surveys are representative of the population. It can generate macro-estimates and take us a step closer to generalisation.

LFPSs are a market response to demand for schooling from the economically weaker sections or low-income households. In this study, the low-income households are defined as the bottom two quintiles (Q1 and Q2). By studying the behaviour of households vis-à-vis the course fee (CF) paid at school, we attempt to provide an operating benchmark of CF in the LFPS sector and to estimate the overall size of the LFPS sector.

After categorizing sample households quintile-wise based on monthly per capita consumption expenditure (MPCE), distribution of CF for children attending private schools in the first two quintiles in the elementary grades (Grades 1-8) is drawn. *Benchmark CF* captures the CF paid for a particular child by the representative household opting for private schools from the bottom two quintiles. Representative behaviour can be understood by examining the mode of the CF distribution. Modal CF is considered as the benchmark CF as it is the CF paid for the maximum number of children in the group compared to any other CF.

To estimate the *size of the LFPS sector*, the cut-off CF for LFPS has to be decided from the overall distribution of CF for private schools. In other words, it is the upper-limit of CF for LFPS. There will be a range of CF for the LFPS sector as the sector is differentiated. This is particularly true of urban centres that have large overall market size and various sub-markets with slight differentiation in facilities and prices. In rural areas, where market size is typically not large, LFPS sector is expected to be more homogenous. To identify the cut-off CF for LFPS, dispersion in CF distribution for children attending private schools from the two lowest quintiles is thus examined. The attempt is to identify the various clusters/concentrations of CF and delineate these from less dense segment of the distribution. For the purpose, CF distribution is transformed into the cumulative distribution of course fee (CDCF) for children attending private schools in the two lowest quintiles. The slope of CDCF measures the corresponding (additional) number of children who attend private schools for a certain increment in CF. A relatively steep slope of CDCF signifies higher clustering around the particular CF level compared to where the slope is less steep. The cutoff CF corresponds to a kink point in the CDCF curve. Beyond that point only a few can pay even a marginal increase in CF.

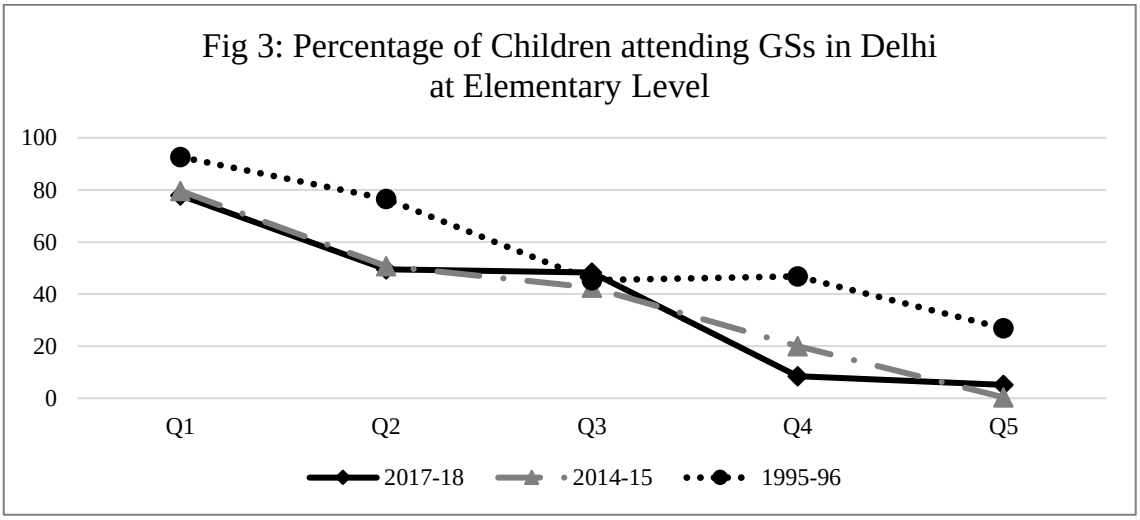
The cut-off CF is, hence, decided endogenously based on the observed characteristics of the CF distribution. Majority coverage is implicit and can be ascertained through the CDCF for children attending private schools in Q1 and Q2. The cut-off CF has been corroborated through another method (using average absolute distance) discussed in Appendix 1. Having identified the cut-off CF for LFPS, the cumulative distribution of CF across quintiles provides the percentage of children attending LFPSs as a share of children attending private schools. It gives us an estimate of the size of the LFPS sector.

The method outlined above is applied to NSS household level data, across two rounds 2014-15 and 2017-18. Estimation is done for Delhi, an urban city state with the second highest per capita income in the country and a massive population of 16.8 million people (Census, 2011). Delhi has a large underbelly of unrecognised private schools. There is no official database of unrecognised schools operating in Delhi. One can find widely varying estimates from independent sources. Social Jurist, a Delhi based NGO, claimed that there were as many as 10,000 unrecognised schools in the year 2004, where about 6 lakhs children were studying(Social Jurist v. GNCT & Ors.,2008). A list of 1593unrecognised schools was prepared in 2008 by the administration following a

High Court order. According to another estimate by association of Delhi private schools, there are about 3,000 unrecognised schools in Delhi.[3]

5. Results

Delhi's pattern of exit is similar to what we noted for all-India, except that Delhi still retains a relatively larger segment of children (compared to all-India, urban) in GSs in Q1, Q2 and Q3 (Fig 3). The overall percentage of children attending GSs was 68% in 1995-6 in Delhi. This number dropped to 51% in 2014-15 (DISE). In 2014-15, 81% of children attending GSs belonged to the two lowest quintiles of households in Delhi, reflecting the deep-rooted phenomenon of social streaming.



Source: Same as Fig 1

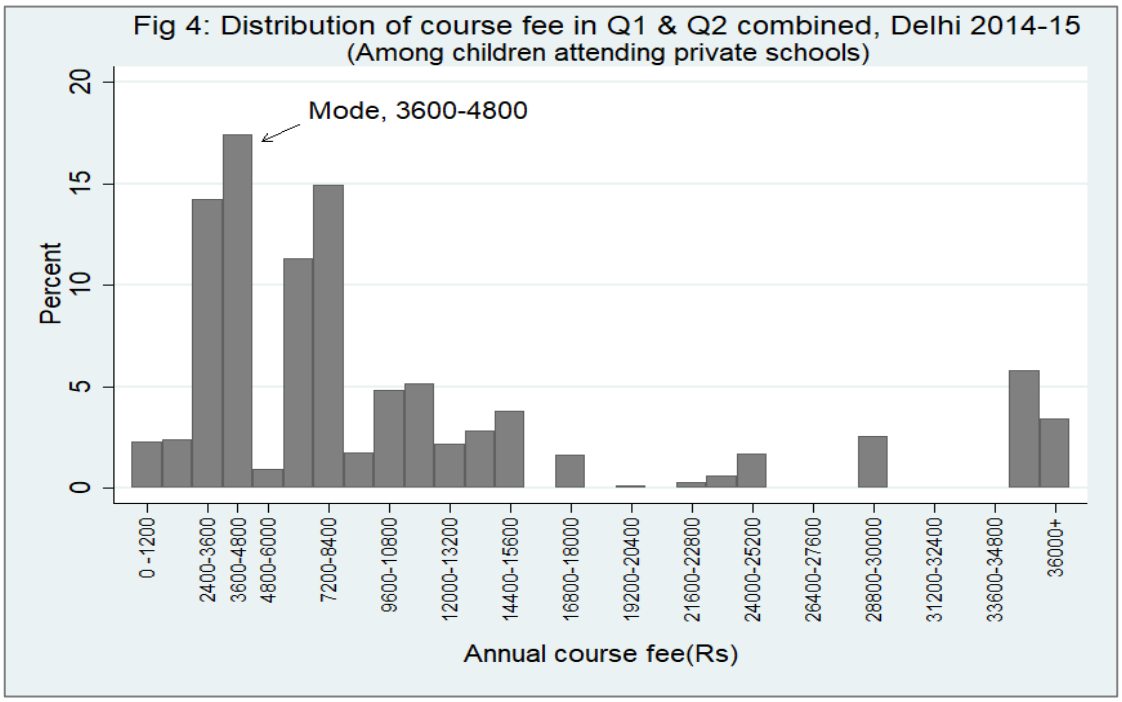
The phenomenon of exit in Delhi has to be seen against the overall supply shortages in public schooling. The expanding and bustling metropolitan centre has witnessed increased demand for schooling both in quantity and quality; in contrast, the expansion of public schools has not measured up. Based on available data (DISE), the average annual growth of GSs and aided schools was stagnant and even negative between 2006-7 and 2017-18, the period for which consistent data is available. Private schools grew at the rate of 7.8% over the same period, though change in recognition status from unrecognised to recognised accounts for part of the increase. The share of GSs in total schools fell from 63% in 2006-7 to 49% in 2017-18. When the unrecognised sector is fully accounted for, the share of GSs would be smaller. We will return to the issue of supply in section 7.

