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Private Schooling in Rural India

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Abstract

This paper presents a brief review of alternative explanations and views on public versus private schooling in India. The data for this study has been obtained mainly from a sample survey of households conducted by the National Council of Applied Economic Research (NCAER) in 1994 in rural India, supplemented with the data available from the All-India Educational Surveys conducted by the National Council of Educational Research and Training (NCERT). The paper analyses several dimensions of private education — the relative size of the private sector, its growth, attributes of children going to private schools, and demand for private education in rural India. A distinction is made between the government-aided private schools and the unaided private schools, with focus on the unaided private school system as the private system of education in India. On the whole, in rural and urban areas together, the relative size of both the government and the government-aided sectors seem to be shrinking and that of the private (unaided) sector is increasing, though private unaided sector is still a tiny sector with less than 9 per cent of the total enrolments at primary level and around 11 per cent at upper primary level. The demand function that has been estimated shows, among other things, that households with higher income demand private education for their children; that the probability of enrolling in a private school is less if the child belongs to Scheduled Caste/Tribe, than if he/she belongs to other (forward) caste; that education and occupation of father/parent play a role, as do gender of the child (demand for private education for a male child in preference to female) and his/her age (younger the age, higher is the demand for private education).

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1. INTRODUCTION

In a mixed economy, where the private corporate sector has contributed significantly to industrial and agricultural development, the role of private enterprise in education needs to be analysed in detail. This is particularly necessary when the growth of public resources for education has been stagnant, if not rapidly declining, while the requirements of education for both quantitative and qualitative development have been growing very fast.

The role of the private sector in education is different from that of the private sector in the economy in general. Private education or private schools necessarily mean a privately managed system, and not necessarily a privately funded system of education.¹ In fact, there are various types of private schools, and also government schools. The schooling system in India is not homogeneous. In all, there are at least three major forms of educational systems in India:

- (a) publicly managed and funded schools, e.g. government schools (and colleges and universities);²
- (b) privately managed but largely publicly funded schools, e.g. private aided schools (and colleges); and
- (c) privately managed and privately funded schools, generally known as private unaided or self-financing schools (and colleges).

The schools in the latter two categories together are generally referred to as private schools, while most government schools in India belong to category (a). Government schools include those that are run by the union (central) government or state government, or by local bodies (both management and financing rest with the government). A vast majority of private schools in India, as in many countries, belong to category (b): they are privately managed, but receive funds from the state exchequer to meet as much as 95 per cent or even higher proportion of their expenses. Though they are generally called private aided schools, they could, in fact, be called 'government-aided' schools, as they are aided by the government. Schools in category (c) are very few in number in India; but they are rapidly increasing. The private sector includes

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¹ See Tilak (1991) for a detailed classification of various types of privatisation of education.

² These institutions may get a little bit of private finances, particularly in the form of fees, and community contributions; but they are predominantly publicly funded.

actors with varying motivations, resources and pedagogical abilities. The range extends from voluntary organisations, and missionary schools, and schools founded for philanthropic reasons, to clearly commercial set-ups. The private schools in India that do not receive any state subsidy are least regulated by public authorities. Their management is in the hands of the private sector and finances flow from private sources — mainly students, but also management and other non-governmental sources. Though they do not receive any grant from government, they might receive public subsidies in the form of tax concessions and concessions in tariffs, including land, building and material at concessional prices. They are either formally recognised by the government to transact education business, or not necessarily recognised. Some of them could even be registered under commercial establishments and ‘shops’ act (Panchamukhi, 1989, p.44). While the private unaided schools are indeed a distinct category, private aided schools are more akin to government schools in many respects (Tilak, 1994).

Any good in-depth analysis of private schools in India or in other developing countries should make a clear distinction between these two types of private schools — private aided schools and private unaided or self-financing schools. Due to absence of data, most often research in the area, in India and also in other developing countries, has failed to make such a distinction; all kinds of private schools are clubbed together, as if they are a homogeneous lot and are labelled as ‘private’ schools.³ Since government-aided schools follow government norms in most areas of operation, an assessment of the implications of privatisation of education is best done by comparing private schools, recognised and unrecognised, with government and government-aided schools. Unlike many earlier studies, this paper makes a distinction between private aided schools and private unaided or self-financing schools and examines the role of private sector in elementary education in rural India.⁴ The three major types of schools referred to in this paper, unless otherwise mentioned, belonged to the categories (a), (b) and (c) as discussed. Specifically the paper examines the relative size of the private education sector in India, and the attributes of students going to private schools. It also attempts to estimate a demand function — demand for private education, using a probit model. The issues are examined

³ A few studies, however, are available, focusing exclusively on private unaided schools in India, more from the point of view of sociology and education. See for example Singh (1972), deSouza (1974), and Bhatia and Seth (1975).

⁴ Elementary education refers to primary education (Grades I–V for the age group generally defined as 6–11), and upper primary or middle level education (Grades VI–VIII for the age group 11–14), that is to education of the first eight years of schooling (Grades I–VIII).

by looking at patterns of enrolment, and trying to identify the salient determinants of private school enrolment. Since the data on which this study is based permits analysis only at a macro level, what we expect to observe are patterns rather than processes; the latter requires micro-level analysis, which is outside the scope of this paper.

Database

The data for this study has been obtained primarily from the Human Development Indicator (HDI) survey conducted by the National Council of Applied Economic Research (NCAER) in January–June 1994, and it is supplemented as needed with the data collected from the All-India Educational Surveys of the National Council of Educational Research and Training (NCERT) and from other sources. It is hoped that even a limited analysis of the kind attempted here, may provide some useful pointers on the policy towards private schooling. Unfortunately, the data that is generally available does not always permit the inclusion of unrecognised schools. Official data excludes unrecognised schools. The NCAER data, being based on a household survey, includes both recognised and unrecognised schools. This is important because a large proportion of private schools are likely to be unrecognised and hence official statistics by excluding them, underestimate the size and importance of the private sector. The assessment of the significance of private schooling can change substantially depending on which statistic is used (see for example Kingdon, 1994, 1996a).

The HDI survey concentrated on rural India, and it covered 33,230 households living in 1765 villages in 195 districts in major states, spreading over all the regions in the country—north (Haryana, Himachal Pradesh, and Punjab), upper central (Bihar and Uttar Pradesh), lower central (Madhya Pradesh, Orissa and Rajasthan), west (Gujarat and Maharashtra), east (West Bengal and the states in the North-Eastern region) and south (Andhra Pradesh, Karnataka, Kerala and Tamil Nadu). In all, there are sixteen major state categories (putting all states in the North-Eastern region into one category and 15 other states). The survey yielded valuable information on poverty and relative incomes, distribution of income, ownership of physical assets by the households, educational, health and demographic characteristics of households, enrolment of children in public and private schools, and household expenditures

on various categories, including food security, education, and health. The survey also yielded a detailed profile of the villages surveyed with respect to the infrastructure facilities available there.⁵

The analysis here concentrates on children in the age group 5–15 years in rural India. About 31 500 students are currently enrolled in schools — public or private. Boys form 58 per cent of the sample, and girls 42 per cent. 72 per cent of the children are in government schools, 18 per cent in government-aided schools and 10 per cent in private schools. The sample also includes Scheduled Caste pupils (21 per cent of the total), and Scheduled Tribe children (14 per cent).⁶ The paper is confined to elementary education, though some aspects of the discussion could be relevant for other levels of education as well.

The paper is organised as follows: Section 2 briefly reviews alternative schools of thought on various important issues relating to private education in India. Sections 3, 4, and 5 are devoted to an empirical examination of three aspects, viz., the relative size of the private sector in elementary education, attributes of children in private schools, and demand function respectively. Section 6 concludes the paper with a short summary of the results and the issues involved.

⁵ Valuable descriptive results of the survey, including details on the sample survey, are published in Shariff (1999).

⁶ Some details on the sample are given in Appendix, Table A.1.

2. PRIVATE VERSUS PUBLIC EDUCATION: A REVIEW OF ALTERNATIVE EXPLANATIONS AND PERSPECTIVES

There are quite a few important arguments in the literature against private education, and clearly in favour of public education, which are somewhat universally valid: education produces externalities; education is both a public and a merit good; there exists market imperfections, including specifically imperfections in capital market; education is a valuable investment that contributes to economic growth, reduces poverty and improves income distribution; it is an important instrument of social mobility; etc. In view of these aspects, left to themselves, people will not be able to make adequate investments in education on their own, or markets will not be able to ensure adequate levels of education of population, resulting in under-optimum social investment, causing huge social losses. Hence the state should provide education.

These arguments are applicable to all levels of education — primary, secondary and higher — though the degree of applicability may vary by levels of education. But their relevance for elementary education is generally believed to be high. For example, elementary education is regarded as a pure public good, and a social merit good. The externalities produced by elementary education are so immense, widespread and varied, that all of them cannot even be identified, not to speak of their quantification. Elementary education is considered as one where equity–efficiency conflicts do not arise. Besides, most countries view elementary education as a human right, or as a fundamental right as in India.

On the other hand, the neo-liberals argue against state provision, and clearly in favour of private education, on a variety of grounds. There are two main arguments in favour of private education that can be summarised in two phrases: ‘excess demand’ and ‘differentiated demand’ (James, 1987, 1991a; see Tilak, 1994). First, it is argued that there exists in developing countries like India a huge excess demand for education, over and above the quantum that the government can provide. The government does not have the resources to meet the growing demand for education and hence, there is no solution other than relying on the private sector. As education is likely to continue to suffer from inadequate public funds, privatisation is unavoidable. Private schools, based on the principle of self-financing, tap the untapped resources available

in the society, and generate the much needed resources for the development of education. They provide considerable financial relief to the government.

Second, it is also argued that private education — aided and unaided — is important to meet differentiated demand. Government monopoly of provision (and not necessarily financing) of education, it is felt, cannot satisfy the demand for the different types (religious, cultural, linguistic) and quality of education. It is also implicitly argued that the quality of education provided by the government institutions is inferior and that the uniform type of education provided in the government schools does not satisfy the diverse demand for education of different values. For example, English language teaching, which is offered by most private schools, may be an important factor behind the growing demand for private education. General observation suggests that this is an extremely important factor, because people link knowledge of English to higher social status and also better job opportunities. The ‘excess demand’ argument, in contrast to the ‘differentiated demand’ argument, would simply mean that people send their children to private schools in the absence of government schools (or effectively functioning government schools). It may be argued that the excess demand phenomenon explains the growth of private higher education in India, while it is differentiated demand that explains the growth of private education at school level — more importantly at primary level (Tilak, 1999). Similarly, people may demand something that can be offered only by the private schools, for example religious teaching. Religious minorities, and even majorities, may demand education based on values of a specific religion, in contrast to secular education that is offered in government schools.

