Vidya, Veda, and *Varna*: The Influence of Religion and Caste on Education in Rural India

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Summary: *This paper argues that Vidya (education), Veda (religion) and Varna (caste) are inter-linked in India. It examines whether, and to what extent, the enrolment of children at school in India is influenced by community norms such as those of religion (Hindu or Muslim) or caste (Scheduled or non-Scheduled). The econometric estimates are based on unit record data from a survey of 33,000 rural households, in 1,765 villages, from 16 states of India. The equation for the likelihood of being enrolled at school is estimated separately for boys and for girls and, in each of the equations, all of the slope coefficients are allowed to differ according as to whether the children are Hindu, Muslim or Scheduled Caste. The main findings are that the size of the religion or caste effect depends on the non-community circumstances in which the children are placed. Under favourable circumstances (for example, when parents are literate), the size of the community effect is negligible. Under less favourable circumstances, the size of the community effect is considerable.*

1. Introduction

The 1990s were good years for education in India. According to the 2001 Census, the literacy rate for men, over the entire decade, increased by 11.8 (percentage) points and that for women by 15 points with the consequence that in 2000, 57% of India's (over 15) population was literate, with a literacy rate of 68% among men and 45% among women. Notwithstanding these considerable achievements, however, India's record, relative to that of other countries in Asia, has been woefully inadequate: its adult literacy rate of 57% in 2000 needs to be set against Thailand's 96%; Sri Lanka's 92%; Indonesia's 87%; and China's 84% [*United Nations Development Programme, 2002*].

Many of the issues relating to literacy are reflected in school participation, defined as the initial enrolment of a child at school. The net enrolment rate of children, aged 6-14, at school varies across the states of India ranging from 99% for boys and 98% for girls in Kerala, to 91% and 84% in Tamil Nadu, to 69% and 56% in Madhya Pradesh [*Shariff and Sudarshan, 1996*]. Furthermore, the survey data used in this paper suggested that the (all-India) school enrolment rates, for boys and for girls, varied considerably between the Hindu, Muslim and the Scheduled Caste/Scheduled Tribe [1]

(hereafter collectively referred to as *Dalits*) communities: the enrolment rates for Hindu boys and girls were, respectively, 84% and 68% while for Muslim boys and girls they were 68% and 57% and for Dalit boys and girls they were 70% and 55% (Table 1).

While different aspects of the education of children in India have been extensively studied including the enrolment of children in school by *inter alia*: Duraisamy [*1991*], Duraisamy and Duraisamy [*1992*], Jeffery and Basu [*1996*], Jayachandran [*1997*], Sipahimalani [*1999*], Dreze and Kingdon [*2001*], the important question of inter-community differences in school enrolment rates has not been fully researched [2]. In keeping more generally with recent research interest into issues of ethnicity and educational attainment in other societies [*Gang and Zimmermann 2000; Akerlof and Kranton 2002*], the key question of inter-group differences in school enrolment rates in India also needs further investigation.

It is this last observation that provides the main motive for this paper. Its *raison d'etre* is to examine whether, and to what extent, the enrolment of children at school in India was influenced by the norms, or other socio-economic characteristics, of the communities (Hindus, Muslims and Dalits) to which they belonged. There are two issues embedded in this study. The first is that inter-community differences between communities, in the school enrolment rates of their children, could be due to the fact that the communities differed in terms of their endowment of 'enrolment-friendly' attributes. Call this the 'attribute effect'. On the other hand, inter-community differences in enrolment rates could exist, even in the absence of inter-community differences in attribute endowments, simply because different communities, by virtue

of differences in their norms, translated a given attribute endowment into different enrolment rates. Call this the 'community effect'. The overall enrolment rate is, of course, the outcome of both effects. The average probability of school enrolment is the sum of two (mutually exclusive and collectively exhaustive) parts: one that was engendered by the 'community' effect and another whose antecedents were in the 'attribute' effect.

In our research, the equation for the likelihood of being enrolled at school was estimated *separately* for boys and for girls and, in each of the equations, *all* the slope coefficients were allowed to differ according as to whether the children were Hindu, Muslim or Dalit. Thus the econometric estimates took cognisance of differences between the children both with respect to their gender and their religion or caste. The econometric estimates were based on unit record data from a survey of 33,000 *rural* households - encompassing 195,000 individuals - which were spread over 1,765 villages, in 195 districts, in 16 states of India [3].

All this begs the question of why it is important to study the influence of cultural norms on school enrolment? In many communities there is no tradition of sending children to school and little peer pressure to do so; more importantly, these traditions co-exist with well established social norms that condone child labour and accept out-of-school children [*Wazir, 2002*]. Given that 'the child is the father of the man', children who do (or do not) go to school will, with a high degree of probability, grow up to be literate (or illiterate) adults. In turn, the life chances of an adult, and his or her children, will be greatly affected by whether or not he or she is literate[4]. Consequently, if one is concerned with inter-community differences in economic and

social outcomes, one should, as a corollary, be concerned with inter-community differences in rates of school enrolment.

2. Understanding the Demand for Education

Dreze and Kingdon [*2001*] observed that the decision to enrol a child at school may be viewed as a cost-benefit decision in which the present value of the expected flow of benefits from education is compared to the costs that must be incurred in order to secure such benefits. The costs are the direct costs of schooling (expenditure on books, fees, uniforms and so forth), plus the indirect costs in terms of foregone earnings while the child is at school. The benefits are represented by the opportunities for higher earnings to which education gives rise.[5] This model suggests that the likelihood of a child being enrolled at school increases with respect to factors which enhance the perceived benefits of education, or which lower the rate at which these future benefits are discounted, and is reduced for those factors which raise the direct and indirect costs of education. A formal model encapsulating these ideas is in Dreze and Kingdon [*1999*].

The structure of preferences with respect to children may depend upon the level of education of the parents: literate parents may be more aware of the importance of the quality of children, and thus have a higher marginal rate of substitution between quantity and quality, than illiterate parents [*Becker, 1991*]. This, in turn, would lead them to have fewer children and to invest more in their children's future[6] [*Montgomery et.al.,1999*]. The capacity of parental literacy to benefit the lives of children finds much support in an older anthropological literature that portrays the fundamental change that literacy creates in any society [*Goody, 1968*], and in

particular, in a hierarchically-organised country such as India where education is viewed as a means of effecting 'Sanskritzation' and group mobility [*Srinivas, 1966*].

The likelihood of children being enrolled at school may also be influenced by community-specific factors. This influence may be indirect: community-specific factors, particularly religion, may shape attitudes towards family size and hence influence investment in children[7]. If the quantity and quality of children are indeed substitutes then one would expect that communities characterised by large families would have a lower proportion of children in school than communities in which family sizes were smaller [*Patrinos and Pscharopoulous, 1997*]. These cultural effects would be compounded if groups with a preference for large families had ancillary disadvantages such as relatively low literacy rates and incomes. Additionally, as detailed below, cultural factors may exert a direct influence on a child's education chances by shaping the importance that parents attach to education.

Another dimension of cultural mores is the 'preference for sons' that many families in India (and, indeed, in East Asia) display. This has implications for the education of girls. If girls have only to be educated to a level that ensures their marriage - which is a few notches below the educational level of their prospective husbands - then there will be a gender bias in school participation, with boys being more likely to be enrolled at school than girls [8].

Impinging upon these preferences are a set of constraints. One set of constraints concerns the 'price' of investment in quality. If children have to travel long distances to school then the journey time – particularly when it is lengthened by an absence of

good transport facilities – could add appreciably to the costs of schooling. On the other hand, villages which have 'mother and child' centres - providing pre-school education for children and raising awareness among mothers of infants and toddlers of the importance of investing in the health and education of their children - should harvest the benefit of such centres in the form of higher school enrolment.

Another set of constraints relates to the opportunity cost of children. If, say, because of the poverty of their families, children are viewed as an economic resource, supplementing the income of the family, then the opportunity cost of schooling investment will be high. Jensen and Nielsen [*1997*], in the context of Zambia, found support for the hypothesis that poverty forced households to keep their children away from school. In their study of rural Karnataka in India, Kanbargi and Kulkarni [*1983*] found that children spent four hours per day on household and directly productive work; furthermore, there was a gender division in the household with greater household work being performed by girls, and more directly productive work being done by boys. They also found that girls worked longer hours and were less likely to be sent to school. Evidence for the implicit trade-off between child schooling and child labour is also found in anthropological studies of rural South India *[Srinivas, 1976; Caldwell et.al., 1985*].

The preceding discussion has, from the perspective of the econometric model of this paper, a number of implications for the likelihood of school enrolment. First, one would expect a positive relationship between household income and the likelihood of children from a household to be enrolled at school and, after enrolment, to continue in school. Second, one would expect that the larger the number siblings to a child, the

lower the likelihood of that child being enrolled at, or continuing in, school: a large number of siblings suggests that parents have made the 'quantity-quality decision' in favour of quantity[9]. Third, education outcomes for girls - by virtue of the fact that their parents would reap lower returns on their education than on the education of their brothers – would not be as good as that for boys[10]. Fourth, in the cultural setting of rural India, where, broadly speaking, women are in paid work only if the needs of the family so demand, children whose mothers worked would *ceteris paribus* have a lower likelihood of being enrolled at school than children whose mothers were 'unoccupied'[11]. Fifth, given that the degree of economic prosperity varied across the regions of India, it might be expected that children would be more likely to be seen as economic resources in the poorer, as compared to the richer, regions of India; on this expectation, the poorer regions would have a lower likelihood of children being in school.

2.1. Issues relating to equation specification

In the light of the above discussion, the determining variables used to specify the equations for the likelihood of boys and of girls being enrolled at school, were grouped as follows:

1. The communities to which the children belonged: Hindu, Muslim or Dalit. The respondents to the Survey were distinguished along caste lines as: Dalits (Scheduled Caste/Tribe) and non-Dalits. They were *separately* distinguished by religion as: Hindu, Muslim, Christian, etc. Consequently, membership of the two categories, caste and religion, could overlap: Dalits could be Hindu, Muslim or Christian and, say, Hindus could either be Dalits or non-Dalits. In this study, the two categories of caste and religion were rendered mutually exclusive by defining

Hindus, Muslims, Christians (and persons of 'other' religions) as persons professing the relevant faith but who were not Dalits. No distinction was made by religion within Dalits though, parenthetically, it might be noted that over 90% of them gave their religion as Hindu. Because of the small number of Christians and persons of 'other' religions in the Survey, the analysis reported in this paper was confined to Hindus, Muslims and Dalits.

2. The regions in which the children lived: North; South; Centre; East; West. The Central region comprised Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh; the South comprised Andhra Pradesh, Karnataka, Kerala and Tamil Nadu; the West comprised Maharashtra and Gujarat; the East comprised Assam, Bengal and Orissa; and the North comprised Haryana, Himachal Pradesh and Punjab.
3. The educational levels of the mothers and fathers of the children. These were classified as: illiterate; low, if the person was literate but had not completed primary school; medium, if the person was educated to primary level or above but had not passed the school-leaving examination (the matriculation examination, abbreviated, in India, to *matric*) administered at the end of ten years of schooling; high, if the person was educated to *matric* level or above.
4. The occupations of the fathers and the mothers. The mutually exclusive and collectively exhaustive occupational categories were: cultivator, labourer, non-manual workers, and 'unoccupied'.
5. Personal and household variables.
6. *Village level* variables relating to the general level of development of the village and, in particular, the provision of schools within the village. In terms of educational infrastructure, only 11% of the children in the sample lived in villages which *did not* have a primary school, though 50% lived in villages without

anganwadi schools[12], and 30% lived in villages without a middle school within a distance of 2 kilometres.