Benchmark Course Fee for LFPS

Fig 4 plots the distribution of CF in Q1 and Q2 for children attending private schools in Delhi in 2014-15. One can see that even within the two lowest income

[3] Financial Express, 17th October 2019

quintiles, there is substantial variation in the CF.[4] However, clustering can be seen clearly at the lower end, indicating a positively skewed distribution. The mode of the distribution is the CF range Rs3600-4800 per annum or a monthly CF of Rs300-400. We label the CF interval Rs3600-4800 as the benchmark CFs for LFPS in Delhi for 2014-15. The mode constitutes 18% of the children from Q1-Q2 attending private schools.



Note: The course fee interval is drawn such that the width of the interval is Rs 100 per month.

Interestingly, the estimates of our benchmark CF broadly concur with the operational definition of LFPS proposed by Srivastava (2013) in the context of rural UP where the monthly fee charged by the LFPS is equal to one day's wage of a daily wage worker. In 2014-15, the daily wage worker would be earning about Rs350-400 a day in Delhi.

Identifying the Cut-off course fee

CF distribution in Fig 4 shows that CF is clustered at the lower end of the distribution while it spreads out at the higher end. Distinguishing between clustered and the spread segment of the distribution, we estimate the cut-off point for LFPS. Fig 5 plots the cumulative distribution of course fee (CDCF) for children attending private schools from Q1 and Q2. The slope of CDCF measures the additional number of children who attend private schools for a certain increment in CF. The payment of additional CF involves a trade-off. It allows households to buy education service, perceived to deliver better schooling for their children, but at the cost of reduced opportunity to spend on non-educational items. In Fig 5, we ignore the kink point in the CDCF curve close to the

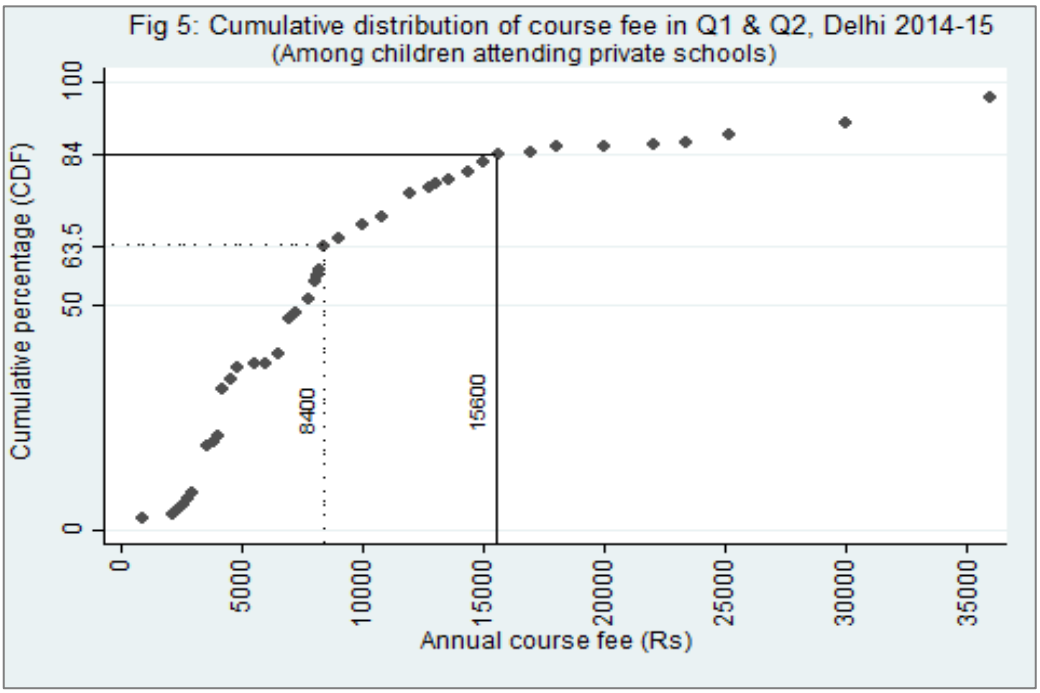
[4]All the CF are annual CF, unless mentioned otherwise.

benchmark CF as one is looking to establish an upper limit, two distinct kinks points can be identified. There is a kink point observed at CF Rs8400 after which the slope of the curve begins to flatten. The second kink point is at CF Rs15600 beyond which the curve flattens out with no further sharp change in the slope of CDCF (see Appendix 1).

The kink points help define the cut-off point and delineate two distinct segments in LFPS.

1. Using the kink-point at CF Rs8400, we label the range of schools charging CF up to Rs8400 as LFPS (Basic). These represent private schools accessed by most children from the low-income groups. CDCF indicates that majority, 63.5% of those children who are attending private schools from bottom two quintiles are in LFPS (basic).

2. In the urban context of Delhi, product differentiation by the market has also created another clear segment with CF between Rs8400 and CF Rs15600 wherein another 21% children attending private schools from Q1 and Q2 are being schooled. These are schools with slightly better facilities, perhaps more "activities", some might even have a recognized status. We count these as LFPSs but put a different label, LFPS (Standard). While majority of the LFPSs are charging CF Rs8400 or less, there is a small but significant proportion of LFPS that are charging higher CF and still attracting a segment of Q2, in particular. As we shall see later, this segment of LFPS has become stronger in 2017-18.



Finally, mapping the cut-off course fee so identified on to the CDCF for children attending private schools for all quintile groups, we estimate the size of LFPS sector. In Delhi, 30% of students in private schools are estimated to go to LFPS (Basic) with CF

Rs8400 or less annually. Including the LFPS (Standard) the share goes up to 47.4% in 2014-15. It clearly establishes the significant presence of LFPS sector in Delhi.

A word of caution is necessary here. The estimation of size based on large-scale survey data is indicative and cannot be a substitute for information obtained from detailed Census of schools. In the absence of a complete enumeration, however, the method gives us a heuristic device to study the LFPS phenomenon more concretely and use it to inform public policy. One shortcoming of using NSS data relates to the inseparability of charitable schools (not receiving government aid) from the rest of the LFPSs that are run as self-financing individual/family run models. LFPS size might be overestimated to that extent. In the context of Delhi, we know the size of the charitable sector is not very significant and several charitable schools for weaker sections integrated with formal schools, or else closed down, after the implementation of the RTE. The extent of overestimation might therefore be small. Finally, we would like to point out that the size is crucially dependent on the choice of the cut-off CF. The attempt has been to identify the cut-off using an objective criterion and to allow the data to speak, which also means allowing its complexity and admitting some amount of tentativeness in estimates through the two cut-off points.

Hierarchies of Schooling

Table 1 presents summary profile of the household in each of the five quintile groups, their schooling choices, median CF paid and the median education expenditure ratio/burden of private education for a child.

Table 1: Schooling profile of Households by Quintile, 2014-15

			Q1	Q2	Q3	Q4	Q5	All
1	Monthly Per Capita Consumption Expenditure Range (in Rs)		333.3-2250	2251-3000	3001-4000	4001-5500	5501-13750	333.3-13750
	Students attending in %	LFPS (Basic)	9.7	14.4	10.0	6.1	1.1	9.2
2		LFPS (Standard)	0.6	9.8	4.6	8.9	11.1	5.2
		Non-LFPS	1.8	6.2	22.8	37.0	50.4	16.1
		Govt. (including aided) schools	87.9	69.6	62.6	48.0	37.4	69.5
3	Median course fee per year (in Rs)*		4200	9000	19000	21564	30000	18000
4	Median of EERATIO(i) in %*		37.3	46.4	57.9	63.3	59.1	53.3

Source: Same as Fig 1
Note: * For children attending private schools

In the lowest quintile, 88% of children attending, are going to public schools. These are the households with little exit option. Even when they exit, they can access

only the LFPS(Basic). Q1 has a substantial presence of SCs and STs (37%) with another 23% of all households being Muslim households. In Q2 (and Q3), whereas the majority access the GSs, exit becomes more prominent with a mix of alternate options of LFPS (Basic), LFPS (Standard) and non-LFPS schools being accessed. Even so, most of those who are seeking an alternative in Q2, can again only go to LFPS (Basic). By exercising the exit option from GSs, the poorest and marginalised end up in institutions which are close substitutes.