Demand for private education may also mean to some extent demand for quality. Though research evidence is not conclusive, the general presumption is that private schools may offer better quality of education.⁷ It is interesting to note that although government schools usually have well-qualified and trained staff, given that recruitment norms are of high standard, attendance at private schools is often much greater. What is perhaps important is a measure of active or effective teaching environment. In a few cases, private schools may have significantly superior facilities for teaching, laboratories and sports, and hence cater to a higher income group. But this is a small group and there is no

⁷ See Govinda and Varghese (1994), Varghese (1995), Bashir (1997) and Kingdon (1996b) for comparative analyses of government and private schools. See also De et al. (2000, pp. 20–21).

real competition between such schools and the government system. It is the large number of non-elite private schools that may be genuine competitors with government schools. However, the positioning of private schools *vis-à-vis* government schools is not necessarily the same in different states.

These questions have been explored to some extent by PROBE (1999), which surveyed four north Indian states, viz., Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh and found “a somewhat heartening and at the same time frustrating scenario where a massive surge in parental demand was counterpointed with a large-scale decline in the government schooling system” (De et al., 2000, p. 26). Demand for private education may be due to the lack of quality in general in government schools, including teacher absenteeism, lack of physical and human infrastructure. This may not necessarily be true in case of other states. Other than this, the survey finds no strong evidence to argue that private schooling was a response to differentiated demand.

In addition, there are several arguments being put forth in favour of private education. For example, it is argued that there is no justification for financing of education, out of public revenues, of those children whose parental ability to pay is very high. Particularly as about 85 per cent of the public revenues in India comprises indirect taxes, paid by the poor, public financing of education of the rich is regressive and should be discouraged.

Another argument, being made more forcefully nowadays with increasing marketisation of the economy, is that the educational system should reflect and be responsive to the changing socioeconomic conditions, particularly the rapidly developing market economy. It is also held that public school system would be incapable of meeting the challenge, and only a private system of education can deliver it.

Thus, private schools have been favoured in India on a few theoretical and empirical grounds, including quality, efficiency, job market relevance, quick response to market signals, income distribution, etc.

On the other hand, many point out that all these arguments are flimsy, and do not stand any rigorous empirical scrutiny. The inegalitarian nature of private schools is well noted by many. The private institutions practise exclusiveness through charging high tuition fee, and demanding alarmingly large capitation or donations. The tuition fee in the private institutions is so high that few lower

and middle class households can afford even to apply for admission in these schools. For example, in Mumbai, during the 1970s private schools (excepting a few private schools that have been established as charities) charged tuition fee ranging from Rs. 4–5 a month to upwards of Rs. 200 a month (Chitnis and Suvannathat, 1984) compared to tuition-free education in government schools. In Delhi, a typical private school presently charges Rs. 180–50,000 per annum as fees (De et al., 2000, p.3).⁸ Many schools are found charging Rs. 300–400 as registration fee for admission itself.⁹ Many ‘public’ schools quite deliberately exclude lower socioeconomic strata, taking economic status of parent as a criterion (see Kumar, 1987).¹⁰ By charging huge donations, capitation and very high levels of fees, these schools, which are, by definition, non-profit institutions, not merely cover their costs, but also make huge ‘quick profits’, which are not necessarily reinvested in education. These practices cannot be checked, as there exist close links between the managers of these institutions and ruling politicians. Kothari (1986, p. 596) expressed serious concerns in a study on Maharashtra, when he noted that “the objective of equal opportunities for education would be jeopardised in a big way. The overall effect would be to convert education into a force for reinforcing the existing stratification of the society.”

That there are strong disequalising forces inherent in a private educational system is well noted by some protagonists of privatisation themselves. A World Bank study rightly feared that private schools “turn out to be socially and economically divisive in the future” (Psacharopoulos and Woodhall, 1985, p. 144). Another policy study by the World Bank (1986, p. 23) recognised that increase in private financing at the primary level might obstruct universal coverage of basic education — a socially desirable goal. In case of India, it has already been found that there are disequalising forces inherent in private education and that the government school system has not been strong enough to counteract them. As a result, the whole educational system has become a disequaliser accentuating income inequalities (Dasgupta, 1979).

⁸ A committee appointed by the Government of National Capital Territory of Delhi (GNCTD, 1997) found that fees are charged in private schools in Delhi under as many as 50 heads.

⁹ *Times of India* (New Delhi), 9 November 2000, p. 2.

¹⁰ For example, a principal of a private school observed, “those parents who come to get their child admitted in a ‘public’ school are deemed to be rich.” *Times of India*, 9 November 2000, p. 2.

Equity demands that the basic education imparted to all children should be similar in content and quality. This could be met in a situation where the government sets minimum educational standards for all schools (although they could be privately managed). However, educational values are not uniform across schools; and “the philanthropic streak in the education sector is not much in evidence today and appears to have been replaced by a dominant commercialisation mode” (De et al., 2000, p. 4). If this is true it implies that in practice the more the government retreats or ceases to be proactive the more likely it is that elements of inequity may be introduced or strengthened within the school system.

Further, no evidence is available to show that external efficiency, as measured by say rate of return to education, of the private schools is higher than that of the government schools. Earnings associated with private schooling are not significantly higher than the earnings associated with government schooling, but private costs of education in private schools are quite high. As a result, the rate of return to private education could be quite low when compared to that of education in state-run schools. The advantage of private schools, if any, is also attributed to the element of monopoly rent, which the products of private schools enjoy due to their small share in the market.

If one looks at the actual functioning of the vast majority of private schools, it can be noted that rarely is the quality of education provided by a majority of private institutions satisfactory. If a few institutions provide quality education, that is more because of clientele homogeneity, which promotes consensus with respect to purpose.¹¹ Similarly, considerations for profit might ensure managerial efficiency (see Varghese, 1993).

From the point of view of the suppliers, motives of profit, influence, and political power explain the growth of these institutions (Rudolph and Rudolph, 1987, p. 296; Tilak, 1990). Educational considerations hardly figure in this context, not to speak of social and national considerations like social justice, equity, and efficiency. As a result, education is subject to vulgar forms of commercialisation. They do provide financial relief to the government, though not to students, in providing education, but at huge long-term economic and non-economic cost to the society (Kothari, 1986).

¹¹ See Govinda and Varghese (1993) for a detailed study that adjusts for clientele homogeneity in measuring the differences in quality. See also Varghese (1995).

To sum up, the conflict between the vested interests of the ruling elite on the one hand, and the social realities on the other, specifically the government's lack of political will to fund the provision of good quality education to all, led to the emergence of the dual system of education — a tiny sector providing expensive quality education for the privileged few through the private schools, known paradoxically as 'public' schools, and not so costly but poor quality education in a large number of private schools; and the public sector providing education of poor quality for the masses.

The private schools and colleges, aided as well as unaided, in India are found to be neither fulfilling the efficiency criterion or the equity principle, nor contributing significantly to educational finances in the country. Yet they are growing in number, particularly in, but not confined to, cosmopolitan urban areas to satisfy the needs of 'gullible parents', according to a report of the Ministry of Education (1985, p. 80). Furthermore, some state governments support their expansion, so long as they serve their vested interests. With the emergence and growth of such private schools, "the system of interlocking interests of capital, educated elites, bureaucrats and politicians is thus mutually supportive and complete" (Kothari, 1986, p. 596).

Given all this, it is argued that the benefits of education in private schools accrue largely to the elites, as the private sector attracts mainly the elites. These schools provide expensive and presumably quality education. On the other hand, the benefits of education in public schools in general go to the masses, as the public schools are compelled generally to choose quantity in the quantity-quality trade-off and, accordingly, provide inexpensive and poor quality education (Tilak, 1990).

Thus, there are equally strong arguments against such private schools, both on theoretical and empirical grounds, that will more than offset the arguments made in favour of private self-financing schools, a few important ones of which may be underscored in conclusion:

- (a) The private schools perpetuate inequalities in the system. Economic inequalities accentuate inequalities in access to education, which further perpetuates unequal access to economic opportunities, and this may form the most important source of inequalities in the society. This is the greatest danger posed by the private schools.

- (b) Similarly, the private school system may accentuate various existing biases, including gender bias (boys being favoured over girls), and location bias (urban areas being favoured over rural areas).
- (c) An equally important consequence of the growth of private schools is massive erosion in the quality and standards of education. The mushrooming of private schools — recognised and more importantly unrecognised — everywhere, with no proper control and regulation by the state, seriously affects the quality of education.
- (d) If allowed, the private school system, particularly the unregulated and the unrecognised one, may even eventually dominate the whole education scene, if not replace the government school system. This is already happening in higher education, particularly professional higher education. The number of professional private colleges is increasing rapidly in several states. The number of schools is also growing, with liberal policies of admission, and appearance for examinations at the end of the school-level in several states. Accordingly, the need for expansion of the public school system gets reduced. Education, a 'public good', will turn out to be a luxury good, and middle and even upper middle income classes may not afford it. It may become a monopoly of the rich.

Empirical evidence on all these aspects is known to everybody, though such evidence is not well documented.

To sum up, there has been a rapid expansion of both types of private — financially supported by the state and high-fee-charging self-financing — schools in India. While during the earlier decades government-aided schools have grown rapidly, in the more recent years, the unaided or self-financing schools are growing in number very fast. Thus the education system is increasingly getting 'privatised'.

In addition to the differentiated demand and the excess demand, government policy — what incentives are offered, how easy it is to start a school, or to obtain recognition of the government, etc. — also clearly plays a part in the expansion of private sector in education.

The different views and arguments about private schooling require close scrutiny. The debate over the appropriate role of private sector in education is far from being conclusive, and this paper seeks to make a small contribution to

the debate by examining the current status of private education, and the attributes of children in private schools in comparison with public schools with the help of the NCAER survey. It does not pretend to resolve many important issues in the debate on public versus private education. It at best throws more insights into the nature of growth of demand for private education.