Of the children in the sample, 77% of boys and 64% of girls were enrolled at school. However, underlying the aggregate figures, there was considerable variation in enrolment rates by: region; community; parental occupation; and parental literacy status. Table 1 shows enrolment rates with respect to these factors for each of the three communities (Hindu, Muslim, Dalit)[13]. In terms of region, enrolment rates were lowest in the Central region and highest in the South, the West and the North. However, in every region, except the South, enrolment rates for Hindu boys and girls were considerably higher than those for their Muslim and Dalit counterparts.

In terms, of parental literacy, enrolment rates for children (both boys and girls) were substantially higher for children with literate parents relative to children whose parents were illiterate. When both parents were illiterate the gap between the enrolment rate of Hindu children, on the one hand, and Muslim and Dalit children, on the other, was considerable; however, when both parents were literate, the inter-community gap in enrolment rates was almost non-existent. Lastly, in terms of occupation, children whose fathers were labourers had the lowest rate of enrolment and children with fathers in non-manual occupations had the highest enrolment rate.

Table 2 pursues the theme of inter-community inequality in the endowment of enrolment-determining factors. The t-values, associated with the test of the null hypothesis that the mean values of the different factors for any two groups - Hindu and Muslim; Hindu and Dalit; Muslim and Dalit - were equal, are reported, parenthetically, in Table 2. These show that, with a handful of exceptions, the means of the factors were significantly different between the groups.

In particular, a significantly larger proportion of Hindu children had parents who were both literate – and a significantly smaller proportion of Hindu children had parents who were both illiterate – compared to Muslim and Dalit children. In addition, a significantly higher proportion of Hindu children had fathers who were cultivators and a significantly higher proportion of Dalit children had fathers who were labourers: over half the Hindu children, in the relevant age-group, had fathers who were cultivators while, in contrast, well over one-third of Dalit children had fathers who were labourers.

So, one reason that enrolment rates differed by community, as Table 1 so clearly indicates they did, is that the distribution of the 'enrolment-determining factors' – region, parental occupation and literacy, availability of educational facilities – were unequally distributed between the communities. The other is that there were significant inter-community differences in 'attitudes' to education, both with respect to children in their entirety and with respect to boys and girls separately.

3. The 'Community Effect': Religion and Caste as Influences on School Participation

The NCAER Survey provides qualitative information on the reasons that parents gave for not enrolling their children at school. These reasons, tabulated separately for Hindus, Muslims and Dalits in Table 3, suggest that 'supply-side' factors ('school too far' or 'school dysfunctional') did not play an important role in non-enrolment; nor did their incidence vary across the communities[14]. The incidence of demand-side factors - whereby family financial constraints or the fact that a child was engaged in non-school activity involving work either within or outside the home - was particularly marked for Dalit children: 34% of Dalit parents, compared with 29%

of Hindu and 22% of Muslim parents, gave this as their reason for non-enrolment. These inter-group differences in the mean values of the 'demand-side' reasons were - as the t-values in Table 3 show - significantly different between the communities.

Another significant difference between Hindus and Dalits on the one hand and Muslims on the other, was in terms of the percentage of children who were not enrolled at school because their parents did not think education was important. This was 16% for Hindus and 17% for Dalits, but, at 23%, significantly higher for Muslims. The fact that some proportion of religious and caste groups consider education 'unimportant' suggests that Muslim religious and Dalit caste norms might matter for school participation. But there are also several other explanations that might account for the lower enrolment figures for Muslims and Dalits which need to be located within the historical context of educational policy in India towards minorities.

3.1. Muslim education in India

An important reason that may affect Muslim education is the role of religious institutions and, in particular, the local clergy [*Iyer 2002*]. It is conventionally argued that the status of women in Islam implies that Muslim parents may invest less in the human capital of their daughters than of their sons [*Coulson and Hinchcliffe, 1978; Jeffery and Jeffery 1997*]. Muslim parents may also be reluctant to send their children to government funded schools owing to the existence of alternatives in community-based schooling (in the form of *madrasas*) and most particularly on account of the lack of Urdu language teaching in the formal system.

Islam first came to India as early as 650 AD with the Arab traders, but it was only under Mughal rule, between the 12th and 17th centuries, that education was encouraged [*Khalidi 1995: 106-07*]. The very first *madrasa* in India was established

in 1781 by Warren Hastings and was called the 'Calcutta Madrasah College for Muhammedans'. *Madrasas* were greatly encouraged under colonial rule in the 18th century and, in the second half of the 19th century, they were set up all over India by the Deobandis – a group of Muslims who were trained in the most orthodox *madrasa* in India, *Darul-uloom* in Deoband, founded in 1866. It was in this phase of their expansion that *madrasas* were funded primarily by individual contributions rather than by princely patronage and when they developed a formal institutional structure similar to western educational institutions, including their own presses for publishing in Urdu [*Minault 1998: 60*] [15]. In post-independence India, *madrasas* were allowed to be set up in India under Articles 30(1) and 30(2), which allows all minorities to establish educational institutions, and which also protects the property of minority educational institutions. In the 1990s, many *madrasas* have been set up, largely through funds from the Middle East, on the western coast of India and in the border regions of north-eastern India [*Bandyopadhyay 2002*].

Today, *madrasas* mainly teach the principles of the Islamic religion, including an elementary level of the reading of the *Koran*[16]. The Indian government has tried at various times to encourage some *madrasas* to combine religious education with 'modern' subjects such as mathematics. For example, a programme was launched to modernise education in the *madrasas* in 1993, and some prominent *madrasas* such as the *Darul-uloom* in Deoband introduced reforms into their curriculum as a consequence.[17] The *Jamia Mohammadia Mansura* in Malegaon, Maharashtra is reputed for its teaching of medical science, and the *Darul-uloom Nadwar-ul-ulema* in Lucknow, Uttar Pradesh even teaches the English language and English literature as core subjects [*Alam 2002*]. However, although in some states such as Karnataka and

Kerala, *madrasas* are a useful complement to the formal schooling sector, such efforts have not, in general, been successful.[18]

Urdu (which is spoken in only 3 countries of the world - India, Pakistan and Mauritius) is widely regarded by Muslims in India as 'their' language. However, in post-independence India, Urdu was not given the status of a 'modern Indian language', despite the fact that a substantial proportion of Muslims and non-Muslims particularly in northern India use it as their primary language of communication; in schools Sanskrit was taught as the preferred alternative in the three-language (Hindi-English-Sanskrit) formula. This has had important implications for Muslim education in India [*Sadgopal, 2000*], particularly as it has tied the issue of education-provision with considerations of religious and political identity [*Farouqui, 2002*], and cultural autonomy [*Sorabjee 2002*].

3.2. Dalit education in India

In their analysis of school enrolment, Dreze and Kingdon [*2001, p.20*] found that Dalit children had what they term an 'intrinsic disadvantage' – they had a lower probability of going to school, even after controlling for other non-caste factors such as household wealth, parents' education etc. [*Dreze and Kingdon, 2001*].

Dalits - who, generally speaking, constitute the 'untouchables' of India[19] - comprise, approximately, 17.5% of India's population. Although, the practice of 'untouchability' is illegal in India, the reality of life is very different. Often, Dalits live in segregated colonies[20] on the outskirts of villages, usually in the southern fringes because that is where the Hindu god of death, Yama, is supposed to dwell [*Sainath, 1996*]. Dalits are not allowed to use common crematoria. Sharecropping, a dominant form of agriculture in most parts of India, is not common among Dalit

households due to the concepts of 'ritual purity' observed by those within the caste system (Malik 1999). More significantly, the practice of untouchability cuts right across religious boundaries, and is observed in day to day interactions not only by Hindus, but by Muslims, Christians, and other religious groups in India as well.

Studies of education and caste in India show that the Dalits are less likely to send children to school [*Anitha 2000: 34*]. The differences between Dalits and non-Dalits in dropout rates are very large: the dropout rates for Dalits are 17% higher then for others in Classes I-V, and 13% greater for those in Class I-VIII [*Jabbi and Rajyalakshmi 2001: 396*]. The historical origins of inequality in the access to education by caste lie in colonial policy towards education. After 1835, education policy in the sub-continent was altered considerably by Macaulay's Minute on Education which changed the dominant language of the curriculum to English, giving rise to what Nehru cynically termed an 'education for clerks' [*Nehru, 1942: 434*]. Western education both resulted in greater social prestige for the upper castes and greater inequality between castes [*Carnoy 1974, Beteille, 1965: 209*]. The success of the non-Brahmin movement in southern India meant that this inequality was addressed there by positive discrimination in favour of the non-Brahmins, in education and in jobs; however, this was not the case in other parts of India.

The influence of religion and caste on school enrolment encompasses both sociological factors such as the role of cultural norms, and historical influences such as colonial and post-colonial policy towards education in India. Collectively, these non-economic factors might exert an important role on current schooling decisions, even after controlling for the economic factors that affect them.

4. The Decomposition of Inter-Community Differences in School Enrolment

The Oaxaca [*1973*] and Blinder [*1973*] method of decomposing group differences in means into an 'explained' and a 'residual' component has been extended to explaining group differences in probabilities, derived from models of discrete choice with binary outcomes, by Gomulka and Stern [*1990*]; Blackaby et. al. [*1997, 1998,1999*]; and by Nielsen [*1999*]. This section sets out the salient features of this methodological extension.

There are N children (indexed, $i=1...N$) who can be placed in K mutually exclusive and collectively exhaustive groups (hereafter referred to as 'communities'), $k=1..K$, each community containing N_k children. Define the variable ENR such that $ENR_i=1$, if the child is enrolled at school, $ENR_i=0$, if the child is not enrolled. Then, under a logit model, the likelihood of a child, from community k, being enrolled in school is:

$$\Pr(ENR_i = 1) = \frac{\exp(\mathbf{X_i^k \beta^k})}{1+\exp(\mathbf{X_i^k \beta^k})} = F(\mathbf{X_i^k \beta^k}) \qquad (1)$$

where: $\mathbf{X_i^k} = \{X_{ij}, j = 1...J\}$ represents the vector of observations, for child i of community k, on J variables which determine the likelihood of the child being enrolled at school, and $\boldsymbol{\beta}^{\mathbf{k}} = \{\beta_j^k, j = 1...J\}$ is the associated vector of coefficients for children belonging to community k.