Composition of students in the LFPS, particularly LFPS (basic), mirrors the socio-economic composition in GSs (Table 1). SC and ST children are disproportionately represented: 35% in LFPS (Basic) versus 25% in non-LFPS. Socio-economic composition of the schools would bear on the voice that parents have in these institutions. Better accountability of the school to parents is one of the key arguments for market choice. There is no evidence that market-based solutions have led to more equal power relationship between the owners and the parents accessing these schools (Phillipson, 2008).

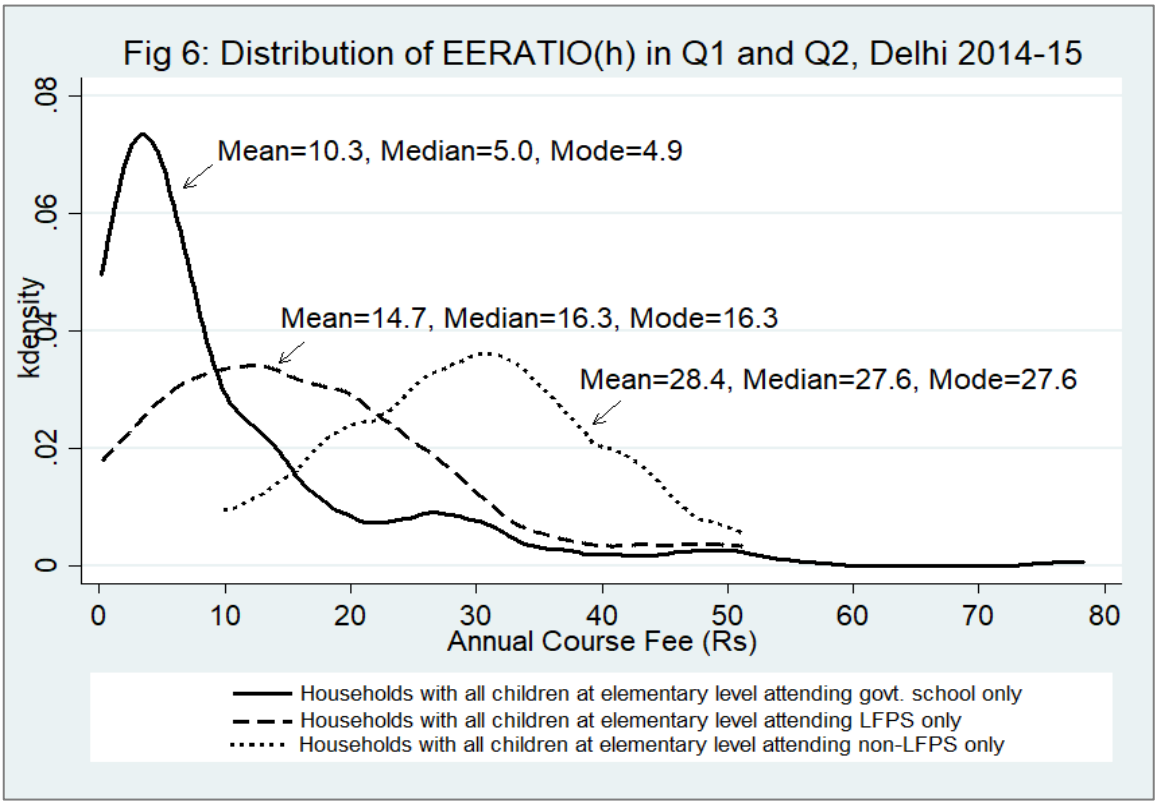
The CF paid by the median household in each quintile increases rapidly as income increases. As one moves from lower to higher income quintiles, median CF increases at a higher rate than household's MPCE. EERATIO(i) measures the education expenditure of the household on the i^{th} child as a proportion of per capita household expenditure. Educational spending rises faster than per capita income, indicating an expenditure elasticity on education of more than one. It affirms the highly differentiated private school sector with schools with different fee structure and different set of facilities for different income classes, the hierarchies of schooling. One needs to qualify that GSs are not a homogenous category either. There are gradations within them, with well-resourced well-managed public school models on one end & the common man's school on the other. The 37% of children in Q5 accessing public schools are not accessing the same schools as the majority in the lowest quintiles.

How affordable are LFPSs really?

The advocates of the LFPSs argue that these schools are "affordable" to the poorer households. This, they argue, is reflected in the rise in the number of LFPSs and the enrolment therein. Although a substantial number of households from poorer households are sending their children to LFPS, the poorest (Q1) are still unlikely to be able to afford the LFPS as reflected in Table 1. And those who do, might do it at a high opportunity cost.

To estimate affordability, education burden of a household is estimated as household expenditure on education across all members as a proportion of total household expenditure or EERATIO(h). Apart from CF, it includes expenditures on books, uniforms, transport, private coaching, etc. On an average, CF accounts for around 60% of household expenditure on education, and is similar across quintiles. The expenditure burden on education for median household sending children in LFPS (non-

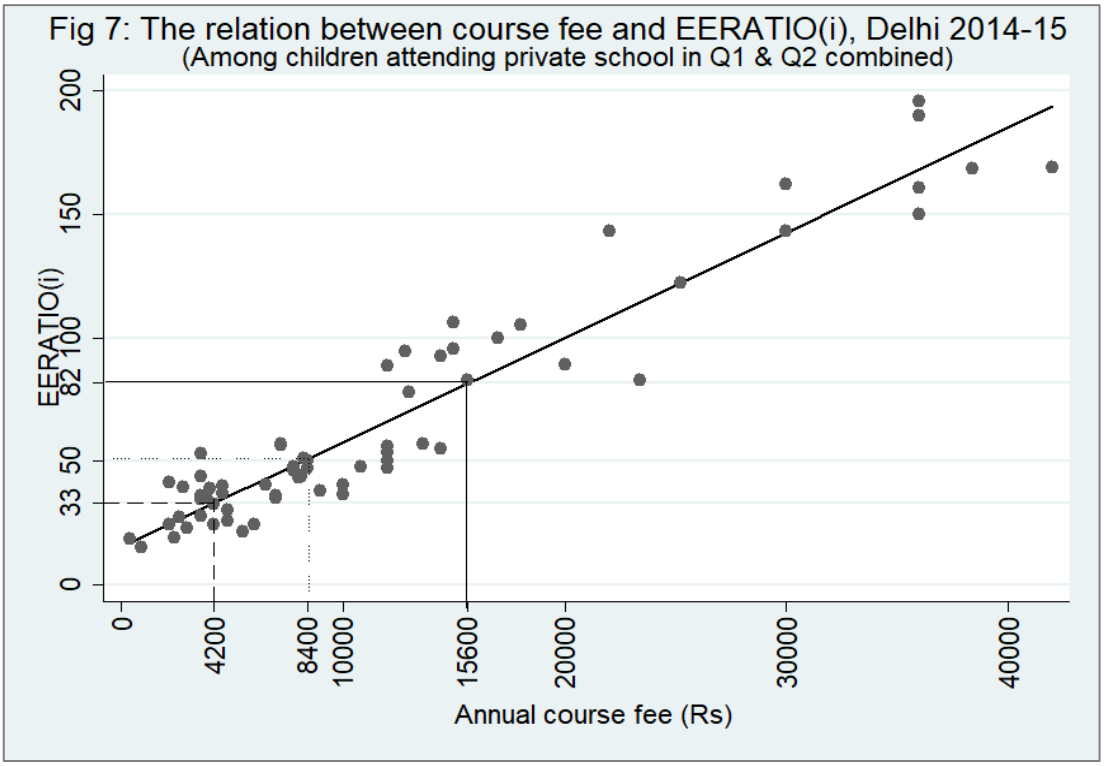
LFPS) is three (five) times in comparison to the median households in Q1-Q2 sending children to GSs (Fig 6). Median EERATIO(h) for LFPS households is 16%. This is broadly in tune with what others have obtained. Endow (2019) finds that the share of education expenditure in earnings ranges between 14-20% for low income households who choose LFPS in the context of unauthorized colonies of Delhi and its neighbourhood.