3. SIZE OF THE PRIVATE SECTOR IN ELEMENTARY EDUCATION

NCERT periodically collects and publishes data on the number of schools under different types of management, and enrolment of pupils therein. Such data based on census enumeration of all schools in the country, provide valuable information on the size of and the growth in the public and private schools in the country and in several states in India. According to the latest survey (NCERT, 1998), private schools, unaided and government-aided together, constitute a small proportion of the total number of schools at primary level (see Table 1). Even at upper primary level the corresponding proportion is very small. It is only in urban areas that they are sizeable in terms of the proportions. In urban areas, they form about one-third at primary level and nearly half of the total number of schools at upper primary level.

Between the government-aided and unaided schools, the government-aided ones are larger in number in rural areas — both at primary and upper primary level — while in urban areas, the unaided schools are about two times the number of government-aided schools. On the whole, in rural areas, unaided schools are negligible in proportion at primary level, and account for a small proportion at upper primary level; but in urban areas they are sizeable.

But there has been a rapid growth in government-aided and private schools. It is important to note that private (unaided) sector is growing, though slowly, at the cost of government-aided sector in rural India. The relative size of the government-aided sector has shrunk over the years. The relative size of the government sector has remained constant or has marginally declined at primary level, and has shown a slight increase at upper primary level. In urban India, private (unaided) sector is growing rapidly at the cost of both government and government-aided sectors — both at primary and at upper primary levels. On the whole, in rural and urban areas together, both government and government-aided sectors seem to be shrinking in their relative size, and that of the private (unaided) sector is increasing, though private unaided sector is still a tiny sector — with less than 9 per cent of the total enrolments at primary level and around 11 per cent at upper primary level.

Enrolments in schools experienced a marginally different trend, as shown in Table 2. Enrolments in private (unaided) sector in rural India constitute a very small proportion, 3.5 per cent of the total enrolments at elementary level; but

in urban areas, about one-fourth of the enrolments at primary levels and a little less than one-fifth at upper primary level are accounted for by the private sector in 1993. The enrolments in unaided sector increased both at primary and upper levels clearly at the cost of government and government-aided sectors. On the whole, 75 per cent of the enrolments in elementary education in the country are in government schools, 16 per cent in government-aided schools and a little less than 10 per cent in private (unaided) schools.

State-wise differences in the relative size of the private schooling system are shown in Table 3. These data refer to 1992–93 and are drawn from the MHRD (Ministry of Human Resource Development), 1998. These figures, like the ones in Tables 1 and 2, exclude unrecognised schools. According to these figures, the private system is most visible at secondary and senior secondary levels. In Bihar the proportion is not significant at any level. Kerala has the largest number of primary schools under private management. In West Bengal almost all upper primary schools are under private management, but most of them are government-aided. On the other side, all primary schools in West Bengal, nearly all in Bihar, Himachal Pradesh and Orissa are government schools.

Table 4 shows the growth in enrolment in private (unaided) primary schools in India between 1986 and 1993. The percentage changes appear to be quite high. But this may be because of the low base. As a percentage of new enrolments also the performance of the private sector is impressive. In urban India, 61 per cent of all new enrolments among boys and 38 per cent among girls between 1986 and 1993 were accounted for by private unaided schools. However, taking Scheduled Castes alone, the percentage of new enrolment of boys and girls going to private unaided schools was 32 per cent and 20 per cent respectively, and the corresponding figures for Scheduled Tribes are 34 per cent and 25 per cent. In rural India, almost 30 per cent of new enrolments of boys and 9 per cent of girls were accounted for by private unaided schools (see also De et al., pp.13–15). These trends are suggestive of the biases expected from private schooling — favouring urban, male and non-Scheduled Castes/Scheduled Tribes. Much of this bias is due to the fact that larger expenditure is necessary to send children to private schools.¹²

¹² See Tilak (2000a, b) for a detailed account of household expenditure on education in India, by gender, caste and other characteristics such as religion.

The NCAER survey provides some important details on different dimensions of the size of the private education in rural India. According to the survey, 86 per cent of the sample villages have at least one government primary school and 11 per cent at least one private school. The private schools could be either recognised or unrecognised. About 10 per cent of the villages have both — at least one government and one private school. At upper primary level the extent of availability of schools is very small — 38 per cent of the villages have a government school, 5 per cent a private school, and only 2 per cent have a government school and also a private school (see Table 5).

According to the sample survey, at primary school level, Gujarat is the only state without any private schooling facilities (in the villages sampled). In Haryana, despite 97 per cent of the villages having a government school, 32 per cent also have a private school. Kerala displays a somewhat different pattern, with the government and the private systems being apparently complementary rather than competitive. Bihar, Madhya Pradesh and Orissa have no private upper primary schools in the villages sampled. In many states the picture tends to be that villages with government schools are unlikely to have private schools, and vice versa.

Whether the two systems are seen as competitive or complementary is important in order to judge the adequacy or otherwise of available government facilities and the quality of teaching in government schools. Simply on the basis of the details available, a couple of highly tentative observations that will have to be tested with the help of further research, can be made:

- In Haryana, there is an ‘unmet’ demand for primary education that is being met by private schools: although this could be either differentiated supply or a reflection of poor quality of education offered in government schools. In Kerala, in contrast, the two seem to complement each other.
- In general, private schools come up in areas where there is an already established demand for schooling. That is, they themselves cannot create new demand.
- On the whole, the relative size of the private education sector is small.

In fact, in terms of size private sector will remain small, because an expansion of the private sector beyond a point may change the composition of the clientele group, and reduce profitability and monopoly rent, leading to minimisation of

its relative advantages (Varghese, 1993). In fact, Varghese (1993) argues that any trend towards a large-scale privatisation of education may not be advantageous to the private sector whose advantages are based on scarcity rent. For the same reason, the size of the proper 'formal' private sector in school education in many developed countries remained small.¹³ The growth of private sector with the mushrooming of unrecognised and unregulated schools, and the teaching shops alike, will be more counter-productive, as the average quality of the whole private system would fall.

¹³ See Cummings and Riddell (1992) for details on a large cross-section of countries. See for a shorter version Cummings and Riddell (1994). See also several papers in the same issue of the journal. See also James (1991b) and Jimenez and Lockheed (1991).

4. PATTERNS OF ENROLMENT IN PUBLIC AND PRIVATE SCHOOLS

The NCAER survey provides certain interesting details on the attributes of the children going to government and private schools in rural India. An analysis of the data helps us in deriving certain patterns. The HDI survey gives the enrolment of children aged 6–10 and 11–14 years in schools by household income groups and by type of schools.

The available data on the enrolment and non-enrolment rates in the age group 6–10 are summarised in Table 6. Enrolment rates (in all schools together) systematically increase (and the corresponding non-enrolment rates systematically decrease) among both boys and girls, with the increase in the levels of household income. While 60.5 per cent of the children in the bottom income group (with an annual household income of below Rs. 20,000) are enrolled in schools, the proportion increases to 86 per cent in the top income group (with an annual income of above Rs. 86,000). At low income levels (up to Rs. 20,000 per household) 40 per cent of children are not enrolled in school. This figure drops steadily with an increase in household income, and is around 14 per cent for households with an income of over Rs. 86,000. The effect of income is similar in the case of non-enrolment of boys (the rate falling from 33 per cent to 12 per cent) and girls (the rate falling from 45 per cent to 15 per cent). A slightly larger proportion of boys are sent to private schools than girls, but there is nothing dramatic about this difference (see Table 7).

The percentage of Scheduled Caste and Scheduled Tribe children who are not in school is over 42 per cent, compared with only 26 per cent for other castes (see Table 6). Among male children belonging to Scheduled Tribes, 37 per cent are not in school, while the figure is a little less, 35 per cent for Scheduled Castes and 21 per cent for other castes. In the case of girls, over 50 per cent are not enrolled among the Scheduled Tribes, 48 per cent for Scheduled Castes and 32 per cent for others.

The non-enrolment rate among Muslims is the highest and is more or less equivalent to the rates relating to the Scheduled Caste and the Scheduled Tribe children. Christians have the lowest non-enrolment percentage (13–14 per cent for boys and girls).

All this shows the general pattern of inequalities in enrolments in primary education between children belonging to different socioeconomic groups in rural India. Considering any aspect — economic, caste or religion — girls are at a disadvantage. The non-enrolment rates are higher for girls than for boys in any group. This is not a new phenomenon. But more importantly, one may notice that the gender differences are larger in case of low income groups than in case of high income groups; larger among Scheduled Tribes than among others. They are also the least among Christians and the highest among Hindus. The differences are marginally less among Muslims than among Hindus.

From now on, we shall concentrate on enrolled children to look at their distribution between government and private schools. The distribution of enrolments in different types of schools by characteristics such as household income reveals quite a few important aspects.

It is quite important to note from Table 7 that in every household income group, a majority of the children go to government schools. This figure ranges between 60 per cent and 73 per cent. In all, 69 per cent of the children in the age group 6–10 and 66 per cent of the children in the age group 11–14 are enrolled in government schools, while the corresponding proportions are 11.1 per cent and 8.4 per cent for the private (unaided) schools, and 20 per cent and 25 per cent for the government-aided schools, respectively.¹⁴

The government-aided schools account for the second largest group, though far below the size of the government schools. Among the different income groups, the only exception is the top income group which has a larger proportion of children going to private primary schools, compared to government-aided schools (but still a majority goes to government schools). In fact, in the top income group, the proportion of children going to private schools is nearly double the proportion going to government-aided schools at primary level. This is true in general, with respect to both boys and girls, and all. But for the top income group, in all cases, children going to government-aided schools outnumber the children going to private schools, though together they constitute much less than the proportion going to government schools.

¹⁴ The distribution of children by type of schools is discussed here for age groups 6–10 and 11–14, and this classification does not necessarily mean that children are enrolled in primary and upper primary levels of education, respectively. It actually refers to their enrolment in schools (primary, upper primary, secondary or senior secondary), but they may be mostly in primary or upper primary levels.

The pattern of enrolment rates of girls in government-aided schools does not follow a consistent pattern as income levels change. In all, these figures show that even among the rich a vast majority of the children are enrolled in government schools. Enrolments in government schools and also government-aided schools decline by household income groups, and correspondingly the enrolment rates in private schools increase steadily and consistently among both boys and girls in the age group 6–10; in the age group 11–14 the pattern is not highly systematic, though it is more or less similar. On the whole, all this depicts the close association between household income and demand for private education.