The average probability of a child from community k being enrolled at school – which is also the mean enrolment rate for the community - is:

$$\bar{ENR}^k = \bar{P}(\mathbf{X_i^k}, \boldsymbol{\beta}^{\mathbf{k}}) = N_k^{-1} \sum_{i=1}^{N_k} F(\mathbf{X_i^k \beta^k}) \qquad (2)$$

Now for any two communities, say Hindu ($k=H$) and Muslim ($k=M$):

$$E\bar{N}R^{H} - E\bar{N}R^{M} = [\bar{P}(\mathbf{X_i^M}, \boldsymbol{\beta}^{\mathbf{H}}) - \bar{P}(\mathbf{X_i^M}, \boldsymbol{\beta}^{\mathbf{M}})] + [\bar{P}(\mathbf{X_i^H}, \boldsymbol{\beta}^{\mathbf{H}}) - \bar{P}(\mathbf{X_i^M}, \boldsymbol{\beta}^{\mathbf{H}})] \quad (3)$$

Alternatively:

$$E\bar{N}R^{H} - E\bar{N}R^{M} = [\bar{P}(\mathbf{X_i^H}, \boldsymbol{\beta}^{\mathbf{H}}) - \bar{P}(\mathbf{X_i^H}, \boldsymbol{\beta}^{\mathbf{M}})] + [\bar{P}(\mathbf{X_i^H}, \boldsymbol{\beta}^{\mathbf{M}}) - \bar{P}(\mathbf{X_i^M}, \boldsymbol{\beta}^{\mathbf{M}})] \quad (4)$$

The first term in square brackets, in equations (3) and (4), represents the "community effect": it is the difference in average enrolment rates between Hindu and Muslim children resulting from inter-community differences in responses (as exemplified by differences in the coefficient vectors) to a given vector of attribute values. The second term in square brackets in equations (3) and (4) represents the "attributes effect": it is the difference in average enrolment rates between Hindu and Muslim children resulting from inter-community differences in attributes, when these attributes are evaluated using a common coefficient vector.

So for example, in equation (3), the difference in sample means is decomposed by asking what the average school enrolment rates for Muslim children would have been, *had they been treated as Hindus*; in equation (4), it is decomposed by asking what the average school enrolment rates for Hindu children would have been, *had they been treated as Muslim*. In other words, the common coefficient vector used in computing the attribute effect is, for equation (3), the Hindu vector and, for equation (4), the Muslim vector.

It is possible to further decompose the "community effect", using an indicator variable which serves as one of the explanatory variables in the logit equation [*Nielsen, 1998*]. Suppose that the region in which the children live is one such variable. Define the quantities $\bar{P}^{r}$ (for $r=1...K$) as:

$$\bar{P}^r = N^{-1}\sum_{k=1}^{K}\sum_{i=1}^{N_k}\left[\frac{\exp(\mathbf{X_i^k\beta^r})}{1+\exp(\mathbf{X_i^k\beta^r})}\right] = N^{-1}\sum_{k=1}^{K}\sum_{i=1}^{N_k}F[(\mathbf{X_i^k\beta^r})] \tag{5}$$

Then $\bar{P}^r$ is the average probability of enrolment computed over *all* the children in the sample when their individual attribute vectors (the $\mathbf{X_i^k}$) are *all* evaluated using the coefficient vector of group *r* ($\boldsymbol{\beta}^{\mathbf{r}}$); equivalently, $\bar{P}^r$ is the average probability of enrolment, computed over the entire sample, when *all* the children are treated as belonging to community *r*: consequently, $\bar{P}^r$ may be thought of as *ceteris paribus* the probability of a child from community r being enrolled at school.

If there are *M* regions, indexed, *m=1...M*, such that N_m children live in region *m*, of whom N_m^k are from community *k,* then $\bar{P}^r$ (of equation (5)) can be rewritten as:

$$\bar{P}^r = \sum_{m=1}^{M}\mu_m N_m^{-1}\sum_{k=1}^{K}\sum_{i=1}^{N_m^k}\bar{P}(\mathbf{X_i^k},\boldsymbol{\beta}_{\mathbf{m}}^{\mathbf{r}}) = \sum_{m=1}^{M}\mu_m\bar{P}_m^r \tag{6}$$

where: $\mu_m = (N_m / N)$ is the proportion of children in the sample who live in region *m*; $\boldsymbol{\beta}_{\mathbf{m}}^{\mathbf{r}}$ is the coefficient vector of community *r* in region *m*; and $\bar{P}_m^r$ is the average probability of enrolment in region *m (m=1...M),* if *all* the children in region *m* were treated as belonging to community *r*.

Then, from equation (6), for any two communities *r* and *s*:

$$\bar{P}^r - \bar{P}^s = \sum_{m=1}^{M}\mu_m(\bar{P}_m^r - \bar{P}_m^s) \tag{7}$$

and $\mu_m(\bar{P}_m^r - \bar{P}_m^s)/(\bar{P}^r - \bar{P}^s)$ is the proportionate contribution that region *m* makes to the overall community effect. Note that $\bar{P}_m^r = \bar{P}_m^s$ if $\boldsymbol{\beta}_{\mathbf{m}}^{\mathbf{r}} = \boldsymbol{\beta}_{\mathbf{m}}^{\mathbf{s}}$ and that $\bar{P}^r = \bar{P}^s$ if $\boldsymbol{\beta}_{\mathbf{m}}^{\mathbf{r}} = \boldsymbol{\beta}_{\mathbf{m}}^{\mathbf{s}}$ for all *m=1...M*.

5. Results

The logit equation for school enrolment was specified as:

$$\log\left(\frac{\Pr(ENR_i=1)}{1-\Pr(ENR_i=1)}\right)=\sum_{j=1}^{J}\beta_j x_{ij}+\sum_{j=1}^{J}\beta_j{}^{M}(MS_i * x_{ij})+\sum_{j=1}^{J}\beta_j{}^{D}(DL_i * x_{ij}) \qquad (8)$$

where, in equation (8), the β_j are the 'Hindu coefficients' and the β_j^M and β_j^D are the *changes* to these coefficients from being, respectively, Muslim and Dalit. The components of the vector of determining variables were discussed earlier. The estimates from equation (8) - with zero restrictions imposed on the coefficients not significant at the 10% level - along with the marginal probabilities[21], are shown in Table 4 for boys and in Table 5 for girls. A compilation of the predicted 'hits and misses' from the estimated equations showed that the probabilities predicted from the school enrolment equations[22] correctly classified 80% of the 19,845 boys and 75% of the 17, 721 girls.

The variables for which the coefficients were significantly different between the communities are clearly identified in Tables 4 (boys) and 5 (girls). In the language of equation (8), the associated β_j^M and/or the β_j^D were significantly different from zero implying that, for these variables, there were additional effects from being Muslim or Dalit. Some of these effects were regional: Muslim and Dalit boys living in the Central region had *ceteris paribus* a lower likelihood of being enrolled at school than their Hindu counterparts. Some of these effects related to parental occupation: in particular, *ceteris paribus* Dalit children with fathers who were cultivators had a lower likelihood of being enrolled at school than their Hindu and Muslim counterparts. Some of these effects related to institutional infrastructure:

the presence of *anganwadis* in villages did more to boost the school enrolment rates of Muslim, relative to Hindu, boys.

Stepping outside the framework of inter-community coefficient differences, household affluence - as measured by the value of the households (non-land) assets index and also by whether the household owned land - was positively associated with school enrolment though, in terms of the likelihood of being enrolled at school, Muslim girls derived less benefit from an increase in household assets than Hindu or Dalit girls.

Another factor which had a significant effect on school enrolment was the level of village development. On the basis of their general level of facilities - for example, quality of roads and public transport, availability of electricity and safe drinking water, the quality of educational, health care, financial and commercial facilities - the 1,758 villages in the NCAER Survey were classified as: low-development villages; medium-development villages; and high-development villages. The likelihood of being enrolled at school rose significantly with the level of village development. Since most of the villages in the sample had a primary school, there was not enough variation in the provision of primary schools for their availability to effect school enrolments. However, easy access to a middle school did raise school enrolments significantly.

5.1. Decomposition Results

Tables 6 and 7 show for boys and girls, respectively, the results from the 'Oaxaca-Blinder type' logistic decompositions. These show that, of the Hindu-Muslim difference in mean enrolment rate of boys, 63% - when Muslims were treated as Hindus (equation (3)) - and 42% - when Hindus were treated as Muslims (equation (4)) - could be attributed to coefficient differences. For Hindu and Muslim girls, the

corresponding figures were 56% (equation (3)) and 55% (equation (4)). As discussed earlier, these percentages reflected the contribution of the 'community effect' towards explaining inter-community differences in mean enrolment rates.

The community effect played a much smaller role in explaining differences in mean enrolment rates between Hindus and Dalits: respectively, 47% and 26% of the difference in Hindu-Dalit enrolment rate for boys and for girls could be explained by inter-community coefficient differences, when Dalits were treated as Hindus; when Hindus were treated as Dalits, the corresponding figures were 29% (boys) and 22% (girls).

Although differences between Dalits and Muslims, in the mean enrolment rates of boys and of girls, were not as marked as between each of these communities and Hindus, this lack of difference concealed considerable differences between Dalits and Muslims in terms of enrolment-enhancing attributes and attitudes. Broadly speaking, Muslims were better endowed with enrolment-enhancing attributes but Dalits had a more positive attitude towards school participation. When Muslim attributes were evaluated using Dalit coefficients the mean enrolment of Muslim boys and girls rose from 68% and 57%, respectively, to 72% and 61%, respectively (Tables 6 and 7, right panel); on the other hand, when Dalit attributes were evaluated using Muslim coefficients, the mean enrolment of Dalit boys and girls *fell* from 70% and 54%, respectively, to 66% and 49%, respectively (Tables 6 and 7, left panel).

Table 6 makes clear that the proportion of the difference in mean enrolment rates of boys, between Hindus and Muslims that could be ascribed to inter-community coefficient differences varied markedly (63%-42%) depending upon whether Muslims were treated as Hindus (equation (3)) or Hindus were treated as Muslims (equation

(4)). A comparison of Hindu and Dalit enrolment rates for boys showed a similar variation (47%-29%).

The interpretation of results based on 'Oaxaca-Blinder type' decompositions can be problematical. First, as noted above, the contribution of inter-group coefficient differences (the 'structural effect') to the overall difference between the groups in the value of a particular variable (for example: the probability of being enrolled at school; average wages) depends on whether the attributes of group X are evaluated using the coefficient vector of group Y (Hindus are 'treated as' Muslims) or the attributes of group Y are evaluated using the coefficient vector of group X (Muslims are 'treated as' Hindus). The results - as with school enrolment rates of Hindu and Muslim boys, discussed above - may differ considerably depending upon the evaluation route chosen. More to the point, there is no *a priori* reason for preferring one route over another.

Second, since the structural effect is obtained as the difference between evaluating a common attribute vector at two different coefficient vectors, its magnitude depends critically upon the specification of the attributes vector. Different equation specifications will, typically, yield different estimates of the structural effect. Consequently, ones confidence in the estimate of the structural effect varies directly with ones confidence in the equation which underpins it.

Third, the 'structural effect' may be masked by unobserved differences in the quality of endowments to the different groups. For example, the presence of a primary school in a village does not mean that all groups in the village have equal access to the school. The fact that children from minority groups may have to traverse areas in which majority group families live - and in which they are not welcome - could create a psychological distance between such children and their

school. Similarly, within the class of land-owning families, there may be considerable differences in the quality of land (for example, irrigated versus dry land) cultivated. Often the data are not fine enough to detect such qualitative differences in attributes with the result that the size of the 'structural effect' is overestimated.