Note: The calculation here excludes households with mixed strategies (government and private) across children in elementary age group, which accounts for 3% of the sample households in Q1&Q2.

An individual household is a price taker. Parents, once they have chosen a school, stretch themselves to accommodate the CF. Unlike other goods, parents are likely to continue with a particular school at least up to a transition grades since it affects the coping ability and the learning of the child. Fig 7 plots the EERATIO(i) for those attending private school in Q1-Q2 against the CF paid. The trend line shows a positive linear relation between the two variables. Higher the CF, higher the EERATIO(i). Corresponding to the mid-point of the benchmark CF range, Rs4200 per annum, 1/3rd of the per-person consumption expenditure is on education. Also, there are several children for whom even at this low CF Rs4200, the expenditure on education constitutes 50% per capita expenditure in the household. The households sending their children to LFPS with CF Rs8400 devote half of their consumption per person on private schooling. At CF Rs15600, the corresponding EERATIO(i) increases to 80%. Households in the two lowest income quintiles pay CF far beyond any reasonable measure of affordability. Since level of consumption expenditure is low in absolute terms for these households, a high share for education expenditure would force a large compromise on

essential items. It would aggravate intra-household disparities and gender inequities (Mehrotra and Panchamukhi, 2006). There is always this trade-off involved in choosing private education, howsoever low the cost is.



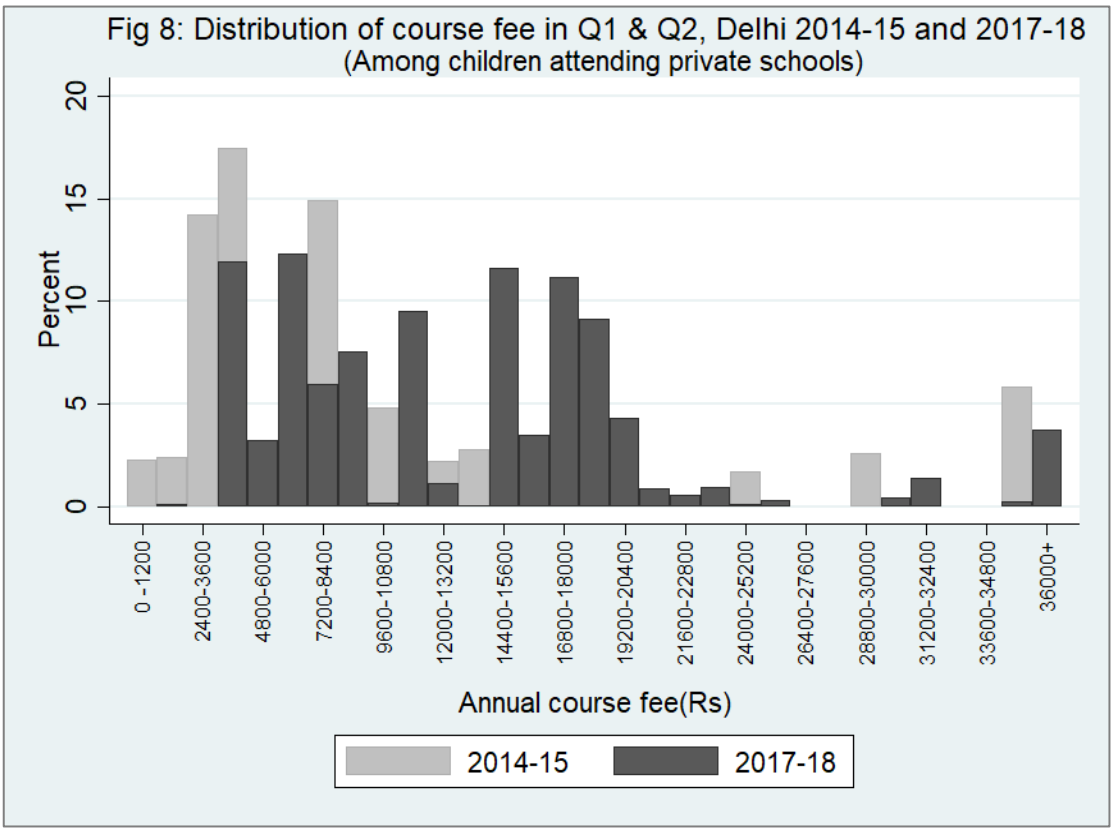
Changes in cost of private education over time

The economic viability of the households in accessing LFPSs needs to be assessed from a long-term view. It is important to see whether these schools can be accessed on a sustained basis. To round up the results, we draw a few comparisons between 2014-15 and 2017-18, the latest NSS survey round. It also serves as a validation of the method used. Fig 8 juxtaposes the CF distribution for children attending private schools from Q1-Q2 for 2014-15 and 2017-18. CF is reported at current price. There is a clear shifting up of the distribution to the right. Benchmark CF range for LFPS moves up from Rs3600-4800 in 2014-15 to Rs6000-7200 per annum in 2017-18 (inflation adjusted, Rs5200-6400). The estimated cut-off CF for LFPS increases from Rs15600 in 2014-15 to Rs18000 in 2017-18 (inflation adjusted, Rs15840).[5] As a proportion of the overall private sector, children attending LFPS is nearly 50% (25% in LFPS (Basic) and 25% in LFPS (Standard)) in 2017-18 compared to 47% (30% in LFPS (Basic) and 17% in LFPS (Standard)) in 2014-15.

It indicates that the overall exit to LFPS is faster than to non-LFPS. Within the

[5]The latter can be verified from Fig A2 in Appendix 1.

LFPS segment, as the weight has shifted to LFPS (Standard) CF range, the educational burden has risen. Per child spending on education was 6.9% of total household expenditure for the median household in Q1-Q2 sending all children to LFPS for elementary education. This share almost doubled to 11.6% in just three years time2017-18.



Among other things, the significant rise in CF and shift towards LFPS (Standard) CF in this phase occurs as many LFPSs gained recognition. The RTE forbids operation of unrecognised schools and allowed time till 2013 to these schools to obtain recognition or close down. While many didn't abide, several did. DISE database indicates more than a-fourth of recognised private schools existing today in Delhi gained recognition in the years starting 2013-14. To what extent, these schools improved their resources and functioning is a moot question. With newly acquired recognition status, the CF has seen a significant jump. Even otherwise, we know that annual growth in private school fees is a source of great anxiety and economic hardship for parents. It raises serious doubt on the long-term viability of private education options for low-income households, who are more vulnerable to job losses and other adverse shocks on the income side.

6. Layers in Exit: Voices from the Field[6]

To unpack the different layers of exit, a small case study from a locality in Delhi is presented below. It ties together the different facets of the phenomenon of exit –the exit of the dominant groups and its negative impact on voice in the school, scarcity in public provisions - schools, classrooms, teachers - typical of many areas of Delhi, the dominance of the exit strategy and limited use of voice through the system, large scale presence of LFPS as a close substitute of GSs and the huge burden of private expenditure on parents.

Jasola is a locality in South East Delhi bordering NOIDA, Uttar Pradesh and Faridabad, Haryana. Gujjars are the land-owning class whose major holdings have been sold off to private real estate developers and DDA over the past three decades or more. Rental income from the remaining property is the major income source for these families owning most of the residential spaces in the area. Families of migrants from neighbouring states stay in these rented tenements, and work in the informal sectors in a variety of low paid wage employment or while some are self-employed. A part of Jasola called Old Jasola has predominantly Muslim households.

Jasola has a government primary school (GPS), which runs in two shifts. Morning shift is for girls and afternoon for boys. As per the DISE (2017-18), enrolment in the GPS(boys) and GPS(girls) are 956 and 1167, respectively. The pupil teacher ratio is 51 (girls) and 43 (boys). Going by the RTE norms on one teacher per classroom and one classroom for 40 children, there should be 8 additional classrooms and several additional teachers. There is a declining trend in enrolment over the years. The private school market in Jasola is highly differentiated with a variety of schooling options from the much sought-after Angel School and DAK school to a large number of low fee private schools. None of the LFPSs figure in the DISE database.

We use the voices of two parents, Kishore and Mayur, living in Jasola to understand their school choices and experiences.