Enrolment rates by caste groups given in Table 8 also show a systematic pattern. Among all the three caste groups identified, a majority of the children go to government schools. The higher the caste hierarchy, the higher is the enrolment of children in private schools. The enrolment rate of Scheduled Tribe children in government primary schools is the least, and that of the Scheduled Caste is the highest. In the private schools, the enrolment rate of the Scheduled Tribes is the least, 3.6 per cent in the age group 6–10; while it is 6.0 per cent among the Scheduled Castes, and 12.5 per cent among the other castes. An exactly similar pattern could be observed in case of children in the age group 11–14 as well.

In case of distribution by religion, except in case of Christians, a majority goes to government schools; in case of Christians the choice is more in favour of the government-aided schools. The enrolment rate in government schools is the highest among 'other minorities' (other than Hindus, Muslims and Christians) followed by Hindus. The choice in favour of private schools is the least among Hindus and Christians. Among Muslims and other minorities, about 16 per cent of children in the age group 6–10 go to private schools.

Thus the first preference in primary education among all the income groups, all the caste groups, and all religious groups (except Christians) is for the government schools; government-aided schools receive the second preference, except of Christians and other minorities, and the private schools the last preference. For Christians the government-aided sector is the first preference, and for other minorities the private sector is the second preference.

While the enrolment patterns in rural India are somewhat systematic in relation to household income, caste and religion, no systematic pattern can

however be observed when we analyse the same by level of education of the parents as in Table 9, or by the occupation of the parents as in Table 10. Nearly equally sizeable number of children with illiterate parents are found both in government schools, including government-aided schools, and also in private schools, though there are small variations. While more than 30 per cent of the children enrolled in government schools are those whose fathers are illiterate, the corresponding proportion is a little less than 30 per cent in case of private schools. Children with their fathers educated (graduation and above) constitute a large proportion (18 per cent in case of boys and 21 per cent in case of girls) in private schools. These figures are much higher (nearly twice) than the figures relating to the corresponding groups in government schools. In government schools, the enrolment percentage is around 8 per cent only, suggesting that higher educated parents may prefer private schools for their children than less educated parents. But this is not completely true, as the proportion of children in private schools whose fathers are educated (graduate and above) is less than the proportion of children whose fathers are illiterate. The differences are large only in case of children whose fathers are matriculate and above. A similar pattern could be noted in case of mother's education as well.

Among the children enrolled in government schools or in private schools in rural India, majority includes those whose fathers are engaged in cultivation and allied activities, as shown in Table 10. The second largest proportion belongs to the occupational category of salaried and qualified professionals. A majority of the children in private schools are also those whose mothers are engaged in 'organised business and trade' or are salaried and qualified professionals. There are, of course, differences in these proportions between government and private schools. But for these, one may not be able to derive any meaningful pattern in the distribution of students in public and private schools by parental occupation. However, a couple of points can be made. A larger number of children with their fathers occupied in cultivation and allied activities go to government or government-aided schools than private unaided schools. On the other hand, among the children whose fathers are salaried and qualified professionals, a larger proportion opts for private schools than government and government-aided schools. Among the occupations of the mothers, salaried and qualified professionals, and also those involved in organised business and

trade, seem to send their children to private unaided schools instead of government schools. But for these, one does not find significant differences in the enrolment pattern.

Inter-State Variations

The variations in enrolment rates in different types of schools between several states are large, as the figures in Table 11 indicate. Except in case of the North-Eastern region, West Bengal and Kerala, in all other states a majority of the children in the age group 6–10 — ranging between 56 per cent in Uttar Pradesh and 96 per cent in Rajasthan — go to government schools in rural areas. The rest go to government-aided or private schools. In West Bengal, North-Eastern region and Kerala, government-aided schools account for the largest proportion of enrolments — 92 per cent in the North-Eastern region, 77 per cent in West Bengal, and 56 per cent in Kerala.

In eight out of the 16 major states in India, private unaided schools account for less than 5 per cent of the enrolment of the children in the age group 6–10, as summarised in Table 12. On the other side, in Punjab and Uttar Pradesh more than one-fourth of the children are enrolled in private schools. In other states, enrolment rates in private schools are either modest (between 5 and 10 per cent), or high (between 10 and 15 per cent). Private schools account for the least enrolment between 1 and 1.6 per cent in the North-Eastern region, West Bengal and Gujarat.

A similar, but not exactly the same pattern could be noted in case of children in the age group 11–14. It is only in Uttar Pradesh, where unaided schools account for 23 per cent of the enrolments, and in another four states (Maharashtra, Punjab, Karnataka and Haryana) that the enrolment rate is above 10 per cent; in all other states it is less than 10 per cent, in seven states it is less than 5 per cent. In the North-Eastern region and West Bengal, the share of the unaided schools is the least.

In general, we note in several tables that a larger proportion of the children go to private schools at primary level than at upper primary level, though there are quite a few exceptions. Or more correctly, a larger number of younger children (in the age group 6–10) go to private schools than older children (in the age group 11–14), the exceptions are Maharashtra, Karnataka, Himachal

Pradesh, Gujarat and Rajasthan. In Maharashtra less than 1 per cent of the children in the age group 6–10 go to private schools, whereas in Uttar Pradesh the corresponding proportion is over 30 per cent. In other states, the difference is marginal.

One can infer from all this that no systematic pattern in rates of enrolment of children in different types of schools in different states exists in the sense that enrolment rates in government or private schools cannot be related to the level of economic development or educational development of the state.

Table 13 shows the private school enrolments as percentage of all enrolments for boys and girls separately, in rural areas of various states. No significant gender differences could be found in private enrolment rates in Tamil Nadu, Orissa, Andhra Pradesh and Uttar Pradesh. In fact, in Tamil Nadu and Orissa the female–male ratio is in favour of girls. Maharashtra and West Bengal show the highest bias in favour of boys. Gender gaps persist for reasons other than simply a shortage of schools, and include differential expectations and constraints within families on boys and girls (see for example Karlekar, 2000). This could be more true in rural areas. Thus neither the enrolment rates in private schools, nor the gender differences could be found to have any relationship with education and/or economic development of the state.



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5. DEMAND FUNCTION: DEMAND FOR PRIVATE EDUCATION

A probit model is used to estimate the demand function, household demand for private education, as the dependent variable on demand for private education (PVTENRL) is measured as a dichotomous variable. The model explains the probability of a child getting enrolled in a private school instead of a government (or government-aided) school, with the help of a few important variables. The choice a child (and his/her parent or household) has: no schooling (non-participation in schooling) versus participation in schooling. If a child participates in the school, the choice is between a public (including government-aided) school and a private school. Thus a multinomial model can be used for estimation of the demand function. But the choice framework chosen here focuses only on children going to school. Then the choice is between public and private schooling. The dependent variable in estimating the model is binary, taking the value of one if a child goes to a private school, zero otherwise (if a child goes to a public school). PVTENRL is defined as a dummy variable, as follows:

$$\begin{aligned} \text{PVTENRL} &= 1, \text{ if the child is enrolled in a private school.} \\ &= 0, \text{ otherwise.} \end{aligned}$$

Accordingly a binary discrete choice model is estimated here using binary probit method, to explain the behaviour of a dichotomous dependent variable.

The choice of the explanatory variables used in the model is influenced by the availability of data, the results of earlier research on demand for education, and common perceptions. The variables chosen include household characteristics; socioeconomic, demographic, occupational, educational background of the parents; attributes of the child and village-level features.

One can expect social, economic, and demographic characteristic features of the households to have considerable influence on the demand for education in general, and demand for private education in particular. Accordingly, a few important variables are chosen to reflect socioeconomic aspects of the households.

Economic levels of the household are generally found to have a significant influence on the demand for education. Household income may be the best measure to refer to household economic levels, among the available ones.¹⁵

¹⁵ Household income and household economic productive asset index are found to be highly correlated. See Tilak (2000b).

We expect that this would influence demand for private education positively.

Since private education is also regarded as socially prestigious, one can expect that higher the caste hierarchy one belongs to, higher would be the probability of demand for private education and vice versa. It could be the same in case of religion. Religious variables may help in verifying the hypothesis on differentiated demand, i.e. private education is demanded for religious reasons, as private schools may offer religious education of choice. Accordingly, both caste and religion are included in the model as independent variables.

The size of the household can be regarded as an indicator of 'demographic burden' on the household. A larger size of the household, with a number of male and female children and other members, might indicate lower levels of participation in schooling in general, and lower levels of participation in private schooling in particular, as private schooling is more expensive.

Is there any difference expected between the demands of older and younger parents as regards private education for their children? This is examined by considering age of the father and also of the mother of the child as two explanatory variables in the demand function.

Another important variable that is considered relates to the educational levels of the parents of the child. Higher educated parents may be concerned about the quality of education, and so enrol their children in private schools, given the general presumption that private schools provide quality education. Does mother's education have more effect or less effect than father's education on the demand for private education? To analyse this, the educational levels (years of schooling) of both father and mother are considered as two separate independent variables.

Occupational levels of the parents may also be expected to influence the nature of demand for education — private education or public education. Occupation of the head of the household is considered in the model.

Among the individual characteristics, the gender of the child may be regarded as the most important factor. General prevalence of gender discrimination implies that households might tend to discriminate against the girl children, in contrast to male children, in sending them to private schools, which are relatively more expensive. The age of the child is also included as

individual characteristic, to see whether it has any effect on household demand for private education.

The level of development of villages is considered as an explanatory variable. Individual and household decisions are considerably influenced by the social environment. While the total social environment cannot be comprehensively described by any one indicator, the level of development of villages can be expected to reflect the social environment in which the households are situated. Two alternative indices, viz., a 'development factor' and a village development index were constructed by the NCAER. The village development index is preferred to the other and is used here, as it is based on the availability of different facilities in villages,¹⁶ while the development factor is based on the existence/non-existence of programmes of the governmental or non-governmental organisations.¹⁷ It is presumed that the former would reflect the level of development of villages better. One can expect a positive relationship between village development index and the household demand for private education.

The quality and quantity of public schooling facilities can also significantly influence the demand for private education. If the quality of government schooling facilities is poor, children may opt for private schooling. But we do not have any data specifically on public schooling facilities. Of course, we do not have any information on private schools either. However, information on pupil-teacher ratio, which is presumed to refer to government schools only, is available. In the absence of any other better measure, this may be considered as reflective of the quality of education offered in government schools in rural areas, or at least reflect the atmosphere of active teaching in schools.