Fourth, differences in mean attributes between groups ('attribute differences') may themselves be the result of past structural imbalances. For example, if in the past, certain groups were denied access to education or to land then the meagreness of their current endowments is the product of past - though not of current - unequal treatment. This does not invalidate the methodology of 'Oaxaca-Blinder type' decompositions but it does have bearing on its interpretation.

Lastly, it is not uncommon to ascribe structural effects to 'unequal treatment'. For example, in the empirical work on male-female earnings differences, the structural component of the difference between (higher) male and (lower) female earnings is ascribed to discrimination against women. In this study, structural effects are ascribed to 'unequal response': given a set of endowments, Hindus, Muslims and Dalits respond differently in terms of the proportion of their children enrolled at school. These unequal responses represent a 'community' effect in that these responses are conditioned by the beliefs, norms and life experiences of the community in question. The nature of this effect is analysed in more detail below.

5.2. Explanations for the Community Effect

It is possible to reconcile these econometric findings with the historical development of Muslim and Dalit education in India, and the anthropological evidence on contemporary attitudes and behaviour among Muslim and Dalit

populations. There are several explanations that might account for the lower enrolment figures for Muslims.

One explanation is that Muslim parents may be sometimes reluctant to send their daughters to school because of *purdah* restrictions [*Iyer 2002*]. For example, Muslim respondents in Karnataka reported an unwillingness to send daughters to school or to acquire a higher education because that would have violated the practice of *purdah* [*Azim 1997: 73*].

Another explanation, due to Jeffery and Jeffery [*1997*], is that many Muslims regard their relative economic weakness as stemming from discriminatory practices in job-hiring[23]. The belief that their children will not get jobs then leads Muslim parents to devalue the importance of education[24].

A third explanation relates to Muslim dissatisfaction in India with the structure and curriculum of the public school system: many Muslim children, particularly in northern India, do not enrol or, having enrolled, do not continue in Hindi-medium schools on account of the overtly Hindu curriculum - reflected in the Hindi texts used - and the Hindu orientation of such schools [*Sadgopal, 2000*]. For example, after the BJP came to power in several north Indian states in the 1990s, many textbooks were rewritten to present a more Hindu-centric view of Indian history [*Khalidi 1995: 112-113*]. This has had disastrous consequences both for education, in particular, and for Hindu-Muslim relations, in general[25].

It was noted earlier that lower Muslim enrolment in formal schools could be attributed to the existence of *madrasas* and to the lack of Urdu language teaching in the formal system. It is important to recognise that the role of the *madrasa* is different to the role of the formal schooling sector [*Ahmad, 2002*], and that they fulfil an important role for Muslim communities who are not within the formal schooling

sector[26]. Although they propagate Islamic norms, they are also less expensive than government funded schools. *Madrasas* that teach the principles of Islam are essentially charities funded by donations from the Muslim community; many *madrasas* provide free board for resident students and the cost of tuition is also free. However, in general, Muslim families with higher incomes do not send their children to *madrasas*; 'the well-to-do go to schools; *madrasas* care for the poor' [*Shahabuddin, 2001* as quoted by *Bandyopadhyay 2002*]. So, at least among the poor, Muslims might not send their children to the formal education sector, but to *madrasas* instead.

The econometric findings on the significant Dalit 'community effect' can also be explained with reference to the anthropological and anecdotal accounts of the many physical and psychological disincentives that act powerfully to reduce Dalit school enrolment. There can be no doubt whatsoever that even today Dalit children face a tremendous degree of discrimination against them in schools [*Malik 1999*]. Many Dalit girls drop out because of discrimination against them by the other higher-caste students [*Sainath, 1996*]. Indeed, anecdotal evidence provided by journalists suggests that this is happening in about 90% of Dalit-majority schools [*Sainath 1996*].

Even though most Dalit children have easy *physical* access to a school, there is a considerable *psychological* distance between the school and them. Not infrequently, the village primary school might be located in a part of the village where upper-caste Hindus live, thus raising the psychological barriers that Dalit (and Muslim) children face in attending school. Caldwell *et. al.* [*1985*], in a study of South India, argued that where a school was located depended on 'the activity of local politicians and leading citizens, and on pressures exerted upon them by *panchayat* councils, caste

organisations (which, at the state level, are very concerned with the increased access to education of their own caste members) and other groups'.

There are thus a host of reasons why Muslims and Dalits might not participate in schooling to the same degree as Hindus. While some of the reasons lie in the representation of Islamic norms by the clergy, the lack of suitable employment opportunities in the public sector, or discrimination in schools; other factors that are important include the existence of *madrasa* education, the lack of Urdu language teaching in the formal schooling sector, and local caste politics. Together, all of these factors act powerfully to account for the significant 'community effect' on Muslim and Dalit education in India.

5.3. Regional Contributions to the Community Effect

One of the early attempts to deal with education policy in India was the Indian Education Commission of 1882. Interestingly, its findings showed that education for women was greater in south India, than in the north; and most particularly in Bengal compared with all of north India [*Minault, 1998: 166*]. Over a century later, these findings are very similar to the situation in India today.[27] One of the features of school enrolment rates in India is their variation by region (Table 1) ranging from 91% for boys and 85% for girls in the West to 79% for boys and 60% for girls in the Central region. The question is whether the 'community effect' in school enrolment was ameliorated in the high, and exacerbated in the low, enrolment regions; or, to use the language of equation (7) whether the proportionate contributions of the different regions, to the overall community effect, were markedly different.

Table 8 shows that 60% of the overall community effect, between Hindus and Muslims, in the enrolment rate of boys was contributed by the Central region and

27% was contributed by the Eastern region with the percentage contributions of the 'high enrolment rate regions' of the South, the West and the North being collectively on 13%. A similar story could be told with respect to Dalits. This suggests that inter-community differences in the school enrolment of boys were, by and large, associated with the poorer regions of India where the overall rate of school enrolment was low.

However, as Table 9 shows, the regional contributions to the overall community effect, between Hindus and Muslims, in the enrolment rate of girls told a different story. Now, particularly as between Hindus and Muslims, the contributions of the high enrolment regions to the overall community effect was significantly high: the South contributed 20% to the overall community effect - and the West and the North weighed in with 13% and 15%, respectively. This suggests that inter-community differences in the education of girls persisted in spite of regional prosperity and in spite of a regional record of high enrolment rates.

5.4. Contribution of Parental Literacy to the Community Effect

An exercise similar to that performed above for the regions can also be performed with respect to the literacy status of the parents of the children. The issue here is whether differences in inter-community attitudes towards school enrolment were sharper when parents were illiterate than when they were literate. A recurring theme in the literature on the welfare of children in developing countries is the importance of having a literate mother. More recently, Basu and Foster [*1998*] have argued that some of the disadvantages of illiteracy may be mitigated if he/she lives in a household in which other members are literate since, for many activities, having access to the ability of the literate members to read and write may serve as a form of 'surrogate' or 'proximate' literacy.

Combining these strands, the children were distinguished according as to whether their mothers were: literate; 'proximate literate', that is mother illiterate but father literate; 'illiterate', that is mother and father illiterate. Tables 10 and 11 show that most of the contribution to the overall community effect emanated from children whose mothers were illiterate: between Hindus and Muslims, 90% of the overall community effect for boys, and 96% for girls, was contributed by families in which the mother was illiterate; between Hindus and Dalits, the corresponding figures were 92% for boys and 86% for girls.

These results point to the importance of maternal education in dismantling inter-community differences in the likelihood of children being enrolled at school. Although the raw data shows significant differences between Hindus, Muslims and Dalits in the proportion of children enrolled at school, an important lesson of this study is that such differences are not immutable. Indeed, for all three communities, an important staging post on the route towards school-going children are mothers who, being themselves literate, appreciate the importance of education for their children [*Kambhampati and Pal, 2003*].

6. Conclusion

Raising the school enrolment rate in India is of paramount importance to the welfare of its citizens and there are a number of non-governmental organisations (NGOs) in India seeking to do just that[28]. Our results showed that while there was a latent demand for education among Dalits, which was almost as strong as the Hindu demand, enrolment rates for children from this community were lower than that for Hindus because Dalits were not as well-endowed as Hindus with 'enrolment-friendly' factors. In particular, the average income of Dalit households was 57% that of Hindu

households. The appropriate response in this situation is to convince Dalit families that family welfare would not fall significantly if children were taken out of work and put in school. In conjunction, the physical and psychological disincentives that inhibit Dalit school enrolment need also to be both recognised and eliminated. Discrimination in schools against Dalit children is an important disincentive for these children to enrol at school. In order to reduce the level of effective segregation in the educational system, it may be very worthwhile to reconsider the concept of the 'neighbourhood school', put forward by the National Policy on Education in 1986 but which was never implemented [*Sadgopal, 2000*]. There are also real problems with the absence of role models in white-collar jobs in the public and private sector [*Khalidi, 1995*].

However, in contrast to Dalits, our results showed that the difference in the enrolment rates between Hindu and Muslim children was disproportionately greater than the difference in their economic positions: this suggests that narrowing the Hindu-Muslim enrolment gap – particularly with respect to children with illiterate parents - is important, especially with respect to lobbying communities about the importance of schooling. It also lies in attempting to understand why some families might be dissatisfied with the nature of formal schooling provision as it stands currently.

Journeying outside the ambit of the paper's econometric results, the Muslim community has invested in institutions of religious learning, and the future of *madrasas* in this context is critical. As this study has argued, the activities of the *madrasas* need to be co-ordinated better with the formal schooling sector so as to allow students to make the transition easily to the formal schooling sector. Social

activists in India have noted recently that post-1992 and the demolition of the Babri Masjid mosque in Ayodhya, Muslim women have become much more aware of the importance of an education, and are much more strident in their pursuit of it [*Engineer 2002*]. In order to further this therefore, an important policy measure would be to translate high-quality text material, both written in India and abroad, up to the undergraduate level into regional languages, including Urdu [*Sadgopal 2000; Shahabuddin, 2001*]. In this context, the role of the *anganwadi* schools in India is important for raising awareness among parents both about the importance of education and about the fact that the financial sacrifices involved in sending children to school would not be excessive. The usefulness of having these schools is particularly evident for Muslim communities since it overcomes the restrictions imposed by *purdah*. Since, the scheme also specifically targets Dalits it is important for raising school enrolment among the poorer groups in Indian society.

An important message that emerges from this paper is that sending children to school depends on attitudes towards education: of the children; of their parents; and of their wider communities. But an equally important finding is that the size of the religion or caste effect depends upon the non-community circumstances in which the children are placed. Under favourable circumstances (for example, when parents are literate), the size of the community effect is negligible. Under less favourable circumstances however, the size of the community effect is considerable. In summary therefore this study argues that *Vidya, Veda* and *Varna* in India are profoundly and fundamentally inter-linked. While economic and regional factors may mediate their interactions, recognition of these inter-linkages has significant implications for education policy in particular, and more widely, for development policy in India.