*****

Kishore works as a security guard (at present) with a wage of Rs 8000 per month. He has changed jobs frequently – till sometime back he used to repair street lights for BSES. At another time, he put up a *thela* (cart) selling vegetables. Kishore's wife works as a domestic help. The couple has four children; the two older ones are in the GPS. The third child, though he is of school-going age, doesn't attend school. He has runaway several times from the GPS. Parents lament the absence of a security guard in the school. The youngest boy, 3 years old, stays at home; GPS (Boys) doesn't have a pre-primary section.

Kishore is unsatisfied with the GPS and feels trapped in the situation. "*Garib*

[6] Names of schools and respondents have been changed for anonymity.

aadmi ke baccho ko fansake rakkha hai. Kiraye daron ke bacche jate hai. Gujjar ke bacche DAK me jaate hain." (The children of the poor have been trapped here. Children from tenant households are in GPS. Children from Gujjar households go to DAV school). Teachers come regularly but they do not pay adequate attention, he says. His daughter is in Grade 4 but her progress has been poor. She is shy and doesn't speak up. Kishore spoke to his daughter's school teachers. The teachers, in turn, related their own helplessness given the huge numbers and instructed him to take care of her at home and put her into "tuition" class or else take the child away if he is unhappy. All four of his children go for tuition, where he pays Rs 450 per month (total). Tuition fee is waived for the youngest child. Kishore is doubtful about the quality of teaching in the tuition class. The teacher mostly asks the children to copy.

While many of the tenant households in his building send their children to the same GPS, Kishore doesn't think mobilization of parents can improve the situation. GPS teachers treat the tenants differently than they treat the Gujjars. Teachers know that the present set of parents will not complain before the authorities as they do not have sufficient reach. He also fears the retribution on his children, as teachers punish the children routinely. He would like to exit the GPS, but with the limited wherewithal, four children and uncertainty of work, he doesn't have a choice. Kishore eyes one of the LFPSs, with hope. But with an admission fee of Rs 3500 and monthly fees of Rs 300, books and stationary separate, he knows, he cannot afford it under the present conditions.

The chances that voice will ever act in conjunction with exit are very low, noted Hirschman (1970). When the most influential parents take their children away from the local schools, it loses the critical resource of those who tend to be movers and shakers, those with most effective voice for improvement from within. For the remaining parents, largely without an exit option, voice is apparently the only available tool. But voice or the articulation of interest is socially embedded. Voice is mediated through caste and class relationships. Where bargaining power is little, effectiveness of voice is in doubt. While the gains from a favourable outcome are immense, the probability of influencing the decisions is low. Kishore has no hope that he will be able to marshal some influence for the school to improve its functioning. The adverse risks of raising voice also pulls him back. Rather, exit appears to present a clear-cut alternative.

*****

Mayur, another resident of Jasola, has already exited the government school system. Mayur irons clothes for a livelihood in a neighbourhood that entails daily interactions with the middle class. Normally, he earns between Rs 400 to 500 a day, with smaller earnings in the winter months. Mayur has three children, all boys, studying in private schools. He has a dim view of public schools - it is the "low class" people who send their children to public schools or avail of public healthcare, according to him.

It is now well-recognised that school choice is not made on the basis of objective criterion alone. Rather the act of choosing a school may become a means for parents to construct and to enact a new identity (Gurney, 2017; Nambissan, 2012). Furthermore, reliance on parental demand may take the system in a direction contrary to the social

purpose (Alexander, 2012).

Mayur's three children have been through Nisha School, a LFPS for pre-primary and primary grades run by a Gujjar family with all female staff and a course fee of around Rs 600 per month. As the two of the older children graduated from primary, they did not want to enter a `*sarkari school*', says Mayur. With limited private options at the upper primary level, even in Delhi, the eldest son now studies in a private school in Unnao, Uttar Pradesh in Grade 10. The second child has been put into Angel school, which Mayur claims has branches across the world. He had to borrow money for his child's admission. The third child is continuing in Nisha School, but Mayur plans to take him out next year and put him into Angel School. Mayur feels that he is not learning much in the present school. "*Ye school bhi waisa hi hai*" (this school also lacks quality). He wants to exit the LFPS.

Different strategies are devised across children to make ends meet. The burden of education expenditure for this family, in quintile 2 as per MPCE classification, is described in Table 2.

Table 2: Expenditure on Education: Mayur's Case

(in Rupees, unless mentioned otherwise)	Eldest Child	Middle Child	Youngest Child
Course Fee (School) per month	200	1500*	500*
Private Tuition Fee per month	450	1000	500
Course Material (Annual)	3000	8000	3000
Contingency (Annual)	1000	1200	1000
Educational Expenditure (Annual)	11800	39200	16000
Per Capita Income for 5 member family	30000	30000	30000
EE Ratio (i) = Education expenditure/Per capita Income (%)	39.33	130.67	53.33
Household Educational Expenditure (Annual)	67000		
Annual Income of Mayur	150000		
EERATIO (h)= Educational Expenditure to Household Income (%)	44.7		

* Using the caste and income certificate, Mayur has obtained partial fee waiver in private schools. The figures quoted are discounted figures.

Families like Mayur's are denying themselves consumption and paying what could be called mirage course fees. "Mirage" like optical illusion of water offers an economic illusion of escape from the current labour status of parents. Market capitalizes on the parent's aspiration. It constantly innovates through product differentiation. What feeds this illusion is the fact that a few do succeed through this route.

Thus, we see, deep social inequalities characterize the school system in Jasola. Exit of the privileged groups from public schools has eroded the accountability of these institutions in the eyes of the parents. Besides systemic deficiencies abound, which contributes to the dysfunctionality of schools. Lack of voice of the remaining social strata and inability to press for quality of a satisfactory kind is forcing the poor and the marginalised sections to exit. The market offers a range of choices – including concessions. Even so, many cannot afford the market price. Parents who step into the differentiated market arena soon realize that the quality offered is but a close substitute of the service provided by the government school, but at a much higher price. In search of the elusive quality, parents are breaking their back.

7. Policy Discussion

The rising trend towards exit at the bottom of the pyramid presents unprecedented challenges. How does one uphold the right to education of a reasonable quality for all children – irrespective of their socioeconomic status - when the schooling structure is fragmented, unequal and exclusionary? While there are no easy answers, we indicate some directions for a medium- term roadmap focusing on the supply response. The specific context of the discussion is the education system in Delhi, though the recommendations apply more generally.

To begin, LFPS sector needs an official database of information, openly shared in the public domain. At a time when DISE has moved to student tracking, it is unacceptable that there are so many schools that are not part of the official database. The concerned governments must take responsibility and pursue this information. The absence of information makes it easy for the authorities responsible for planning, implementation and regulation to ignore these schools. Transparency in information is key to good policy.

Regulation of private schools will fail where the public schools are absent or weak.[7] The weakness in the public school system is a result of cumulative neglect over decades (Tilak, 2002). One of the reasons why the government has not been able to impose regulatory standards in private schools particularly at the lower end is the gap in supply (Mousumi and Kusakabe, 2019; Banerji, 2000).[8] There is a need to build public schools in Delhi, particularly in the urban fringes where the majority of the working-class lives.[9] There is a clear pattern of excess demand in these regions. Moreover, researchers have shown that composite GSs that offer primary and secondary classes are preferred by parents, as they provide continuity in their children's education. Primary students in these schools also have better access to facilities and resources as compared to those that offer only primary classes (Nambissan, 2003). There are various models of well-run and adequately funded composite GSs in operation,

[7] Regulatory aspects of public policy will be dealt with separately in a forthcoming paper.

[8] The regulatory battle around LFPS is neatly summarised in Ohara (2012)

[9] The urban fringe is characterized by congested, unplanned and unauthorised development (Menon, 2017).

Kendriya Vidyalayas being one such model. Creation of well-resourced composite schools in adequate numbers is the need of the day. The security that parents desire of admission to a school that can see their children through the schooling years will be ensured.