Generally it is felt that the demand for private education arises essentially because of the superior quality of education offered by the private sector, and also the medium of instruction offered being English. Simultaneously, the demand for private education is also attributed to the poor quality of education in government schools and the medium of instruction, which is mostly the regional

¹⁶ It is based in all, on 45 variables on (a) infrastructure and amenities (roads, bus stop, and railway station), communications (post office, and telephones), information and entertainment (television, radio, and library/reading room), economic infrastructure (bank, and market/*mandi*), and necessities and amenities (drinking water, pharmacy, and street lighting), (b) education, including availability of incentives in schools, (c) health, and (d) others (irrigated area, government and NGO schemes of development in the village).

¹⁷ The government/NGO schemes or programmes relate to education, health, housing, water supply, sanitation, electricity, women's welfare, credit, employment, skill development, etc.

language in the given state. The demand for private education is also believed to have grown due to public policies favourable to the private sector. Unfortunately, we do not have any data to examine any of these aspects in depth. The analysis largely focused on households and a few aspects relating to villages or schools.

Thus a large set of factors is considered that reflect socioeconomic, educational, occupational and other household characteristics and a few factors that refer to the village development. In all, the following variables are considered in estimating the demand function:

Notation and Description of the Variables Used in the Regression Analysis

Dependent Variable

PVTENRL = 1, if enrolled in private school
 = 0, otherwise

Explanatory Variables

HHY/pc : Total annual income of the household per capita (Rs.)
 SIZE : Size of the household (number of members of the household)
 AGE-F : Age of the father of the child
 AGE-M : Age of the mother of the child
 GENDER : Sex of the child (dummy variable) = 1, if male
 = 0, otherwise (if female)
 AGECHLD : Age of the child
 CASTE : Caste (dummy variable)
 = 1, if Scheduled Caste/Tribe
 = 0, otherwise (if non-Scheduled Caste/Tribe) ('Others')

Religion (dummy variables)

HINDU = 1, if Hindu
 = 0, otherwise
 MUSLIM = 1, if Muslim
 = 0, otherwise
 CHRISTIAN = 1, if Christian
 = 0, otherwise
 SIKH = 1, if Sikh
 = 0, otherwise

OTHERS = 1, if belongs to other religions
= 0, otherwise

Since the five religious groups are mutually exclusive and exhaustive, 'OTHERS' is excluded while estimating the model.

Primary Occupation of the Head of the Household (dummy variables)

CULTIVAT = 1, if cultivation, and allied agricultural activities, such as
cattle-tending
= 0, otherwise
WLAB = 1, if agricultural or non-agricultural wage labourer
= 0, otherwise
ARTISAN = 1, if artisan/independent work or petty shop/small business
= 0, otherwise
ORGTRADE = 1, if organised business/trade
= 0, otherwise
SALARIED = 1, if in salaried employment/pensioner/other qualified
professional
= 0, otherwise
HHWK = 1, if engaged in own household/family work/domestic
servant
= 0, otherwise
RENTIER = 1, if rentier (living on income from rent, interest, dividends,
etc.)
= 0, otherwise
OTHERS = 1, if others (unemployed, domestic work, or others)
= 0, otherwise

Since the eight occupational categories are mutually exclusive and exhaustive, 'OTHERS' is excluded while estimating the model.

Educational Levels (Years of Schooling¹⁸) of Parents of the Child

EDN-F : Years of schooling of the father of the child
EDN-M : Years of schooling of the mother of the child

¹⁸ Years of schooling refers to cumulative years of schooling of a given level of education. It is defined as follows: illiterate: zero; below primary: 4; middle: 8; matriculation/secondary: 10; graduation and above: 16.

Village Characteristics

VDI	:	Village Development Index
PTR	:	Pupil–Teacher Ratio (in the primary school) (average number of pupils per teacher) in government schools in the village

Results

Though a large number of variables are considered, it is clear that some important variables are missing in the specification. The demand for private education critically depends upon the cost of private education in comparison with cost of education in public schools, and rates of return to private education versus rates of return to education in public schools. But these aspects could not be considered here. In addition, the quality of private education *vis-à-vis* public education is also important. PTR cannot reflect this adequately. Thus the model largely considers only the household factors. Only the VDI and PTR are other variables considered. Despite these and other shortcomings, results of the estimated model throw much light on the probable factors that influence the demand for private education.

The demand function is estimated by using maximum likelihood probit method.¹⁹ The set of variables used in the econometric analysis and their means and standard deviations are given in Table A.2 in the Appendix.

Since the sample size is large, one may not expect that multi-collinearity would be severe. Further, inter-correlation matrix of all the independent variables used in the regression analysis, given in Table A.3 in the Appendix does not show high correlation between any two explanatory variables.

Table 14 presents the maximum likelihood probit estimates of the probability of a child going to a private school as against a government school. It is difficult to understand the magnitude of the effects of the various factors from the probit coefficients. Hence, the marginal values are also presented. These are analogous to the OLS estimates, which are also given in the same table.

Most of the coefficients are statistically significant at 99 per cent level of confidence. The results provide some important insights into the demand function. As expected, as household income increases, households tend to

¹⁹ The software used was LIMDEP 7.0.

demand private education for their children. That private education caters to the needs of the better-off sections of the society is well known.

As the demographic burden on the households, measured in terms of the size of the household (SIZE), increases, households may not be able to spend more on education, as demand for resources for alternative purposes increases. So one can expect a negative relationship between household size and household demand for private education, which is more expensive. But the results show that this is not true. Somewhat unexpectedly, the size of the household is also positively and significantly related to the demand for private education. If the size of the household is large, the probability of the child going to a private school is high!

The social status is measured in terms of caste and religion. The dummy variable on caste (equalling 1, if one belongs to Scheduled Caste/Tribe, and 0 otherwise) has, as one can expect, a negative effect on the demand for private education. The probability of enrolling in a private school is less if the child belongs to Scheduled Caste/Tribe, than if he/she belongs to other (forward) caste.

Four dummy variables are introduced on religion. Coefficients of all the four are statistically significant and all are positive in value. The values of the coefficient might suggest that the probability of sending a child to a private school is higher, if he were a Sikh. Next comes Muslims. The demand for private education is the least among Hindus and Christians. This may partly substantiate the differentiated demand argument as a factor responsible for growth in demand for private education.

Education levels of the parents can be expected to have a positive effect on household demand for education, including specifically private education. Education increases the awareness of the benefits of education and accordingly households with higher educated parents may be concerned about the quality of education and send their children to private schools, assuming that private schools offer higher quality education. Such a presumption is found to be holding true. As the education level of father or mother increases, demand for private education also increases. Education level is measured in terms of cumulative years of schooling. The values of the coefficients suggest that the probability of sending a child to a private school is much higher if father is

more educated, than in a case where mother is more educated, though both have a positive influence.

Occupation of the head of the household is considered as a dummy variable (in fact, as 8 dummy variables). The results do show a meaningful pattern, though coefficients of as many as three of the variables are not statistically significant. The results suggest that occupational category of the head of the household influences the demand for private education for the children; the effect could be positive, significant and high in case of salaried and qualified professionals, and artisans, and least in case of those engaged in organised business and trade. The probability of going to a private school is negative in case of the household whose head is a wage labourer. The probability is negative but not statistically significant in case of the household whose head is a cultivator or a rentier, etc.

Regarding the influence of the age of the parents on the demand for private education for their children, the coefficients of age of the father (AGE-F) and that of the mother (AGE-M) show conflicting results: they have different effects on the demand for private education. The age of the father has a negative and statistically significant effect and the age of the mother has a positive but not a significant effect on the demand for private education for their children. The coefficient of AGE-M is not statistically significant. Younger fathers might like to put their children in private schools, and it is only older mothers who have a similar preference!

Among the attributes of a child, two are considered important, viz., gender and age. They are included in the equation and both are statistically significantly related to private schooling. GENDER of the child (dummy variable taking the value of 1 if male, and 0 otherwise, i.e. if female), is positively related: the probability of a male child going to a private school is more than the probability of a girl child being admitted into a private school.

The coefficients of AGECHLD indicate that younger the age of the child, higher is the demand for private education. It has been observed earlier that more children go to private schools at primary level (or in the age group of 5–10), than at upper primary level (or in the age group of 11–14). It suggests that parents would enrol their younger children in private schools and may tend to transfer them to government schools as they grow older.

Contrary to general expectations, pupil–teacher ratio (PTR) in government primary schools in rural areas seems to have a negative influence on the demand for private schooling. The coefficient is statistically significant (at 95 per cent level of confidence) and negative in value. Higher PTR in government schools may represent, at least in some cases, big schools, and parents may prefer sending their children to such schools rather than to small private schools.

The village development index (VDI) reflects the level of development of a village, in terms of amenities available. The higher the level of development of a village, one can expect that higher would be the probability of a child enrolling in a private school. But the coefficient is small in value and statistically not significant, showing no statistically significant relationship between the development of a village and the demand for private education.

In all, the econometric results of the demand function discussed here reveal certain important dimensions on the probable factors that influence the demand for private education in rural India. Some results validate, and some question our general presumptions. Some results that cannot be explained are also observed. The third category of results include different and rather mutually contradictory effects of variables referring to the age of the father and the mother of the child on the demand for private education for the children.

An important caveat related to the model: Problems associated with the specification of the model are already noted; information particularly on the quality and quantity of public and private schooling facilities available in each village is critically missing. Inclusion of relevant variables on these aspects would have made the model less incomplete, and would have yielded more highly useful results.

6. SUMMARY AND CONCLUSIONS

Although universalisation of elementary education is a recognised constitutional responsibility of the State in India, private sector in the area is significant in size. The role of the private sector is important to understand for many reasons, and especially so in the context of contemporary debates on the appropriate roles of public versus private (including non-government) sectors in education. This paper presents a brief review of alternative explanations and views on public versus private schooling in India. With the help of a huge sample survey of households conducted by the NCAER in 1994 in rural India, supplemented with the data available from the All-India Educational Surveys conducted by the NCERT, it empirically analyses several dimensions of private education — the relative size of the private sector, its growth, attributes of children going to private schools, and demand for private education in rural India. Unlike most earlier macro-level studies in this area, the paper makes a distinction between government-aided private schools and unaided private schools. As the aided sector is more akin to government school system, the paper focuses on unaided private school system as the private system of education in India.