Data Appendix

The data used for estimating the five econometric equations, whose dependent variables were described above, was obtained from the NCAER survey, referred to earlier. The salient features of this data are set out in this section. The data from the NCAER survey are organised as a number of 'reference' files, with each file focusing on specific subgroups of individuals. However, the fact that in every file an individual is identified by a household number and, then, by an identity number within the household, means that the 'reference' files can be joined – as will be described below – to form larger files.

So, for example, the schooling equations were estimated on data from the 'individual' file. This file, as the name suggests, gave information on the 194,473 individuals in the sample with particular reference to their educational attainments[29]. From this file, data on the school enrolments and continuations of each child aged 6-14 were extracted (the variables ENR and CON) and associated with this information was data on: the educational attainments and occupation of the child's father and/or mother; the income and size of the household to which the child belonged; the state, district and village in which it lived; its caste/tribe (scheduled or non-scheduled only); its religion; the number of its siblings etc.

Another file – the 'village file' – contained data relating to the existence of infrastructure in, and around, each of the 1,765 villages over which the survey was conducted. This file gave information as to whether *inter alia* a village: had *anganwadi* schools, primary schools, middle schools and high schools and, if it did not, what was the nature of access to such institutions. The village file could be joined to the individual file so that for each individual (say, child between 6-14) there was information not just on the child's schooling outcome and its family and household circumstances but also on the quality of the educational facilities – and general infrastructure - in the village in which the child lived.

The sample of children was distinguished by three *mutually exclusive* subgroups: Dalits[30]; Muslims; and Hindus. In effect, the Hindu/Muslim/Dalit distinction made in

this paper is a distinction between: non-Dalit Hindus; Muslims; and Hindus from the Dalit community. These subgroups are, hereafter, referred to as 'communities'. Because of the small number of Christians and persons of 'other' religions in the Survey, the analysis reported in this paper was confined to Hindus, Muslims and Dalits.

The Survey contained information for each of sixteen states. In this study, the states were aggregated to form five regions: the *Central* region consisting of Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh; the *South* consisting of Andhra Pradesh, Karnataka, Kerala and Tamilnadu; the *West* consisting of Maharashtra and Gujarat; the *East* consisting of Assam, Bengal and Orissa; and the *North* consisting of Haryana, Himachal Pradesh and Punjab.

The equation relating to school enrolment was estimated on data from the NCAER Survey's 'Individual' file', described above, for children between the ages of 6-14 (inclusive) who had both parents living in the household: this yielded a total of 37,566 observations, of which 19,845 were boys and 17,721 were girls.

Table 1
Selected Data for School Enrolments by Community:
Children Aged 6-14

	Hindus (10, 178 boys; 9,200 girls)	*Muslims (2,300 boys; 2,026 girls)*	*Dalits (7,367 boys 6,495 girls)*
% boys enrolled	84	68	70
% girls enrolled	68	57	55
% boys enrolled: Central	79	59	61
% boys enrolled: South	86	91	80
% boys enrolled: West	91	83	81
% boys enrolled: East	86	62	73
% boys enrolled: North	93	68	81
% girls enrolled: Central	60	44	39
% girls enrolled: South	79	84	70
% girls enrolled: West	85	66	71
% girls enrolled: East	77	57	59
% girls enrolled: North	84	30	72
% boys enrolled: both parents literate	96	93	92
% boys enrolled: both parents illiterate	70	50	58
% boys enrolled: low-development village	78	59	59
%boys enrolled: medium-development village	85	70	76
% boys enrolled: high-development village	90	74	77
% girls enrolled: both parents literate	94	92	89
% girls enrolled: both parents illiterate	49	35	40
% boys enrolled: cultivator father	85	67	69
% boys enrolled: labourer father	74	57	64
% boys enrolled: non-manual father	89	74	80
% girls enrolled: cultivator father	72	57	52
% girls enrolled: labourer father	57	47	48
% girls enrolled: non-manual father	83	64	69
% girls enrolled: low-development village	60	44	39
% girls enrolled: medium-development village	74	57	60
% girls enrolled: high-development village	83	69	67

Children whose both parents were present in the household
Source: NCAER Survey

Table 2
Selected Data for Factors Influencing School Enrolments, by Community: Children Aged 6-14

	Hindus (10, 178 boys; 9,200 girls)	*Muslims (2,300 boys; 2,026 girls)*	*Dalit (7,367 boys 6,495 girls)*
% boys enrolled	84	68	70
	(16.1) [22.4]	{2.0}	
% girls enrolled	68	57	55
	(13.2) [23.4]	{1.8}	
% boys living in Central	45	48	48
	(2.0) [3.5]	{0.4}	
% boys living in South	19	19	15
	(0.7) [6.5]	{4.7}	
% boys living in West	14	6	10
	(14.0) [7.2]	{7.9}	
% boys living in East	10	22	16
	(12.7) [9.7]	{6.9}	
% boys living in North	12	5	11
	(11.6) [1.1]	{10.2}	
% girls living in Central	42	42	45
	(0.1) [3.3]	{2.0}	
% girls living in South	19	23	16
	(3.3) [5.2]	{6.3}	
% girls living in West	14	6	12
	(14.3) [4.9]	{9.7}	
% girls living in East	12	24	15
	(12.8) [6.4]	{8.9}	
% girls living in North	13	5	12
	(12.6) [0.6]	{11.3}	
% boys with both parents literate	29	22	13
	(7.2) [26.2]	{9.1}	
% boys with both parents illiterate	33	48	56
	(13.4) [31.5]	{6.8}	
% girls with both parents literate	31	24	12
	(6.3) [29.9]	{11.7}	
% girls with both parents illiterate	31	44	56
	(10.2) [30.7]	{9.3}	
% boys with cultivator father	54	40	40
	(12.8) [18.9]	{0.3}	
% boys with labourer father	16	22	37
	(6.6) [31.3]	{14.2}	
% boys with non-manual father	28	37	22
	(8.0) [9.5]	{13.5}	
% girls with cultivator father	55	40	39
	(12.3) [19.8]	{0.7}	
% girls with labourer father	15	24	38
	(8.2) [31.4]	{12.4}	
% girls with non-manual father	27	34	21
	(5.7) [8.7]	{10.7}	
% boys in low-development villages	31	32	37
	(0.9) [8.5]	{4.7}	
% boys in medium-development villages	42	39	38
	(2.1) [5.0]	{1.1}	
% boys in high-development villages	27	29	25
	(1.4) [3.7]	{3.6}	
% girls in low-development villages	30	30	36
	(0.3) [8.1]	{5.0}	
% girls in medium-development villages	41	40	37
	(0.7) [4.7]	{2.3}	
% girls in high-development villages	29	30	27
	(0.5) [3.5]	{2.7}	

Notes to Table 2:

1. Figures in ( ) are the t-values associated with testing the null hypothesis that the relevant Hindu and Muslim mean values were equal.
2. Figures in [ ] are the t-values associated with testing the null hypothesis that the relevant Hindu and Dalit mean values were equal.
3. Figures in { } are the t-values associated with testing the null hypothesis that the relevant Dalit and Muslim mean values were equal.
4. All the null hypotheses were tested under the assumption of unequal variances.
5. All the figures in Table 2 refer to children whose both parents were present in the household

Source: NCAER Survey

Table 3
Reasons for not Enrolling Children in School by Community

Community→ *Reasons↓*	*Hindu*	*Muslim*	*Dalit*
Supply-Side*	6	6	6
	(0.4)[0.5]	{0.1}	
Demand-Side**	29	26	34
	(2.7) [5.2]	{6.7}	
Education not important	17	23	18
	(5.0) [0.6]	{4.6}	
Child unwilling	13	12	11
	(0.15) [2.5]	{1.6}	
Tradition/married off	9	11	10
	(1.5) [0.3]	{1.3}	
Other	26	22	21
	(3.4) [4.6]	{0.1}	
Total	100	100	100
Total children	4,135	1,625	5,190

Notes to Table 3:

1. Figures in ( ) are the t-values associated with testing the null hypothesis that the relevant Hindu and Muslim mean values were equal.
2. Figures in [ ] are the t-values associated with testing the null hypothesis that the relevant Hindu and Dalit mean values were equal.
3. Figures in { } are the t-values associated with testing the null hypothesis that the relevant Dalit and Muslim mean values were equal.
4. All the null hypotheses were tested under the assumption of unequal variances.
5. All the figures in Table 2 refer to children whose both parents were present in the household.
6. *School too far/school dysfunctional; ** financial constraint/domestic duties/economic activity

Source: NCAER Survey

Table 4
Logit Estimates of the School Enrolment Equation: 19,845 Boys, 6-14 years

Determining Variables	*Estimated odds-ratios (Robust standard errors)*	*z-scores*	*Marginal Probabilities*
Muslim	-0.5693225 (0.083)	-3.85	-0.087
Dalit	-0.7621249 (0.064)	-3.25	-0.037
Age of child	5.419908 (0.360)	25.41	0.227
(Age of child)^2	-0.9273867 (0.003)	-22.75	-0.010
Central	-0.4834143 (0.035)	-9.94	-0.100
East	-0.5999015 (0.065)	-4.68	-0.078
West	-	-	-
South	-	-	-
Productive Assets	1.02979 (0.005)	5.71	0.004
Father educated: low	2.994452 (0.154)	21.27	0.124
Mother educated: low*	2.913494 (0.248)	12.56	0.112
Father educated: medium**	3.298026 (0.249)	15.80	0.120
Mother educated: medium**	2.362174 (0.344)	5.89	0.088
Father educated: high**	4.305608 (0.356)	17.67	0.142
Mother educated: high***	2.413008 (0.437)	4.87	0.089
Father non-manual	1.435977 (0.798)	6.67	0.046
Father labourer	-	-	-
Father cultivator	-	-	-
Mother labourer	-0.7729702 (0.068)	-2.94	-0.037
Mother non-manual	-0.609829 (0.099)	-3.04	-0.078
Mother cultivator	-	-	-
No *anganwadi* in village	-0.8426131 (0.039)	-3.73	-0.023
No primary school in village	-	-	-
No middle school within 2 kilometres of village	-0.8951441 (0.039)	-2.52	-0.015
Landowning household	1.529053 (0.071)	9.12	0.060
Medium-development village	1.291049 (0.063)	5.27	0.034
Highly-development village	1.20837 (0.075)	3.04	0.025
Additional Effects from being Muslim			
Central	-0.6352204 (0.035)	-2.61	-0.070
East	-0.3960093 (0.079)	-4.60	-0.163
Father educated: medium	1.659454 (0.352)	2.39	0.057
Mother labourer	1.709979 (0.412)	2.23	0.060
Mother non-manual	5.53862 (4.082)	2.32	0.127
No *anganwadi* in village	1.45462 (0.188)	2.91	0.045
Additional Effects from being Dalit			
Central	-0.8529931 (0.082)	-1.66	-0.022
East	-0.777906 (0.111)	-1.76	-0.036
Mother labourer	1.248641 (0.137)	2.02	0.028

Notes to Table 4

1. The coefficients are shown in terms of the odds-ratios. These are not the original coefficients obtained from estimating the logit equation: consequently, dividing the odds-ratios by the standard errors (shown parenthetically) will not yield the z-scores shown in the second column.
2. The standard errors are White-corrected standard errors in the presence of heteroscedasticity.
3. Pseudo-R^2=0.2205.
4. The specification in Table 4 was obtained by imposing zero restrictions on an unrestricted equation in which all the variables - and all associated Muslim and Dalit interaction terms - were entered. Using a likelihood ratio test, a $\chi^2(34)=48.6$ (prob>χ^2 value=0.05).
5. The default region was the North. Coefficients on the South and the West were set to zero (see Note 4).
6. The default educational category for the child's father and the mother was that they were illiterate. Educational attainment was: *low*, if the person was literate but had not completed primary school; *medium*, if the person was educated to primary level or above but had not passed the school-leaving examination (the matriculation examination, abbreviated to *matric*) administered at the end of ten years of schooling; *high*, if the person had passed the matric examination
7. The value of the productive assets index for a household was computed as the weighted sum of its productive assets. These assets were (with weights in parentheses): sewing machine (2); tubewell (10); generator (5); thresher (3); winnower (3); bullock cart (4); cycle rickshaw (3); tractor (10).
8. The default occupation for the father was 'unoccupied'. The coefficients on the father being a cultivator or labourer were set to zero (see Note 4).
9. The default occupation for the mother was 'unoccupied'. The coefficient on the mother being a cultivator was set to zero (see Note 4).
10. The villages in the sample were classified according to whether, on the basis of the facilities they provided - roads, transport, schools, hospitals, electricity, banks, markets - they were low-development (the default category), medium-development or high-development villages.