Is such a project financially feasible? What would be the necessary investment to build and run GSs for children attending LFPSs compliant with RTE norms? This question gains relevance in the face of criticism that public investment for universalization of elementary education using public resources is not feasible for India, and LFPS is the only alternative. (Jain and Dholakia, 2009). As the ensuing debate brought out, the arguments in favour of LFPS cannot be defended on the grounds of either equity or quality.[10](i) LFPSs are close substitutes in terms of quality - even when restricted to numeracy and literacy achievements - and do not meet quality benchmarks; (ii) the model itself is inequitable and exploitative whether one sees it from the perspective of the teacher or the taught. Sarangapani (2009) questions if the notion of "school" could be reduced to non-formal centres imparting numeracy and literacy skills through a few hours of engagement adjusted around child labour schedules. (iii) what might seem as parental affirmation for LFPS proves to be an illusion soon as parents want to exit the LFPS for more reliable option as we saw in Mayur's case. In contrast, a well-funded public system can address the issues of quality, equality with social justice. An alternative to LFPS must be found in the public-school system as many scholars have argued. Given the needs of the first-generation schoolgoers, there is an even greater need and urgency for increasing per child allocations (Ramachandran 2009), and to appoint qualified teachers in government schools for reasons of equity, justice, rights and democratic citizenship (Jain and Saxena, 2010). Härmä (2009) reiterates that "parents would prefer an improved government system, that approximately half of them cannot afford LFPSs, and that markets do not deliver universal and socially optimal levels of service delivery, …. it is socially desirable to reform the government system, incorporating accountability as a core principle, rather than relying on increased marketisation" (p.164).

[10]The Economic Political Weekly carried the debate in various volumes.

Table 3: Financial Requirement for Creation and Running of New GSs for schooling of children presently attending LFPS in Delhi, 2017-18

Children attending LFPSs as % of private school goers in elementary age group		49.8
Children in the elementary age group attending LFPS		5,06,237
Number of schools to establish		259
Costs (in Rs Crores)		
Annualised capital cost per school*		1.6
Capital cost		404.0
	Based on Bose et al (2020) #	KV per child recurrent expenditure@
Per student required recurrent cost (in Rs)	27,065	40,480
Recurrent Cost	1370.1	2049.2
Total Cost	1774.2	2453.3
Total cost as % of Gross State Domestic Product	0.28	0.39

* Average composite schools in Delhi absorbs 1600 students among which 980 are at elementary level. We retain the existing system of two shift schools. Capital cost, is assumed to be spread over 5 years. Cost of land is not included. # For details on methodology see Bose et al. (2020). The estimates reported here include 7th Pay Commission pay hike. @ Own Calculations based on Annual Report, 2017-18, https://kvsangathan.nic.in/publication/annual-reports

In our earlier work, we have demonstrated that the financial outlay for a publicly funded school system of a desirable quality is well within the feasible range (Bose et al., 2018; Bose et al., 2020). This is unquestionably so for Delhi, a state with one of the highest income levels in India. Based on normative financial estimates in Bose et al. (2020) and estimates of size of LFPSs arrived in this paper, an estimation of financial requirement is presented in Table 3. Since existing GSs are crowded and non-existent in many places where LFPS are plenty, we assume that new schools need to be established for absorbing children from LFPS.[11]The number of children attending LFPS works out to 5.06 lakh in the elementary age group in 2017-18, and the required number of new schools is estimated at 259. Using annualized capital costs for creation of new capacity spread over 5 years and required recurrent cost per child of Rs 27,065, the financial estimate of additional investment is Rs 1774 crores for Delhi. Considering a higher recurrent cost of Rs 40,480 incurred per student in Kendriya Vidyalaya in 2017-18, raises the financial estimate to Rs 2453 crores. The equivalent as a proportion of gross income of Delhi is 0.28% to 0.39%, and therefore well within the feasible set for the state government.

In addition to creation of new schools and/ expansion of capacity in the existing ones, there is need to firm up the resource base in the existing GSs. If the GSs functioned at a reasonable level, private schools would be forced to measure up or forced out of

[11]Enrolment per GS in Delhi is 577, highest in India, while all India average is 114 (DISE 2015-16).

business. For Delhi, the shortage of teachers gets reflected in the adverse PTR in primary and upper primary levels. Among the State government run schools there are as much as 22% vacant teacher posts, which is being filled largely by guest teachers or contract teachers (CAG, 2016). A quarter of State-government run schools have a PTR of more than 40. Teacher shortage is more in local government run primary schools: 37% schools, have PTR of more than 40. Kishore's voice rings true, where he says teachers do not pay adequate attention. Even a PTR of 30 is high given the attention these children should ideally get. Further, shortfalls in part time instructors for physical education, work education and art education abound (DISE, 2015-16). One of the reasons for apathy against GSs as said by many parents is that the teachers don't teach in the class. Many have highlighted teacher's accountability as the primary reason for poor performance of the GS (Pandey et al., 2010, PROBE, 1999). Head teachers are responsible for regulation and the administration of the school. There are 16% schools that do not have a head teacher at elementary level in Delhi. These gaps need urgent attention, if one is to stem the tide of exit and reverse it.

It needs to be emphasized that the availability of resources is necessary, but not sufficient by itself, to ensure the desired reform of the public education system. It is important to factor in the impediments for reforming the public system if we are to seek behavioral changes that could lead a plan to the desired goals. A set of factors affect the functionality of the schools, the other set affect the quality of classroom processes.[12] In either case, voice has an important role to play. Dissatisfaction can be a motor for change from within. We have noted that the parental demand has leaned heavily towards exit and there is no sign of effective use of voice. Hirschman had argued that voice is an art that must evolve.

"the propensity to resort to the voice option depends .... on the general readiness of a population to complain and on the invention of such institutions and mechanisms as can communicate complaints cheaply and effectively. While exit requires nothing but a clear cut either or decision, voice is essentially an ***art*** *constantly evolving in new directions."* (Hirschman, 1970 p.43 emphasis in the original)

It is true that as soon as you have allowed the exit option through competing products, the chances of political action through voice goes down. And yet all may not be lost. The Allahabad High Court order, where we began, is as an attempt to reinstate voice as a tool for recuperation. It may be argued that voice need not be limited to voice of the upper castes/classes. Mobilization of voice for better quality can happen from within the disadvantaged groups. The Dalit movement and other progressive movements have not exercised its voice to its advantage in the arena of school education. The social vacuum created by the exit needs to be responded in a creative political manner.

[12]See Policy Perspective, Chapter 5 in Bose et al.(2020) for elaboration.

8. Conclusion

The all-India trends on school participation over the last two decades attests the dominance of the exit strategy with several disconcerting features. There is a clear streaming of students into public and private schools depending on their socio-economic status. And, as the dominant groups vote with their feet, those who are left behind, in public schools now hollowed of active parental voice, seek an escape through the use of market options. LFPS is perceived to be offering parents from weaker sections "school choice". The existing literature highlights the problematic and limited nature of the LFPS alternative for educational quality, equity and affordability. Nonetheless, the sector has seen rapid expansion, aided by cheap informal workforce and lax school regulations. We attempt to establish the size of the LFPS sector, information about which is central to educational planning, regulation and implementation, but invisible in the official database. A methodology based on the macro-survey data is formulated and then applied to Delhi, a city state that has a substantial underbelly of LFPSs. We find that the estimated size of the LFPS sector, as a share of the overall children attending private schools at the elementary level was a massive 47% in 2014-15 and increased to 50% in 2017-18. The corresponding burden of expenditures for household on LFPS schooling is not less than three times that of the GSs, on an average. It is no surprise that the poorest are excluded from the LFPSs, even as the socio-economic composition of the LFPS mirrors that of the GSs.

The quintessential narratives of two parents were used to ground the quantitative data within today's social reality. It serves as a warning that while the state sector schools need serious reforms urgently and strengthening of voices from within, market forces using parents' aspirations for mobility can impose extreme economic hardships and a futile hunt for quality. Policy discussion suggests concrete steps toward expansion of public schools through public investment estimated at 0.3-0.4% of GSDP of Delhi, and upgradation of the existing facilities towards well functional benchmarks as per the RTE norms so as to provide a credible alternative to the LFPS sector. Our case for greater investment in terms of expansion of capacity and improvement of public schools rest on the argument that these are far more equitable spaces with a far greater potential to deliver higher quality, if they are supported and made to do so.

Postscript

As this working paper goes to the press, we are in the midst of an extended lockdown due to Covid 19 pandemic. The impact of the lockdown is likely to be particularly severe on the education of the poor and the disadvantaged groups. Lack of employment opportunities, drop in income, food insecurity, lack of other essential consumption, reverse migration, physical and psychological stress is likely to impact scores of children. Discontinuation of schooling is a real danger. It could mean a reversal, temporary at best, to the gains of universalization at the bottom of the pyramid.