It has been observed that private sector is small in size; it is confined mostly to the urban areas, and has grown rapidly in the recent years. It is also growing in the rural areas, though slowly, and concurrently there has been a decline in the relative size of the government and the government-aided sectors in education. This may lead us to observe that the expansion of private schools seems to be a result of reduced dynamism in the state sector combined with increased willingness to spend on education on the part of households. The private sector has clearly grown at the cost of the government and the government-aided sectors in education. But at the same time, it cannot be said that government and private schools are competitive with each other. A vast majority of children from any economic or social background — high or low — attend government schools. The second preference is for government-aided schools; the private schools are the last preference. The characteristics of private schools are such that it is felt that the private sector cannot but remain small in size, relative to the public sector.

An analysis of the characteristic features of the students going to private and government schools highlights the economic, social (caste and religion),

gender and regional (inter-state) inequalities in education in rural India. Private schools may strengthen the forces of inequity further. Certainly there is no evidence to suggest that the private system counters existing gender and other biases; if anything, the pattern of enrolment is a manifestation of these biases.

Despite the limited nature of the econometric model used and its specification, the probit estimates of the demand function shed some light on certain important probable factors that influence the demand for private education in rural India. Demand for private education is influenced considerably by household economic factors, social factors such as caste, and parental background such as educational and occupational levels. With respect to household incomes, caste and education of the parents, a systematic pattern could be noted — probability of a child going to a private school is higher among the households of higher strata. Besides, a clear gender bias could also be observed. The bearing that the age of father versus mother's age has on the demand for private education of the child is also evident.

Further, inter-state variations in private education and other closely related aspects of education such as gender disparities could not be explained in terms of educational and economic development levels of the state.

Therefore, further expansion of the private system is likely to cater to some sections only; and it is not likely to help in the task of extending schooling to remote and otherwise neglected areas and populations. Private schools cannot promote equity in the system.²⁰ Rarely do they complement the state school system. As they cannot generate demand on their own, they are found essentially where a government school exists and demand for schooling is clearly evident. Therefore, the private sector normally does not help in meeting the 'excess' or the unmet demand of the people for elementary education. Probably it meets only the 'differentiated' demand.

All this has a clear policy implication. The private sector cannot be relied upon for achieving the goals of universal elementary education in the country.

²⁰ This is true at the aggregate; but there may be certain kinds of non-government initiatives that do aim at promoting the interests of the weaker sections. Similarly, quite a few private schools have made a good number of innovations and educational experiments, although one might find some such experiments in government school system as well. But it is not possible to explore these aspects, unless one makes in-depth micro-level case studies.

The question is not one of promoting or prohibiting the private school system; it is one of revitalising the government school system. The State has no choice but to shoulder the entire responsibility in this regard. That is, perhaps, what is enshrined in the Constitution of India also. The growth of private education also makes it imperative for the State to pay serious attention to the deteriorating quality of education in government schools. The State may also have to think in terms of meeting differentiated demand at primary and upper primary levels of education with appropriate strategies.

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TABLE I
Distribution of Primary and Upper Primary Schools across Public and Private Schools in India
(per cent)

	Primary			Upper Primary			Elementary			
	1973	1978	1986	1973	1978	1986	1973	1978	1986	1993
<i>Rural</i>										
Government	95.3	96.4	96.5	95.4	81.2	79.7	86.7	93.7	93.3	93.6
Government-aided	3.8	2.6	2.5	2.9	15.5	15.4	7.5	4.4	5.3	3.8
Private	0.9	0.8	1.0	1.8	3.3	4.9	5.7	1.2	1.7	2.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total (thousands)	414.2	431.6	475.8	507.8	75.2	113.1	129.2	525.8	588.9	637.1
<i>Urban</i>										
Government	73.7	68.3	62.7	66.0	64.1	55.3	51.2	67.1	60.3	60.8
Government-aided	17.6	22.5	20.6	11.3	24.0	20.4	17.2	22.9	20.5	13.4
Private	8.7	9.2	16.7	22.8	11.9	24.3	31.6	10.0	19.2	25.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total (thousands)	41.6	43.0	52.9	62.9	18.2	25.9	33.6	61.2	78.8	96.5
<i>All-India</i>										
Government	93.4	94.0	92.1	92.1	77.6	75.1	79.5	90.8	88.6	89.3
Government-aided	5.0	4.4	4.3	3.8	17.7	16.3	9.5	7.1	6.8	5.1
Private	1.6	1.6	2.6	4.1	4.7	8.6	11.0	2.1	3.8	5.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total (thousands)	457.8	474.6	528.7	570.5	90.2	139.0	162.8	548.0	667.7	733.3

Source: Based on NCERT (1973, 1978, 1986, and 1998).

TABLE 2
Distribution of Enrolment in Primary and Upper Primary Schools by Type of Schools in India
(per cent)

	Primary				Upper Primary				Elementary			
	1973	1978	1986	1993	1973	1978	1986	1993	1973	1978	1986	1993
<i>Rural</i>												
Government	91.3	91.7	91.4	90.5	58.1	58.6	65.6	67.7	89.9	85.9	85.9	85.3
Government-aided	7.9	7.5	7.4	6.7	36.5	37.5	29.2	25.8	9.1	12.7	12.0	11.1
Private	0.8	0.8	1.2	2.8	5.4	3.9	5.2	6.5	1.0	1.3	2.0	3.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total (lakhs)	471.2	519.3	658.3	724.7	21.4	109.6	177.3	214.8	492.6	628.9	835.6	939.5
<i>Urban</i>												
Government	64.2	61.6	55.7	52.3	44.9	45.4	44.8	41.5	61.6	56.8	52.2	48.6
Government-aided	27.3	28.4	26.3	22.0	48.8	49.7	40.6	39.7	30.2	34.7	30.9	28.0
Private	8.5	10.0	18.0	25.7	6.3	6.9	14.6	18.8	8.2	9.1	16.9	23.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total (lakhs)	141.3	166.7	201.1	245.6	21.6	70.0	95.4	126.0	162.9	236.7	296.5	371.6
<i>All-India</i>												
Government	85.1	84.4	83.1	80.1	53.0	53.5	58.3	58.0	83.0	77.9	77.1	74.9
Government-aided	12.3	12.6	11.8	10.6	41.2	41.4	33.2	30.9	14.2	18.6	17.0	15.9
Private	2.6	3.0	5.1	8.6	5.8	5.1	8.5	11.0	2.8	3.6	5.9	9.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total (lakhs)	612.6	686.0	859.1	970.3	43.0	179.6	272.7	340.7	655.6	865.6	1131.8	1311.1

Source: Based on NCERT (1973, 1978, 1986, and 1998).

TABLE 3
Percentage of Schools under Private Management, 1992-93

State	Primary (up to Class V)	Middle (up to Class VIII)	Secondary (up to Class X)	Higher Secondary (up to Class XII)
Andhra Pradesh	6.5	18.0	21.7	48.0
Assam	3.4	11.3	42.5	0.4
Bihar	1.0	3.4	6.3	9.5
Gujarat	5.3	13.9	90.0	89.9
Haryana	3.8	1.1	18.0	26.9
Himachal Pradesh	1.5	5.6	13.0	11.2
Karnataka	6.4	18.3	68.0	65.0
Kerala	61.0	66.0	60.5	25.0
Madhya Pradesh	7.8	19.0	33.0	29.0
Maharashtra	8.6	7.8	90.5	91.0
Orissa	1.4	55.4	91.6	0.0
Punjab	2.4	9.6	15.9	21.0
Rajasthan	9.0	18.7	10.6	25.9
Tamil Nadu	16.7	33.8	38.0	55.0
Uttar Pradesh	9.6	45.5	80.7	83.5
West Bengal	0.0	99.8	99.8	97.0
<i>All India</i>	7.0	24.0	55.0	58.0

Source: MHRD (1998).

TABLE 4
**Percentage of Increase in Enrolment between 1986 and 1993 in
Private (Unaided) Primary Schools in India**

	Scheduled Castes	Scheduled Tribes	All
<i>Urban</i>			
Male	32.4	34.4	61.8
Female	20.6	25.4	37.9
Total	26.0	29.8	48.8
<i>Rural</i>			
Male	7.4	3.9	29.2
Female	4.1	2.6	9.1
Total	5.7	3.3	16.4

Source: NCERT (1998).

TABLE 5
Percentage of Sample Villages Having Government and Private Schools

	Primary		Middle/Upper Primary		Govt & Private
	Govt*	Private	Govt*	Private	
Andhra Pradesh	92.9	20.5	33.9	4.5	3.6
Bihar	92.2	12.1	42.2	0.0	0.0
Gujarat	96.6	0.0	44.3	2.3	1.1
Haryana	97.8	32.2	50.0	8.9	4.4
Himachal Pradesh	74.6	11.1	38.1	6.4	6.4
Karnataka	91.1	13.5	57.8	8.2	7.4
Kerala	30.7	25.5	10.7	10.7	0.0
Maharashtra	96.7	5.3	44.4	12.6	5.3
Madhya Pradesh	93.6	2.3	32.3	0.0	0.0
Orissa	77.5	1.0	53.9	0.0	0.0
Punjab	94.3	14.3	57.1	1.4	1.4
Rajasthan	92.5	13.2	44.3	4.7	1.9
Tamil Nadu	80.3	19.7	32.9	6.6	1.3
Uttar Pradesh	70.8	14.8	18.1	7.4	0.0
West Bengal	100.0	2.6	23.1	1.3	0.0
North-Eastern Region	91.0	4.5	34.3	7.5	1.5
Total	86.4	11.4	37.7	5.1	2.0

* Includes government-aided schools.

Source: NCAER Survey.