Table 5
Logit Estimates of the School Enrolment Equation: 17,721 Girls, 6-14 years

Determining Variables	*Estimated odds-ratios (Robust standard errors)*	*z-scores*	*Marginal Probabilities*
Muslim	-0.541536	-6.77	-0.137
	(0.049)		
Dalit	1.285717	1.63	0.051
	(0.199)		
Age of child	3.677957	19.78	0.269
	(0.242)		
(Age of child)^2	0.9428191	-18.11	-0.012
	(0.003)		
Central	-0.2987395	-25.10	-0.254
	(0.014)		
South	-	-	-
West	-	-	-
East	-0.5745904	-7.16	-0.123
	(0.044)		
Productive assets index	1.03941	8.26	0.007
	(0.005)		
Father educated: low	2.33463	18.72	0.160
	(0.106)		
Mother educated: low	3.567762	16.47	0.212
	(0.276)		
Father educated: medium	3.060463	16.63	0.189
	(0.206)		
Mother educated: medium	4.848036	10.60	0.225
	(0.722)		
Father educated: high	5.035235	21.59	0.252
	(0.377)		
Mother educated: high	4.494074	6.97	0.215
	(0.969)		
Father labourer	-	-	-
Father cultivator	-	-	-
Father non-manual	1.618016	9.55	0.094
	(0.082)		
Mother labourer	-0.8617083	-2.79	-0.031
	(0.046)		
Mother Cultivator	-	-	-
Mother non-manual	-	-	-
No anganwadi in village	-	-	-
No primary school in village	-	-	-
No middle school within 2 km	-0.9140555	-2.11	-0.019
	(0.039)		
Landowning household	1.382258	7.20	0.068
	(0.062)		
Medium-development village	1.246746	3.95	0.045
	(0.069)		
High-development village	1.464051	6.65	0.076
	(0.083)		
Additional Effects from being Muslim			
Central	1.421324	2.95	0.067
	(0.014)		
Productive assets index	-0.9519971	-4.11	-0.010
	(0.011)		
Mother educated: low	2.103151	3.67	0.129
	(0.426)		
Father educated: medium	-0.7528689	-1.66	-0.062
	(0.129)		
Additional Effects from being Dalit			
East	-0.8230176	-1.80	-0.042
	(0.089)		
Mother's Education: high	-0.3800601	-2.63	-0.228
	(0.140)		
Medium-development village	1.233398	2.71	0.042
	(0.095)		
Age of child	-0.9449562	-3.83	-0.012
	(0.014)		

Notes to Table 5

1. The coefficients are shown in terms of the odds-ratios. These are not the original coefficients obtained from estimating the logit equation: consequently, dividing the odds-ratios by the standard errors (shown parenthetically) will not yield the z-scores shown in the second column.
2. The standard errors are White-corrected standard errors in the presence of heteroscedasticity.
3. Pseudo-R^2=0.2381.
4. The specification in Table 4 was obtained by imposing zero restrictions on an unrestricted equation in which all the variables - and all associated Muslim and Dalit interaction terms - were entered. Using a likelihood ratio test, a $\chi^2(37)=44.4$ (prob>χ^2 value =0.19).
5. The default region was the North. Coefficients on the South and the West were set to zero (see Note 4).
6. The default educational category for the child's father and the mother was that they were illiterate. Educational attainment was: *low*, if the person was literate but had not completed primary school; *medium*, if the person was educated to primary level or above but had not passed the school-leaving examination (the matriculation examination, abbreviated to *matric*) administered at the end of ten years of schooling; *high*, if the person had passed the matric examination
7. The value of the productive assets index for a household was computed as the weighted sum of its productive assets. These assets were (with weights in parentheses): sewing machine (2); tubewell (10); generator (5); thresher (3); winnower (3); bullock cart (4); cycle rickshaw (3); tractor (10).
8. The default occupation for the father was 'unoccupied'. The coefficients on the father being a cultivator or labourer were set to zero (see Note 4).
9. The default occupation for the mother was 'unoccupied'. The coefficients on the mother being a cultivator or a non-manual worker were set to zero (see Note 4).
10. The villages in the sample were classified according to whether, on the basis of the facilities they provided - roads, transport, schools, hospitals, electricity, banks, markets - they were low-development (the default category), medium-development or high-development villages.

Table 6
The Decomposition of Inter-Community Differences
in the Proportion of Boys Enrolled at School:
"Oaxaca-Blinder type" Logistic Decomposition

	Sample Average	***Community s treated as community r***		***Community r treated as community s***	
	$E\bar{N}R^r - E\bar{N}R^s$	$\bar{P}(\mathbf{X}_i^s, \hat{\boldsymbol{\beta}}^r) - \bar{P}(\mathbf{X}_i^s, \hat{\boldsymbol{\beta}}^s)$	$\bar{P}(\mathbf{X}_i^r, \hat{\boldsymbol{\beta}}^r) - \bar{P}(\mathbf{X}_i^s, \hat{\boldsymbol{\beta}}^r)$	$\bar{P}(\mathbf{X}_i^r, \hat{\boldsymbol{\beta}}^r) - \bar{P}(\mathbf{X}_i^r, \hat{\boldsymbol{\beta}}^s)$	$\bar{P}(\mathbf{X}_i^r, \hat{\boldsymbol{\beta}}^s) - \bar{P}(\mathbf{X}_i^s, \hat{\boldsymbol{\beta}}^s)$
***r*=Hindu**	0.843-0.675=	0.781-0.675=	0.843-0.781=	0.843-0.773=	0.773-0.675=
***s*=Muslim**	**0.168**	**0.106**	**0.062**	**0.070**	**0.098**
***r*=Hindu**	0.843-0.698=	0.752-0.698=	0.843-0.752=	0.843-0.801=	0.801-0.698=
***s*=Dalit**	**0.145**	**0.054**	**0.091**	**0.042**	**0.103**
***r*=Dalit**	0.698-0.675=	0.724-0.675=	0.698-0.724=	0.698-0.660=	0.660-0.675=
***s*=Muslim**	**0.023**	**0.049**	**-0.026**	**0.038**	**-0.015**

Table 7
The Decomposition of Inter-Community Differences
in the Proportion of Girls Enrolled at School:
"Oaxaca-Blinder type" Logistic Decomposition

	Sample Average	***Community s treated as community r***		***Community r treated as community s***	
	$E\bar{N}R^r - E\bar{N}R^s$	$\bar{P}(\mathbf{X}_i^s, \hat{\boldsymbol{\beta}}^r) - \bar{P}(\mathbf{X}_i^s, \hat{\boldsymbol{\beta}}^s)$	$\bar{P}(\mathbf{X}_i^r, \hat{\boldsymbol{\beta}}^r) - \bar{P}(\mathbf{X}_i^s, \hat{\boldsymbol{\beta}}^r)$	$\bar{P}(\mathbf{X}_i^r, \hat{\boldsymbol{\beta}}^r) - \bar{P}(\mathbf{X}_i^r, \hat{\boldsymbol{\beta}}^s)$	$\bar{P}(\mathbf{X}_i^r, \hat{\boldsymbol{\beta}}^s) - \bar{P}(\mathbf{X}_i^s, \hat{\boldsymbol{\beta}}^s)$
***r*=Hindu**	0.725-0.567=	0.656-0.567=	0.725-0.656=	0.725-0.637=	0.637-0.567=
***s*=Muslim**	**0.158**	**0.089**	**0.069**	**0.088**	**0.070**
***r*=Hindu**	0.725-0.544=	0.591-0.544=	0.725-0.591=	0.725-0.686=	0.686-0.544=
***s*=Dalit**	**0.181**	**0.047**	**0.134**	**0.039**	**0.142**
***r*=Dalit**	0.544-0.567=	0.609-0.567=	0.544-0.609=	0.544-0.493=	0.493-0.567=
***s*=Muslim**	**-0.023**	**0.042**	**-0.065**	**0.051**	**-0.074**

Table 8
The Regional Contributions to the all-India "Community Effect": Boys

	Central	*South*	*West*	*East*	*North*	*All-India*
Hindus v Muslims: $\mu_m(\overline{P}_m^H - \overline{P}_m^M)$	0.049	0.004	0.003	0.023	0.003	0.082
Percentage contribution	60	5	4	27	4	100
Hindus v Dalits $\mu_m(\overline{P}_m^H - \overline{P}_m^M)$	0.031	0.003	0.002	0.009	0.003	0.048
Percentage contribution	65	6	4	19	6	100

The percentage distribution of the 19,845 boys in the sample between the regions were: Central (46.8), South (17.3), West (11.5), East (13.9); North (10.6).

Table 9
The Regional Contributions to the all-India "Community Effect": Girls

	Central	*South*	*West*	*East*	*North*	*All-India*
Hindus v Muslims: $\mu_m(\overline{P}_m^H - \overline{P}_m^M)$	0.033	0.018	0.012	0.014	0.015	0.092
Percentage contribution	36	20	13	15	16	100
Hindus v Dalits $\mu_m(\overline{P}_m^H - \overline{P}_m^M)$	0.020	0.006	0.004	0.010	0.003	0.043
Percentage contribution	47	14	9	23	7	100

The percentage distribution of the 17,721 girls in the sample between the regions were: Central (43.2), South (18.4), West (12.5), East (14.3); North (11.6).

Table 10
The Contribution of Parental Literacy to the all-India "Community Effect": Boys

	Both Parents Illiterate	*Mother Illiterate, but Father Literate*	*Mother Literate*	*All-India*
Hindus v Muslims: $\mu_m(\overline{P}_m^H - \overline{P}_m^M)$	0.052	0.022	0.008	0.082
Percentage contribution	63	27	10	100
Hindus v Dalits $\mu_m(\overline{P}_m^H - \overline{P}_m^M)$	0.030	0.014	0.004	0.048
Percentage contribution	63	29	8	100

The percentage distribution of the 19,845 boys in the sample between parents of different literacy status were: both illiterate (42.9); mother illiterate, father literate (33.4); mother literate (23.7).