We have talked about the high economic vulnerability of the households sending their children to LFPSs. The lack of purchasing power is likely to hit these families hard. With depressed incomes, households will have to make further cut back on other consumption expenditures and borrow to pay for continuation of education. It will affect the revenues of LFPSs running on self-financing model. LFPSs would in turn squeeze the salaries of teachers and other employees. If the economic downturn is prolonged, some schools will become unviable. Just as in public health, the infrastructure for primary health care is essential to meet any challenge, one should realize that there's no short cut to public funded credible elementary schools for all.

Reference

Akyeampong, K., & Rolleston, C. (2013). Low-fee private schooling in Ghana: Is growing demand improving equitable and affordable access for the poor. In P. Srivastava (Ed.), *Low-fee Private Schooling: aggravating equity or mitigating disadvantage*? (pp.37-64). Oxford: Symposium Books.

Alexander, K. (2012). Asymmetric information, parental choice, vouchers, charter schools and Stiglitz. *Journal of Education Finance*, *38*(2), 170-176.

ASER. (2018). Annual Status of Education Report (rural) http://img.asercentre.org/docs/ASER%202018/Release%20Material/aserreport2018.pdf.

Baird, R. (2009). Private schools for the poor: development, provision, and choice in India. Available online at: http://dise.in/downloads/use%20of%20dise%20data/ross%20baird.pdf (accessed 11 May 2020).

Banerji, R. (2000). Poverty and primary schooling: field studies from Mumbai and Delhi. *Economic % Political Weekly*, 795-802.

Bose, S., Ghosh, P. & Sardana, A. (2018). Universalisation of school education using the public-school system is feasible, Economic & Political Weekly, 53 (44).

Bose, S., Ghosh, P. & Sardana, A. (2020). *RTE and the Resource Requirements: The Way Forward*. Bhopal: Eklavya Foundation.

CAG (2016). Report of the Comptroller and Auditor General of India on Social, General and Economic Sectors (Non-Public Sector Undertakings) for the year ended 31 March 2016. Available online at: https://cag.gov.in/sites/default/files/audit_report_files/Report%201%20of%202017%20of%20Non-PSUs%20of%20NCT%20Delhi.pdf (accessed 11 May 2020).

De, A., Noronha, C., & Samson, M. (2002). Private schools for less privileged: Some insights from a case study. *Economic and Political Weekly*, 5230-5236.

Endow, T. (2019). Low Cost Private Schools: How Low Cost Really Are These?. *Indian Journal of Human Development*, *13*(1), 102-108.

Government of India (GoI), (2009). The Right of Children to Free and Compulsory Education Act. New Delhi, Delhi: Ministry of Law and Justice. Available online at: https://mhrd.gov.in/sites/upload_files/mhrd/files/upload_document/rte.pdf (accessed 14 May 2020).

Gurney, E. (2017). Choosing schools, choosing selves: exploring the influence of parental identity and biography on the school choice process in Delhi, India. *International Studies in Sociology of Education*, *26*(1), 19-35.

Härmä, J. (2009). Can choice promote Education for All? Evidence from growth in private primary schooling in India. *Compare: A Journal of Comparative and International Education*, *39*(2), 151-165.

Hirschman, A. (1970). *Exit, Voice, and Loyalty: Responses to decline in firms, organizations, and states.* Cambridge, MA: Harvard

Jain, M. & Saxena, S. (2010). Politics of low cost schooling and low teacher salary. *Economic & Political Weekly*, *45*(18), 79-80.

Jain, P. S., & Dholakia, R. H. (2009). Feasibility of implementation of right to education Act. *Economic & Political Weekly*, 44(25), 38-43.

James, E. (1993). Why do different countries choose a different public-private mix of educational services?. *Journal of Human Resources*, 571-592.

Karopady, D. (2014). Does School Choice Help Rural children from Disadvantaged Sections? Evidence from Longitudinal Research in Andhra Pradesh. *Economic and Political weekly*, 49 (51), 46-53.

Majumdar, M. (2014). The Shadow School System and New Class Divisions in India. *Working Paper Series*, *TRG Poverty & Education, Max Weber Stiftung*. Available online at:https://www.ghil.ac.uk/fileadmin/redaktion/dokumente/trg_india/Paper_2_Manabi_Majumbar.pdf (accessed 11 May 2020).

Mehrotra, S., &Panchamukhi, P. R. (2006). Private provision of elementary education in India: Findings of a survey in eight states. *Compare: A Journal of Comparative and International Education*, *36*(4), 421-442.

Menon, R. (2017). On the Margins of 'Opportunity': Urbanisation and Education in Delhi's Metropolitan Fringe. In William T. Pink& George W. Noblit (Eds.)*Second International Handbook of Urban Education* (pp. 445-467). Springer, Cham.

Mousumi, M. A., & Kusakabe, T. (2019). The dilemmas of school choice: do parents really 'choose'low-fee private schools in Delhi, India?. *Compare: A Journal of Comparative and International Education*, *49*(2), 230-248.

Nambissan, G. (2003). Educational deprivation and primary school provision: a study of providers in the city of Calcutta. IDS Working Paper, issue 187. Available online at: https://opendocs.ids.ac.uk/opendocs/bitstream/handle/20.500.12413/3982/Wp

187.pdf?sequence=1(accessed 11 May 2020).

Nambissan, G. (2012). Low-Cost Private Schools for the Poor in India Some Reflections. Available online at: http://www.idfc.com/pdf/report/2012/Chapter_8.pdf(accessed 11 May 2020).

Ohara, Y. (2012). Examining the legitimacy of unrecognised low-fee private schools in India: comparing different perspectives. *Compare: A Journal of Comparative and International Education*, *42*(1), 69-90.

Oketch, M., Mutisya, M., Ngware, M., &Ezeh, A. C. (2010). Why are there proportionately more poor pupils enrolled in non-state schools in urban Kenya in spite of FPE policy?.*International Journal of Educational Development*, *30*(1), 23-32.

Pandey, P., Goyal, S. &Sundararaman, V. (2010). Public Participation, Teacher Accountability and School Outcomes in Three States. *Economic and Political Weekly, 45(24)*, 75-83.

Phillipson, B. (2008). *Low cost private education: impact of achieving universal primary education*. London: Commonwealth secretariat.

Pratham, (2010). Annual status of education report (Rural) 2009, Provisional. Available online at: http://img.asercentre.org/docs/Publications/ASER%20Reports/ASER_2010/ASERReport2010.pdf (accessed 11 May 2020).

PROBE (1999). *Public Report on Basic Education in India.* New Delhi, Oxford University Press.

Ramachandran, V. (2009). Right to Education Act: a comment. *Economic & Political Weekly*, *44*(28), 155-157.

Sarangapani, P. M. (2009). Quality, feasibility and desirability of low cost private schooling. *Economic & Political Weekly*, 67-69.

Social Jurist v. GNCT &Ors., WP(C) 43/2006, CMs 1819/2007 & 16275/2007. Delhi High Court (2008). Available online at: https://delhidistrictcourts.nic.in/Feb08/Social%20Jurist%20Vs.%20GNCT.pdf (accessed 14 May 2020).

Srivastava, P. (2013). Low-fee private schooling: issues and evidence. In P. Srivastava (Ed.), *Low-fee Private Schooling: aggravating equity or mitigating disadvantage*? (pp.7-35). Oxford: Symposium Books

Srivastava, P., & Noronha, C. (2016). The myth of free and barrier-free access: India's Right to Education Act—private schooling costs and household experiences. *Oxford Review of Education*, *42*(5), 561-578.

Stern, J. M., &Heyneman, S. P. (2013). Low-fee private schooling: the case of Kenya In P. Srivastava (Ed.), *Low-fee Private Schooling: aggravating equity or mitigating disadvantage*? (pp.105-130). Oxford: Symposium Books.

Tilak, J.B.G. (2002). Financing Elementary Education in India. In R. Govinda (Eds.) India Education Report: A Profile of Basic Education (pp. 267-295). New Delhi, Oxford University Press.

Tooley, J., & Dixon, P. (2007). Private schooling for low-income families: A census and comparative survey in East Delhi, India. *International Journal of Educational Development*, *27*(2), 205-219.

Tooley, J., Dixon, P., &Gomathi, S. V. (2007). Private schools and the millennium development goal of universal primary education: a census and comparative survey in Hyderabad, India. *Oxford Review of Education*, *33*(5), 539-560.