TABLE 6
Rates of Enrolment and Non-enrolment of Children 6-10 years by Household Income Group
(per cent)

	Boys		Girls		All	
	Enrolment	Non-enrolment	Enrolment	Non-enrolment	Enrolment	Non-enrolment
	Total	Total	Total	Total	Total	Total
<i>Household Income Group</i>						
< 20,000	66.9	33.1	53.7	46.3	60.5	39.5
20,001-40,000	76.2	23.8	66.0	34.0	71.6	28.4
40,001-62,000	81.6	18.4	70.8	29.2	76.6	23.4
62,001-86,000	87.0	13.0	76.5	23.5	82.1	17.9
> 86,000	87.3	12.7	84.1	15.9	85.7	14.3
<i>Caste Group</i>						
Scheduled Tribes	62.7	37.3	49.6	50.4	56.6	43.4
Scheduled Castes	64.2	35.8	51	49	58.1	41.9
Others	79.0	21.0	67.2	32.8	73.5	26.5
<i>Religion</i>						
Hindus	73.5	26.5	61.2	38.8	67.7	32.3
Muslims	62.0	38.0	52.5	47.5	57.4	42.6
Christians	86.4	13.6	86.0	14.0	86.2	13.8
Other Minorities	78.7	21.3	72.8	27.2	75.6	24.4
<i>Rural India</i>	75	25	61	39	67	33.0

Source: NCAER Survey.

TABLE 7
Distribution of Enrolments in Schools across Various Types and by Household Income Group
(per cent)

Household Income	Age Group: 6-10				Age Group: 11-14			
	Govt- ment	Govt- Aided	Private	Total	Govt- ment	Govt- Aided	Private	Total
<i>All</i>								
< 20,000	71.4	20.5	8.1	100	68.3	25.6	6.1	100
20,001-40,000	67.0	20.9	12.1	100	65.3	26.0	8.7	100
40,001-62,000	65.4	19.8	14.8	100	61.5	27.7	10.8	100
62,001-86,000	64.9	18.2	16.9	100	68.7	21.5	9.8	100
> 86,000	67.8	11.3	20.9	100	63.6	19.3	17.1	100
All Groups	69.0	19.9	11.1	100	66.3	25.3	8.4	100
<i>Boys</i>								
< 20,000	70.3	20.3	9.4	100	69.1	24.1	6.8	100
20,001-40,000	65.7	20.6	13.7	100	66.1	24.4	9.5	100
40,001-62,000	63.6	19.9	16.5	100	60.6	27.9	11.5	100
62,001-86,000	63.2	18.6	18.2	100	66.5	20.7	12.8	100
> 86,000	66.3	11.6	22.1	100	65.7	17.8	16.5	100
<i>Girls</i>								
< 20,000	72.9	20.8	6.3	100	66.8	27.9	5.3	100
20,001-40,000	68.6	21.3	10.1	100	64.2	28.1	7.7	100
40,001-62,000	67.6	19.6	12.8	100	63.5	27.6	8.9	100
62,001-86,000	68.4	17.9	13.7	100	71.3	22.4	6.3	100
> 86,000	69.3	11.1	19.6	100	61.3	21.0	17.7	100

Source: NCAER Survey.

TABLE 8
Distribution of Enrolments in Schools across Various Types of
Schools and by Caste/Religion

(per cent)

	Age Group: 6-10				Age Group: 11-14			
	Govt- ment	Govt- Aided	Private	Total	Govt- ment	Govt- Aided	Private	Total
Scheduled Tribes	66.0	30.4	3.6	100	69.2	27.1	3.7	100
Scheduled Castes	73.5	20.5	6.0	100	68.0	26.1	5.9	100
Others	72.0	15.5	12.5	100	68.1	22.5	9.4	100
Hindus	71.7	18.0	10.3	100	68.2	23.6	8.2	100
Muslims	48.2	35.8	16.0	100	51.4	39.5	9.1	100
Christians	42.5	45.5	12.0	100	43.3	49.8	6.9	100
Other Minorities	80.1	3.3	16.6	100	80.9	11.3	7.8	100
Rural India	69.0	19.9	11.1	100	66.3	25.3	8.4	100

Source: NCAER Survey.

TABLE 9
Enrolment of Children (Age Group: 5-15) in Government and
Private Schools, by Parental Education

(per cent)

	Govt & Govt-Aided		Private	
	Male	Female	Male	Female
<i>Educational Level of Father</i>				
Illiterate	39.4	33.9	30.6	25.7
Below primary	12.4	13.3	7.5	6.9
Middle	15.1	15.9	11.9	9.6
Matriculate & higher secondary	25.6	28.0	32.4	37.2
Graduate & higher	7.5	8.8	17.6	20.7
<i>Educational Level of Mother</i>				
Illiterate	69.9	62.7	60.3	52.8
Below primary	8.5	10.3	6.2	6.4
Middle	10.9	13.5	10.9	13.3
Matriculate & higher secondary	9.6	12.3	18.3	22.1
Graduate & higher	0.9	1.2	4.2	5.4

Note: The figures are expressed as a percentage of total number of children, including non-enrolled children.

Source: NCAER Survey.

TABLE 10
**Enrolment of Children (Age Group: 5-15) in Government and
 Private Schools, by Occupation of Parents**

	Govt & Govt-Aided		Private	
	Male	Female	Male	Female
<i>(per cent)</i>				
<i>Occupation of Father</i>				
Cultivation & allied activities	46.0	44.7	39.7	38.9
Artisan & petty business	10.9	11.2	14.7	13.5
Organised business trade	0.9	0.8	1.6	1.5
Salaried & qualified profession	14.3	16.1	24.2	29.2
Household & family work	0.4	0.3	0.5	0.3
Living on rent, dividend pension	0.3	0.4	0.3	0.4
Others	1.4	1.7	2.2	2.2
<i>Occupation of Mother</i>				
Cultivation & allied activities	8.4	8.6	6.1	5.3
Artisan & petty business	1	0.9	0.9	0.8
Organised business Trade	0.02	0.02	100	100
Salaried & qualified profession	14.3	16.1	24.2	29.2
Household & family work	0.4	0.3	0.5	0.3
Living on rent, dividend pension	0.3	0.4	0.3	0.4
Others	1.4	1.7	2.2	2.2

Note: The figures are expressed as a percentage of total number of children, including non-enrolled children.

Source: NCAER Survey.

TABLE 11

Distribution of Enrolments in Schools across Various Types of Schools and by States

(per cent)

	Age Group: 6-10			Age Group: 11-14			Total
	Government	Govt.-Aided	Private	Government	Govt.-Aided	Private	
	Total	Total	Total	Total	Total	Total	
Andhra Pradesh	85.5	1.5	13.0	94.1	1.0	4.9	100
Bihar	79.4	10.4	10.2	78.9	12.7	8.4	100
Gujarat	80.1	18.3	1.6	75.7	21.7	2.6	100
Haryana	82.9	1.8	15.3	87.9	1.8	10.3	100
Himachal Pradesh	95.3	0.2	4.5	93.9	0.6	5.5	100
Karnataka	88.1	3.8	8.1	82.9	4.8	12.3	100
Kerala	29.4	55.9	14.7	32.5	58.4	9.1	100
Madhya Pradesh	84.4	10.9	4.7	83.4	13.8	2.8	100
Maharashtra	91.9	7.2	0.9	52.7	34.4	12.9	100
North-Eastern region	7.1	91.9	1.0	11.1	88.4	0.5	100
Orissa	76.6	18.9	4.5	71.0	25.0	4.0	100
Punjab	72.7	1.7	25.6	85.8	1.4	12.8	100
Rajasthan	95.8	2.0	2.2	92.4	4.9	2.7	100
Tamil Nadu	83.2	8.5	8.3	84.5	10.1	5.4	100
Uttar Pradesh	56.4	13.3	30.3	55.9	21.4	22.7	100
West Bengal	21.6	77.1	1.3	18.9	80.5	0.6	100

Source: NCAER Survey.

TABLE 12
**Classification of States by the Size of Private (Unaided) Sector (%) in Total
 Enrolments in Primary and Upper Primary Education**

< 5.1	5.1-10.0	>10.0
<i>Primary</i>		
Gujarat	Karnataka	Andhra Pradesh
Himachal Pradesh	Tamil Nadu	Bihar
Madhya Pradesh		Haryana
Maharashtra		Kerala
North-Eastern region		Punjab
Orissa		Uttar Pradesh
Rajasthan		
West Bengal		
<i>Upper Primary</i>		
Andhra Pradesh	Bihar	Haryana
Gujarat	Himachal Pradesh	Karnataka
Madhya Pradesh	Kerala	Maharashtra
North-Eastern region	Tamil Nadu	Punjab
Orissa		Uttar Pradesh
Rajasthan		
West Bengal		

Source: Based on Table 11.

TABLE 13
Private School Enrolment by State and Gender for Children Aged 6-14

States	Male	Female	Female/Male Ratio
Andhra Pradesh	9.8	9.6	0.98
Bihar	9.5	6.1	0.64
Gujarat	2.5	1.5	0.60
Haryana	15.3	10.7	0.70
Himachal Pradesh	5.4	4.0	0.74
Karnataka	10.5	8.4	0.80
Kerala	15.1	9.2	0.61
Maharashtra	2.2	0.9	0.41
Madhya Pradesh	4.1	3.3	0.80
Orissa	4.0	4.1	1.03
Punjab	21.6	15.6	0.72
Rajasthan	4.6	3.8	0.83
Tamil Nadu	7.7	8.9	1.16
Uttar Pradesh	28.1	26.6	0.95
West Bengal	1.5	0.7	0.47
North-Eastern region	0.7	0.6	0.86
<i>Total</i>	10.1	7.8	0.77

Source: NCAER Survey.