Table 11
The Contribution of Parental Literacy to the all-India "Community Effect": Girls

	Both Parents Illiterate	*Mother Illiterate, but Father Literate*	*Mother Literate*	*All-India*
Hindus v Muslims: $\mu_m(\overline{P}_m^H - \overline{P}_m^M)$	0.050	0.039	0.003	0.092
Percentage contribution	54	42	4	100
Hindus v Dalits $\mu_m(\overline{P}_m^H - \overline{P}_m^M)$	0.023	0.014	0.006	0.043
Percentage contribution	53	33	14	100

The percentage distribution of the 17,721 girls in the sample between parents of different literacy status were: both illiterate (42.9); mother illiterate, father literate (33.4); mother literate (23.7).

NOTES

[1] Articles 341 and 342 of the Indian Constitution include a list of Scheduled Castes and Scheduled Tribes (broadly constituting India's 'untouchable' castes) who were to receive positive discrimination in education and political representation.

2 For example, in both Sipahimalani (1999) and Dreze and Kingdon (2001), the analysis of caste (Dalits) or religion (Muslim) effects was conducted by simply including the appropriate dummy variables as explanatory variables in the regression equation.

[3] This survey - commissioned by the Indian Planning Commission and funded by a consortium of United Nations agencies - was carried out by the National Council of Applied Economic Research (NCAER) over January-June 1994 and most of the data from the survey pertains to the year prior to the survey, that is to 1993-94. Details of the survey - hereafter referred to as the NCAER Survey - are to be found in Shariff (1999), though some of the salient features of data from the NCAER Survey, insofar as they are relevant to this study, are described in this paper.

[4] There is a body of evidence suggesting that the number of children born to a woman is inversely related to her level of education (Borooah, 2000; Parikh and Gupta, 2001; Borooah, 2002). Furthermore, there is considerable evidence to suggest that children's health (including the likelihood of their surviving infancy and childhood), nutritional status and educational attainments are enhanced by having better educated parents, particularly the mother (Behrman and Wolfe, 1984; Thomas, Strauss and Henriques, 1991; Sandiford, Cassel, Montenegro and Sanchez, 1995; Lavy, Strauss, Thomas and de Vreyer, 1996; Ravallion and Wodon, 2000; Gibson, 2001). Evidence also suggests that a farm-household's total income depends upon the highest education level reached by a household member rather than by the mean educational level of the household or by the educational level of the household head (Foster and Rosensweig, 1996). Lastly, education raises the wages of both men and women (Kingdon and Unni, 2001).

[5] Needless to say, the benefits from educating children are not restricted to higher potential income. Education confers non-income benefits, not just to the persons receiving education (for example, through better health for themselves and their children), but also to society (for example, through the fact that educated persons are more likely to be more active, better informed, and racially tolerant citizens).

[6]Such investment could be in the health of children and take the form of a better diet, preventing illness through vaccination and immunisation, or seeking medical help promptly in the event of illness. In addition, parents - by enrolling their children in school and ensuring that, after enrolment, they continued to remain in school - could also invest in the education of their children.

[7] For example, the use of contraception methods, including the preference for certain types of contraceptive methods over others, may be influenced by religious beliefs (Moulasha and Rao, 1999), when other factors are not adequately controlled for.

[8] The relative disadvantage of girls with respect to school participation may also be exacerbated by other factors. For example, in their study of educational quality in Kenya, Lloyd *et. al.* (1998) found that girls were more likely to drop out of school prematurely, and to perform less well at school, because of gender-bias within the family and unequal treatment in the school environment. In a similar study for Egypt, Lloyd *et. al.* (2001) argued that differences between boys and girls, in grade levels attained, were a reflection of social norms with respect to gender roles.

[9] Of course, the number of siblings a child has would depend on his/her household's income.
[10]Girls, after marriage, leave home and, in a traditional Indian context, are 'lost' to their parents. Needless to say, culture may also play a role – perhaps a bigger role than economic calculation – in the educational deprivation of women.
[11] Note that even though household income has been controlled for, the labour market status of households contributes to this income.
[12] *Anganwadis* are village-based early childhood development centres. They were devised in the early 1970s as a baseline village health centre, their role being to: provide state government-funded food supplements to pregnant women and children under five; to work as an immunization outreach agent; to provide information about nutrition and balanced feeding, and to provide vitamin supplements; to run adolescents girls' and women's groups; and to monitor the growth, and promote the educational development of children in a village. In such schools, educated women, who are specifically trained for the purpose, conduct primary school level teaching in the courtyards (*aangan*) of their homes. This system of instruction has the advantage that mothers who cannot afford to send their children to formal schools can, instead, send their children to *anganwadi* schools.
[13] The fact that the number of girls is less than that of boys is consistent with the low sex ratio in India, termed by Dreze and Sen (1996) as a "missing women" phenomenon.
[14] This is not to suggest that there are no problems with the quality of schools in India; it was rather the case that the quality of schools was not the most often cited barrier to enrolment.
[15] Despite these developments in Muslim education overall, however, in nineteenth-century India, Muslim women who could read and write were relatively rare. One reason for this were Muslim norms governing family prestige: for example, it was felt that if a woman could write she might engage in correspondence with men and this might lead to family dishonour. This, however, changed with the influence of Muslim religious reformers, who linked education with the appropriate practice of religion. For more on this, see Minault, 1998 p. 24.
[16] The word '*Koran*' is actually derived from the Arabic word for reading (Khalidi 1995: 106).
[17] This particular *madrasa* now includes in its curriculum, in addition to traditional subjects, eight years of Modern Indian History, Islamic History, Civics, Geography, General Sciences, Health-care, Economics and Computing (Alam, 2002).
[18] For example, one study in Karnataka showed that the regularity of attendance is not assessed in *madrasas*, and that many students only attended them for one or two years only (Azim 1997: 79).
[19] In the sense that physical contact with them is considered as polluting.
[20] This observation is consistent with early sociological studies of India which have described how the physical proximity of upper caste houses, for example, the *agraharam* of the Brahmin community in south India, implies that physical separation encourages exclusion in the village. For more on this, see Béiteille, 1965.
[21] For discrete variables, taking the value 0 or 1, the effect is calculated as the change in the average probability of the outcome when the value of the variable changes from 0 to 1, the values of the other variables being held at their mean values.
[22] 'Hit' if the probability of enrolment was greater than 0.5; 'miss' otherwise.
[23]For example, the proportion of Muslims in government service in India is only about 2% today (Engineer 2002). In 1998, there were 620 candidates selected for the top

civil service jobs in the country; only 13 of these were Muslims, of whom 6 came from one institution, the Aligarh Muslim University (as reported in *Islamic Voice*, 1998).

[24] In states such as Maharashtra and Karnataka however, the enrolment of Muslims at both the primary and secondary stages is increasing (*Islamic Voic*e 2000). This is due to greater awareness campaigns, and financial assistance for Muslim children in these states.

[25] For example, soon after the demolition of the Babri Masjid mosque in Ayodhya in 1992, a primary school mathematics textbook published in Uttar Pradesh included the following question: 'If 15 *kar sevaks* (Hindu volunteers) demolish the Babri Masjid in 300 days, how *many kar sevaks* will it take to demolish the mosque in 15 days?' (Khalidi, 1995 p. 115).

[26]The curriculum of the typical *madrasa* spans about 12 years and includes recitation from memory and interpretation of the *Koran*, Islamic law and jurisprudence, and some amount of philosophy, mathematics and astronomy (Bandyopadhyay, 2002).

[27] A Committee appointed by Sir Harcourt Butler in 1904 to improve women's education, even recommended that Hindu and Muslim women should be educated separately, and that this should also be the case for upper-caste and lower-caste women. For more on this, see Minault, 1998 pp. 167-69.

[28] One of the most successful of these is the Mamidipudi Venkatarangaiya (MV) Foundation which operates programmes for raising enrolment in five hundred villages in the state of Andhra Pradesh. In four hundred of these villages, this Foundation has succeeded in ensuring that every child, between the ages of 5-11, is in school and this achievement must be set against an overall enrolment rate of 53% for the state as a whole [*Wazir, 2002*].

[29] Needless to say, the file also contained other information on the individuals.

[30] Those castes and tribes – also known as Scheduled Castes/Tribes - recognised by the Indian Constitution as deserving special recognition in respect of education, employment and political representation.

References

Ahmad, I. 1983, *Modernization and Social Change among Muslims in India* Delhi: Manohar.

Ahmad, I. 2002, 'The role of Urdu in educational enrichment of *madrasas*' Conference paper presented at the *International Conference on Urdu Education*, February, New Delhi.

Akerlof, G. A. and Kranton, R. E. 2002, 'Identity and schooling: Some lessons for the economics of education', *Journal of Economic Literature*, Vol. XL, No. 4, December, pp. 1167-1201.

Alam, M. 2002, 'Modernisation of *madrasas* in India', *The Hindu*, 22 April.

Anitha, B. K. 2000, *Village, Caste and Education*, New Delhi: Rawat Publications.

Azim, S. 1997, *Muslim Women: Emerging Identity,* New Delhi: Rawat Publications.

Bandyopadhyay, D. 2002, '*Madrasa* Education and the Condition of Indian Muslims', *Economic and Political Weekly*, 20 April.

Basu, K. Narayan, A. and Ravallion, M. 2002, 'Is literacy shared between households?', *Labour Economics*, Vol. 8, pp. 649-665.

Becker, G. 1981, *A Treatise on the Family*, Cambridge: Harvard University Press.

Behrman, J. R. and Wolfe, B. L. 1984, 'The socioeconomic impact of schooling in a developing country', *Review of Economics and Statistics*, vol. 66, pp. 296-303.

Beteille, A. 1965, *Caste, Class, and Power: Changing Patterns of Stratification in a Tanjore Village*. Berkeley: University of California Press.

Blackaby, D.H., Drinkwater, S., Leslie, D.G., Murphy, P.D. 1997, 'A Picture of Male Unemployment Among Britain's Ethnic Minorities', *Scottish Journal of Political Economy*, Vol. 44, pp. 182-197.

Blackaby, D.H., Leslie, D.G., Murphy, P.D. and O'Leary, N.C. 1998, 'The Ethnic wage Gap and Emplyment Differentials in the 1990s: Evidence for Britain', *Economics Letters*, Vol. 58, pp. 97-103.

Blackaby, D.H., Leslie, D.G., Murphy, P.D. and O'Leary, N.C. 1999, 'Unemployment Among Britain's Ethnic Minorities', *The Manchester School*, Vol. 67, pp. 1-20.

Blinder, A.S. 1973, 'Wage Discrimination: Reduced Form and Structural Estimates', *Journal of Human Resources*, Vol. 8, pp. 436-455.

Borooah, V. K. 2000, 'The Welfare of Children in Central India: Econometric Analysis and Policy Simulation', *Oxford Development Studies*, Vol. 28, pp. 263-87.

Borooah, V. K. 2003, 'Births, Infants and Children: An Econometric Portrait of Women and Children in India', *Development and Change*, Vol. 34, pp. 67-103.