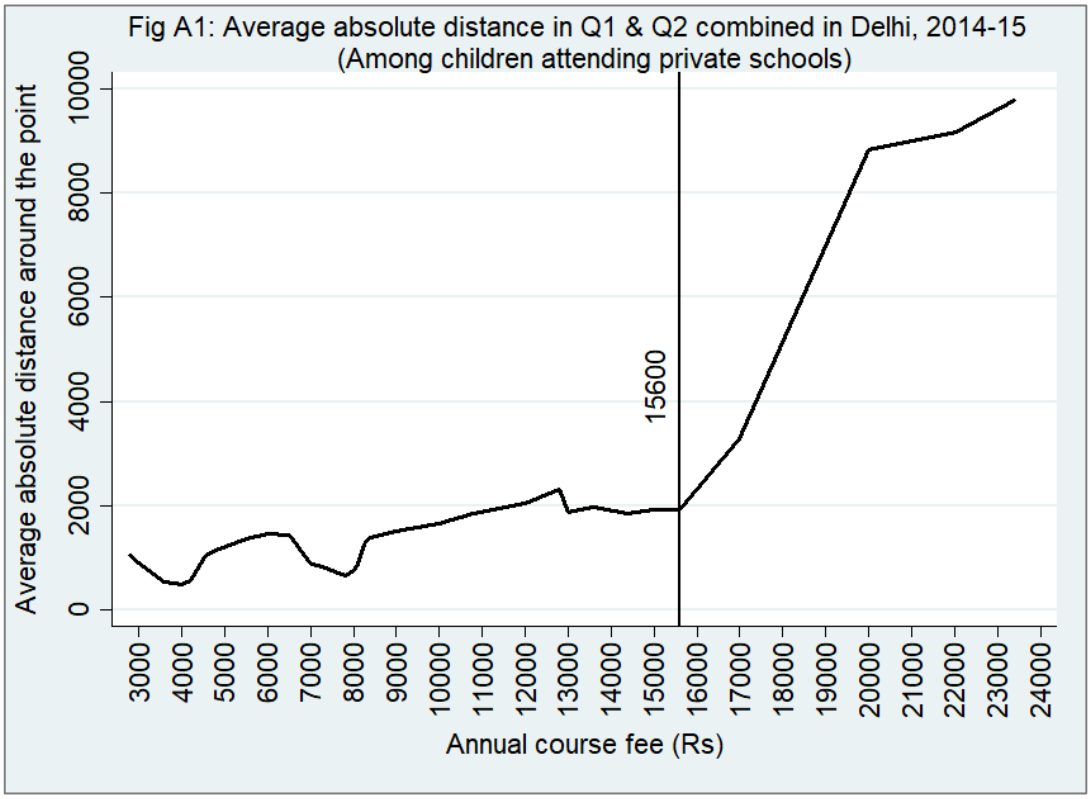
Tooley, J., Dixon, P., Shamsan, Y., & Schagen, I. (2010). The relative quality and cost-effectiveness of private and public schools for low-income families: A case study in a developing country. *School Effectiveness and School Improvement*, *21*(2), 117-144.

Appendix 1

Estimating the cut-off CF for LFPS sector

To estimate the cut-off CF, another method used involves the concept of average absolute distance (AAD). AAD around each point in the CF distribution for children attending private schools from the two lowest quintiles is calculated. The average absolute distance (AAD) around the CF point C within a neighbourhood (C-δ, C+ δ) is measured by taking the weighted average of absolute distance of the CF point C from each point in the neighbourhood where the frequency (i.e. no. of children) of each CF point is the weight. It provides a measure of dispersion that helps in identifying the clustering around each point; greater the clustering, smaller is the AAD and vice-versa. A cut-off CF for LFPS is obtained by locating the turning point in the AAD; it is one beyond which the AAD around each CF is significantly higher.

Fig A1 shows the average absolute distance (AAD) around each point of the CF distribution in 2014-15. The turning point in AAD series is observed at a CF Rs 15600. This indicates that CF Rs 15600 separates out the cluster segment of the CF distribution from spread segment and thus can be considered cut-off CF for LFPS. It corroborates the cut-off course fee obtained from Fig 5. Fig A2 shows the AAD series in 2017-18.



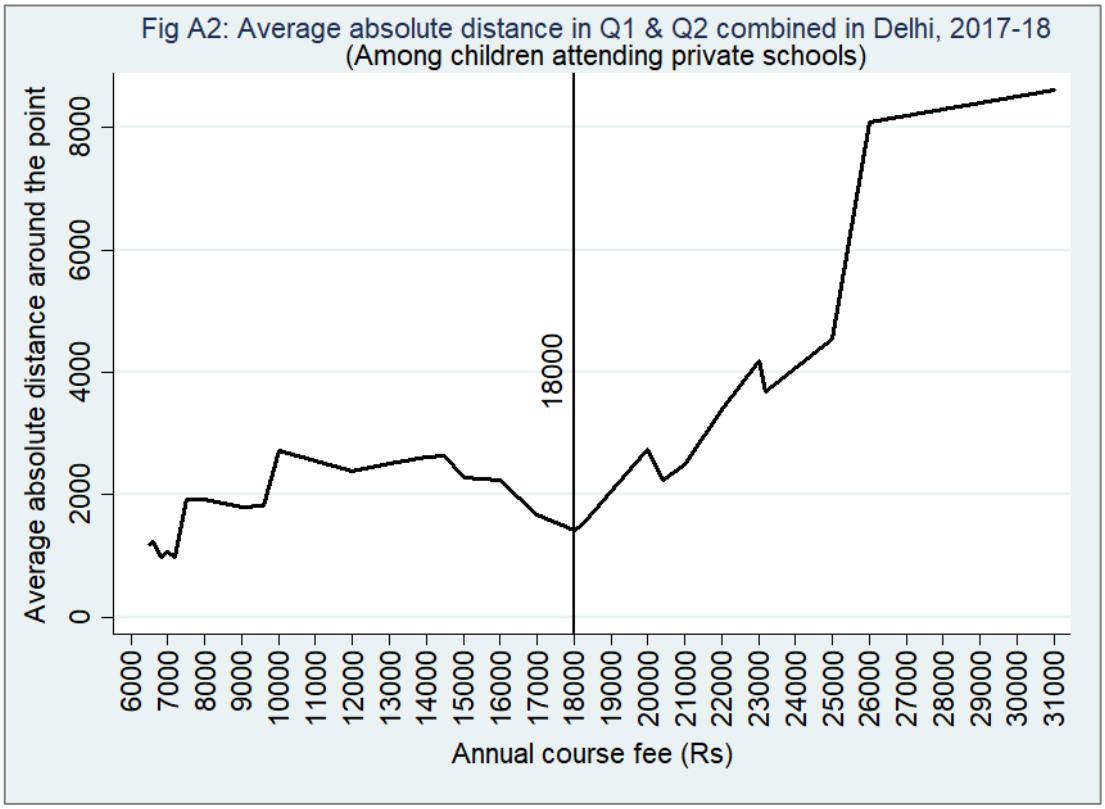


Fig A2: Average absolute distance in Q1 & Q2 combined in Delhi, 2017-18
(Among children attending private schools)
Average absolute distance around the point
0
2000
4000
6000
8000
18000
6000
7000
8000
9000
10000
11000
12000
13000
14000
15000
16000
17000
18000
19000
20000
21000
22000
23000
24000
25000
26000
27000
28000
29000
30000
31000
Annual course fee (Rs)

MORE IN THE SERIES

- Damle, D., Srivastava, S., Anand, T., Joshi, V., and Trehan, V., (2020). Gender discrimination in devolution of property under Hindu Succession Act, 1956, WP No. 305 (May).
- Rangan, D., and Chakraborty, L., (2020). COVID-19: Global Diagnosis and Future Policy Perspective, WP No. 304 (May).
- Jena, P. R., and Singh, A., (2020). Emerging Fiscal Priorities and Resource Concerns: A Perspective on Fiscal Management from Madhya Pradesh, WP No. 303 (April).

Sukanya Bose, is Assistant Professor, NIPFP
Email: sukanya.bose@nipfp.org.in

Priyanta Ghosh, is Research Fellow, NIPFP
Email: priyanta.ghosh@nipfp.org.in

Arvind Sardana, is associated with Eklavya, Madhya Pradesh.
Email: arvindewas@gmail.com

National Institute of Public Finance and Policy,
18/2, Satsang Vihar Marg,
Special Institutional Area (Near JNU),
New Delhi 110067
Tel. No. 26569303, 26569780, 26569784
Fax: 91-11-26852548
www.nipfp.org.in