TABLE 14
Probit Estimates of Participation in Private Schooling

	Maximum Likelihood		Probit Estimates		OLS Estimates	
	Probit Estimates		Partial Derivatives			
	Coef.	t-value	$\partial\hat{Y}/\partial X$	t-value	Coef.	t-value
<i>Household Characteristics</i>						
SIZE	0.015370	5.771	0.002357	5.774	0.002846	6.113
HHY/pc	0.00001338	8.458	0.00000205	8.448	0.000003	9.533
CASTE	0.277649	10.734	0.042584	10.845	0.036747	9.673
<i>Religion</i>						
HINDU	0.466049	2.713	0.071479	2.719	0.038087	2.182
MUSLIM	0.725676	4.167	0.111298	4.180	0.086727	4.751
CHRISTIAN	0.513457	2.812	0.078750	2.818	0.040285	1.989
SIKH	0.950152	5.351	0.145726	5.371	0.140754	7.184
OTHERS	Excluded		Excluded		Excluded	
<i>Occupation of the Head of the Household</i>						
CULTIVAT	-0.000745	-0.031	-0.000114	-0.031	-0.001954	-0.493
WLAB	-0.147326	-3.804	-0.022595	-3.813	-0.013080	-2.392
ARTISAN	0.160857	4.478	0.024671	4.483	0.025362	4.170
ORGTRADE	0.043636	1.142	0.006693	1.142	0.005696	0.764
SALARIED	0.263756	7.971	0.040453	7.987	0.046515	8.017
HHWORK	0.095726	2.327	0.014682	2.327	0.020382	2.647
RENTIER	-0.019252	-1.347	-0.002953	-1.347	-0.004051	-1.542
OTHERS	Excluded		Excluded		Excluded	
<i>Education of the Parents</i>						
EDN-F	0.019875	8.634	0.003048	8.661	0.003300	8.522
EDN-M	0.010116	3.742	0.001551	3.841	0.002287	4.944
<i>Age of the Parents</i>						
AGE-F	-0.003811	-3.719	-0.000585	-3.723	-0.000559	-3.479
AGE-M	0.002263	1.593	0.000347	1.594	0.000324	1.469
<i>Child Characteristics</i>						
AGECHLD	-0.037428	-9.972	-0.005740	-9.997	-0.006647	-10.950
GENDER	0.191140	9.159	0.029316	9.192	0.031012	9.352
<i>Village Characteristics</i>						
VDI	0.000608	0.985	0.000933	0.985	0.000101	1.011
PTR	-0.001041	-2.953	-0.000160	-2.954	-0.000175	-3.060
<i>Constant</i>						
	-2.0718	-11.393	-0.3178	-11.498	0.0221	1.106
No. of Observations	31486		31486		31486	
Log Likelihood Function	-9345.287				-5559.92	
Restricted Log Likelihood	-9965.741				-6215.77	
Adjusted R-Square					0.0401	
F-Value					60.84	

Appendix

TABLE A.1
Sample Size of School Enrolment of Children (Age Group: 5-15)

	Per cent Distribution by								
	Type of School			Gender			Numbers		
	All (100.0 per cent)								
	Boys	Girls	All	Boys	Girls	All	Boys	Girls	All
Government Schools	71.1	73.1	71.9	57.4	42.6	100.0	13004	9640	22644
Government-Aided Schools	18.4	18.5	18.4	57.9	42.1	100.0	3356	2445	5801
Private Schools	10.5	8.4	9.6	63.5	36.5	100.0	1925	1108	3033
Total	100.0	100.0	100.0	58.1	41.9	100.0	18285	13193	31478
	Scheduled Tribes (9.7 per cent)								
Government Schools	70.9	77.1	73.3	59.2	40.8	100.0	1325	912	2237
Government-Aided Schools	24.6	20.7	23.1	65.2	34.8	100.0	459	245	704
Private Schools	4.5	2.2	3.6	76.6	23.4	100.0	85	26	111
Total	100.0	100.0	100.0	61.2	38.8	100.0	1869	1183	3052
	Scheduled Castes (20.8 per cent)								
Government Schools	77.5	79.8	78.4	59.3	40.7	100.0	3048	2091	5139
Government-Aided Schools	15.5	15.2	15.4	60.4	39.6	100.0	608	398	1006
Private Schools	7.0	5.0	6.2	67.6	32.4	100.0	275	132	407
Total	100.0	100.0	100.0	60.0	40.0	100.0	3931	2621	6552
	Other Castes (69.5 per cent)								
Government Schools	69.1	70.7	69.8	56.5	43.5	100.0	8631	6637	15268
Government-Aided Schools	18.3	19.2	18.7	56.0	44.0	100.0	2289	1802	4091
Private Schools	12.5	10.1	11.5	62.2	37.8	100.0	1565	950	2515
Total	100.0	100.0	100.0	57.1	42.9	100.0	12485	9389	21874
	Hindus (83.2 per cent)								
Government Schools	73.8	76.4	74.9	57.7	42.3	100.0	11299	8299	19598
Government-Aided Schools	16.6	16.2	16.5	59.1	40.9	100.0	2548	1762	4310
Private Schools	9.6	7.3	8.7	64.8	35.2	100.0	1470	798	2268
Total	100.0	100.0	100.0	58.5	41.5	100.0	15317	10859	26176
	Muslims (10.2 per cent)								
Government Schools	55.9	52.5	54.5	59.3	40.7	100.0	1038	711	1749
Government-Aided Schools	27.9	34.4	30.7	52.7	47.3	100.0	519	465	984
Private Schools	16.2	13.1	14.9	62.9	37.1	100.0	300	177	477
Total	100.0	100.0	100.0	57.9	42.1	100.0	1857	1353	3210
	Christians (2.5 per cent)								
Government Schools	31.5	35.1	33.2	51.3	48.7	100.0	134	127	261
Government-Aided Schools	58.8	54.1	56.7	56.1	43.9	100.0	250	196	446
Private Schools	9.6	10.8	10.2	51.3	48.8	100.0	41	39	80
Total	100.0	100.0	100.0	54.0	46.0	100.0	425	362	787
	Other Religions (4.1 per cent)								
Government Schools	77.7	81.3	79.4	51.4	48.6	100.0	533	503	1036
Government-Aided Schools	5.7	3.6	4.7	63.9	36.1	100.0	39	22	61
Private Schools	16.6	15.2	15.9	54.8	45.2	100.0	114	94	208
Total	100.0	100.0	100.0	52.6	47.4	100.0	686	619	1305

Source: NCAER Survey.

TABLE A.2
Summary Statistics of the Variables Used in the Regression Analysis
 (No. of Observations: 31,486)

	Mean	Standard Deviation
PVTENRL	0.0096	0.2948
<i>Household Characteristics</i>		
SIZE	7.5418	3.6147
HHY/pc	4562.41	5384.28
CASTE	0.6948	0.4605
<i>Religion</i>		
HINDU	0.8316	0.3742
MUSLIM	0.1018	0.3024
CHRISTIAN	0.0025	0.1561
SIKH	0.0033	0.1778
<i>Occupation of the Head of the Household</i>		
CULTIVAT	0.4848	0.4998
WLAB	0.1070	0.3092
ARTISAN	0.1100	0.3128
ORGTRADE	0.0009	0.0092
SALARIED	0.1412	0.3482
HHWK	0.0025	0.1608
RENTIER	0.0007	0.0084
OTHERS	0.1143	0.3182
<i>Education of Parents</i>		
EDN-F	5.8813	5.2543
EDN-M	2.7089	4.1278
<i>Age of Parents</i>		
AGE-F	37.9048	12.5797
AGE-M	34.3003	9.1470
<i>Child Characteristics</i>		
AGECHLD	10.0683	2.8389
GENDER	0.5808	0.4934
<i>Village Characteristics</i>		
VDI	37.0091	16.3326
PTR	60.0222	28.6485

TABLE A.3
Inter-Correlation Matrix

	PVTENRL	SIZE	HHV/pc	CASTE	HINDU	MUSLIM	CHRISTIAN	SIKH	CULTIVAT	WLAB	ARTISAN	ORGRADE	SALARIED	HHWORK	RENTIER	EDN-F	EDN-M	AGE-F	AGE-M	AGECHLD	GENDER	VDI	PTR
PVTENRL	1																						
SIZE	0.048	1.000																					
HHV/pc	0.080	-0.025	1.000																				
CASTE	0.095	0.107	0.127	1.000																			
HINDU	-0.073	-0.007	0.000	-0.116	1.000																		
MUSLIM	0.060	0.050	-0.045	0.195	-0.748	1.000																	
CHRISTIAN	0.003	-0.079	0.044	-0.028	-0.356	-0.054	1.000																
SIKH	0.062	0.015	0.049	-0.006	-0.409	-0.062	-0.029	1.000															
CULTIVAT	-0.029	0.112	0.101	0.117	0.093	-0.074	-0.036	-0.030	1.000														
WLAB	-0.067	-0.143	-0.151	-0.177	-0.017	0.008	0.028	-0.017	-0.336	1.000													
ARTISAN	0.026	-0.026	-0.058	0.031	-0.082	0.111	0.005	-0.014	-0.341	-0.122	1.000												
ORGRADE	0.021	0.002	0.040	0.018	-0.093	0.047	0.013	-0.010	-0.093	-0.033	-0.034	1.000											
SALARIED	0.076	-0.067	0.111	0.000	-0.018	-0.009	0.019	0.031	-0.393	-0.140	-0.143	-0.039	1.000										
HHWORK	0.022	0.091	-0.014	0.025	-0.018	0.020	-0.012	0.012	-0.160	-0.057	-0.058	-0.016	-0.067	1.000									
RENTIER	0.015	0.013	0.017	0.020	0.006	-0.025	-0.004	0.033	-0.082	-0.029	-0.030	-0.006	-0.034	-0.014	1.000								
EDN-F	0.106	0.101	0.175	0.169	0.026	-0.042	0.053	-0.018	-0.035	-0.189	0.015	0.063	0.275	-0.034	0.019	1.000							
EDN-M	0.095	0.013	0.177	0.183	-0.092	0.021	0.160	0.026	-0.057	-0.120	0.016	0.081	0.163	0.023	0.035	0.455	1.000						
AGE-F	-0.025	0.020	0.011	-0.005	0.025	-0.015	-0.021	0.002	0.041	-0.013	0.016	0.010	0.032	-0.147	-0.031	0.136	0.054	1.000					
AGE-M	-0.021	0.028	0.004	0.018	-0.011	0.019	-0.008	0.010	0.020	-0.023	-0.005	-0.003	0.013	-0.008	-0.007	-0.052	-0.059	0.538	1.000				
AGECHLD	-0.065	-0.042	0.041	0.017	0.015	-0.012	0.008	-0.011	0.014	-0.021	-0.015	-0.006	0.034	-0.009	-0.002	-0.040	-0.060	0.212	0.306	1.000			
GENDER	0.036	-0.043	-0.018	-0.031	0.019	-0.001	-0.013	-0.023	0.006	0.011	-0.002	0.007	-0.023	-0.014	-0.014	-0.049	-0.068	0.024	0.022	0.051	1.000		
VDI	0.004	-0.025	-0.007	0.005	-0.007	0.020	-0.007	-0.019	-0.015	-0.005	0.001	-0.001	0.012	-0.007	0.004	-0.006	0.002	-0.005	-0.007	-0.002	0.008	1.000	
PTR	-0.017	-0.038	0.030	-0.018	0.016	-0.031	0.013	0.007	-0.006	-0.020	0.012	0.009	0.012	-0.025	0.009	0.007	-0.003	0.003	-0.003	0.002	-0.002	0.900	1.000