Caldwell, J., P. H. Reddy and P. Caldwell 1985, 'Educational Transition in Rural South India', *Population and Development Review*, Vol. 11, No. 1, pp. 29-51.

Carnoy, M. 1974, *Education as Cultural Imperialism*, New York: Longman.

Coulson, N. and Hinchcliffe, D. 1978, 'Women and Law Reform in Contemporary Islam', In L. Beck and N. Keddie (eds), *Women in the Muslim World*, pp. 37-49. Cambridge: Harvard University Press.

Deshpande, A. 2000, 'Recasting Economic Inequality', *Review of Social Economy*, Vol. 58, pp. 381-399.

Dreze, J. and Sen, A.K. (1996), *Economic Development and Social Opportunity*, New Delhi: Oxford University Press.

Dreze, J. and Kingdon, G. G. 1999, *School Participation in Rural India*, LSE Development Economics Discussion Paper Series, No. 18, London: London School of Economics.

Dreze, J. and Kingdon, G.G. 2001, 'School Participation in Rural India', *Review of Development Economics*, Vol. 5, pp. 1-24.

Duraisamy, P. and Duraisamy, M. 1991, 'Impact of Public Programs on Fertility and Gender Specific Investments in Human Capital', in T.P. Schultz (ed.) *Research in Population Economics*, Vol. 7.

Duraisamy, P. 1992, *Gender, Intrafamily Allocation of Resources and Child Schooling in Sri Lanka*, Yale Economic Growth Center, Discussion Paper No. 667, New Haven: Yale University.

Dyson, T. and Moore, M. 1983. 'On Kinship Structure, Female Autonomy and Demographic Behaviour in India.' *Population and Development Review*, pp. 35-60.

Engineer, A. A. 2002, 'Indian Muslims and Education', *Secular Perspective*, July 1-15, Centre for the Study of Secularism, Mumbai.

Farouqui, A (2002), 'Urdu Education in India', Economic and Political Weekly January 12, p.106.

Foster, A.D. and Rosenzweig, M.R. 1996, 'Technical Change and Human Capital Returns and Investments: Evidence from the Green Revolution', *The American Economic Review*, Vol. 86, pp. 931-53.

Gang, I. N. and Zimmermann, K. F. 2000, 'Is Child Like Parent? Educational Attainment and Ethnic Origin', *Journal of Human Resources*, Vol. 35, No. 3, pp. 550-569.

Gibson, J. 2001, 'Literacy and intrahousehold externalities', *World Development*, Vol. 29, pp. 155-66.

Godbole, M. 2001, 'Elementary education as a fundamental right: The Issues' *Economic and Political Weekly*, 15 December, pp. 4609-4613.

Gomulka, J. and Stern, N. 1990, 'The Employment of Married Women in the United Kingdom 1970-83', *Economica*, Vol. 57, pp. 171-199.

Goody, J. edited 1968, *Literacy in Traditional Societies*, Cambridge: Cambridge University Press.

Government of India 1990, *The National Policy on Education Review Committee* (Acharya Ramamurti Committee), New Delhi: Government of India.

Government of India 1986, *The National Policy on Education*. New Delhi: Government of India.

International Institute for Population Sciences and ORC Macro 2000, *National Family Health Survey (NFHS-2), 1998-99: India*, Mumbai: IIPS.

Islamic Voice (2000), Vol. 14-07, No:163, July.

Islamic Voice (1998), Vol. 12-07, No. 139, July.

Iyer, S. 2002, *Demography and Religion in India*, Delhi: Oxford University Press.

Jabbi, M. K. and C. Rajyalakshmi 2001. 'Education of Marginalised Social Groups in Bihar' in A. Vaidyanathan and P. R. Gopinathan Nair (ed.) *Elementary Education in Rural India: A Grassroots View, Strategy for Human Development in India – Volume 2*, New Delhi: Sage Publications, pp. 395-458.

Jacoby, H.G. and E. Skoufias 1997, 'Risk, Financial Markets, and Human Capital in a Developing Country', *Review of Economic Studies*, Vol. 64, pp. 311-335.

Jayachandran, U. 1997, *The Determinants of Primary Education in India*, MSc. Dissertation, Delhi: Delhi School of Economics.

Jeffery, R. and Basu, A. M. (eds). 1996. *Girls' Schooling, Women's Autonomy, and Fertility Change in South Asia,* New Delhi: Sage Publications.

Jeffery, R. and Jeffery, P. 1997, *Population, Gender and Politics*, Cambridge: Cambridge University Press.

Jeffery, P. and Jeffery, R. 2000, 'Religion and Fertility in India', *Economic and Political Weekly*, vol. XXXV, pp. 3253-59 (August 26-September 2).

Jensen, P. and H. S. Nielsen, 1997, 'Child Labour or School Attendance?', *Journal of Population Economics*, vol.10, pp. 407-424.

Kambhampati, U. and Pal, S. 2003, 'Role of Parental Literacy in Explaining Gender Difference: Evidence from Child Schooling in India', *European Journal of Development Research*, Vol. 14.

Khalidi, O. 1995, *Indian Muslims since Independence*. Delhi: Vikas Publishing House.

Kingdon, G. G. and Unni, J. 2001, 'Education and Women's Labour Outcomes in India', *Education Economics*, Vol. 9, pp. 173-95.

Kanbargi, R. and Kulkarni, T. 1986, 'Child labour and schooling in South India', in J. Stoeckel & A. K. Jain (eds.), *Fertility in Asia: Assessing the Impact of Development Projects*.

Kumar, D. 1965, *Land and Caste in South India*, Cambridge: Cambridge University Press.

Lavy V., Strauss, J., Thomas D. and de Vreyer, P. 1996, 'Quality of Health Care, Survival and Health Outcomes in Ghana', *Journal of Health Economics*, Vol. 15, pp. 333-57.

Lloyd, C. B., B. S. Mensch, and W. H. Clark 1998, *The Effects of Primary School Quality on the Educational Participation and Attainment of Kenyan Girls and Boys*, Population Council Policy Research Division Working Paper 116, New York: Population Council.

Lloyd, C. B., S. El Tawila, W. H. Clark and B. S. Mensch, 2001, *Determinants of Educational Attainment among adolescents in Egypt: Does school quality make a difference?* Population Council Policy Research Division Working Paper 150, New York: Population Council.

Malik, B. 1999, 'Untouchability and Dalit Women's Oppression', *Economic and Political Weekly*, 6 February.

Minault, G. 1998, *Secluded Scholars: Women's Education and Muslim Social Reform in Colonial India*. Delhi: Oxford University Press.

Mistry, M. B. 1998, 'Indian Muslim women: Levels of Education and Exposure to mass media', *Islamic Voice*, Vol 12-03, No. 135, March.

Montgomery, M. R., Arends-Kuenning, M. and Mete, C. 1999, *The Quantity-Quality Transition in Asia*, Population Council Policy Research Division Working Paper 123, New York: Population Council.

Moulasha, K. and Rao, G.R. 1999, 'Religion-Specific Differentials in Fertility and Family Planning', *Economic and Political Weekly*, vol. 34 (42), pp 3047-51 (October 16- 23).

Musallam, B. F. 1983, *Sex and Society in Islam: Birth Control before the Nineteenth Century.* Cambridge: Cambridge University Press.

Nielsen, H.S. 1998, 'Discrimination and Detailed Decomposition in a Logit Model', *Economics Letters*, Vol. 61, pp. 115-20.

Obermeyer, C. M. 1992, 'Islam, Women and Politics: The Demography of Arab Countries.' *Population and Development Review*, Vol. 18, No. 1, pp. 33-60.

Oaxaca, R. 1973, 'Male-Female Wage Differentials in Urban Labor Markets', *International Economic Review*, Vol. 14, pp. 693-709.

Parikh, K. and Gupta ,C. 2001, 'How Effective is Female Literacy in Reducing Fertility?', *Economic and Political Weekly*, Vol. XXXVI, pp. 3391-98 (September 1-7).

Patrinos, H. A. and G. Psacharopoulos 1997, 'Family size, schooling and child labour in Peru – an empirical analysis.', *Journal of Population Economics*, Vol. 10, pp. 387-405.

Platteau, J-P 1992, *Aristocratic Patronage as an Ingredient of the Caste System: Formal Analysis and Dynamic Considerations*, STICERD Discussion Paper, No. 36, London: London School of Economics.

Ravallion, M. and Q. Wodon 2000, 'Does child labour displace schooling? Evidence on behavioural responses to a enrolment subsidy in Bangladesh', *Economic Journal* Vol. 110, pp. 158-176.

Russell, R. 1999, 'Urdu in India since Independence'*, Economic and Political Weekly*, 2-9 January.

Sadgopal, A. 2000, 'Random reflections on "Agenda for Urdu education in 21st century India with special reference to Dr. Zakir Hussain"', Paper presented at the *Conference on Minorities, Education and Language in 21st Century Indian Democracy*, Delhi.

Sandiford, P., Cassel, J., Montenegro, M. and Sanchez, G. 1995, 'The Impact of Women's Literacy on Child Health and its Interaction with Health Services', *Population Studies*, Vol. 49, pp. 5-17.

Sikand, Y. 1998, 'Muslim Women's Education and Social Reform', *Islamic Voice*, Vol. 12-03, No. 135, March.

Shahabuddin, S. 2001, 'Right to Education: Real or Farcical?' *Mainstream*, 22 December, pp. 51-52.

Sainath, P. 1996, *Everybody Loves a Good Drought: Stories from India's Poorest Districts,* New Delhi: Penguin.

Shariff, A. and Sudarshan, R. 1996, 'Elementary Education and Health in India - Some Indicators', in N. Rao, L. Rurup and R. Sudarshan (ed) *Sites of Change - The Structural Context for Women's Empowerment in India*, New Delhi: UNDP.

Siphaimalani, V. 1999, *Education in the Rural Indian Household: A Gender-Based Perspective,* Working Paper No. 68, New Delhi: National Council of Applied Economic Research.

Sorabjee, S. J. 2002, Text of talk delivered at the *Conference on Minorities, Education and Language in 21st Century Indian Democracy*, New Delhi, 8 February.

Srinivas, M. N. 1976, *The Remembered Village*, Delhi: Oxford University Press.

Srinivasan, K. and S. Kumar, 1999, 'Economic and Caste Criteria in Definition of Backwardness', *Economic and Political Weekly*, 16-23 October.

Thomas, D., Strauss, J. and Henriques, M-H. 1991, 'How Does Mother's Education Affect Child Height', *The Journal of Human Resources*, Vol. 26, pp. 183-211.

Tilak, J. B. G. 1987, *The Economics of Inequality and Education*, Sage Publications: Delhi.

United Nations Development Programme 2002, *Human Development Report 2002*, New York: Oxford University Press.

Vaidyanathan, A and P. R. Gopinathan Nair ed. 2001, *Elementary Education in Rural India: A Grassroots View, Strategy for Human Development in India – Volume 2*. New Delhi: Sage Publications.

Wazir, R. 2002, *Getting Children Out of Work and Into School: the MV Foundation*, Secunderabad (AP): the MV Foundation.