On Backwardness and Fair Access to Higher Education

Results from NSS 55th Round Surveys, 1999-2000

Against the backdrop of the policy of reservation of seats in higher education for the Other Backward Classes in India, this paper examines two inter-related yet distinct issues: (i) the use of economic criteria for assessing the backwardness of different social groups, and (ii) assessment of fairness of access to higher education of an identified "backward" social group. On an analysis of the NSS 55th round surveys for 1999-2000 we show that, on a range of economic criteria, there is a clear hierarchy across (essentially) caste-based social groups, with the scheduled castes (in urban India) and the scheduled tribes (in rural India) at the bottom, the OBCs in the middle, and the non-SC/ST "Others" at the top. However, for the poor among them, there is more of a continuum across caste-groups, with surprisingly small differences between the OBCs and the non-SC/ST Others. It is also shown that for the OBCs as a group, and especially for over 70 per cent of them who are above the poverty line, the extent of their under-representation in enrolments at the undergraduate and postgraduate levels is less than 5 per cent. Therefore, a 27 per cent quota for the OBCs, which would effectively raise their share in enrolments to over 50 per cent when their share in the eligible population is 30 per cent or less, is totally unjustified.

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This paper, written against the backdrop of the decision to reserve 27 per cent of "seats" in institutions for higher education for the Other Backward Classes (OBCs for short), seeks to address two inter-related yet distinct issues. These are: (i) the criteria for assessing the backwardness of different social groups; and (ii) assessment of fairness of access to higher education of a "backward" caste group. Accordingly, the paper is organised in two parts.

In the first part, we review briefly the evidence, across (essentially) caste-based social groups, on poverty, livelihood categories, occupational diversification, and, educational attainments – elements in "economic" criteria of backwardness. It is shown that for all households (poor and non-poor taken together) there is a clear hierarchy with the schedule castes (SCs) (in urban India) and the scheduled tribes (STs) (in rural India) at the bottom, the OBCs in the middle, the non-SC/ST others at the top. However, for the poor among them, there is more of a continuum with surprisingly small differences between the OBCs and the non-SC/ST Others.

In the second part, we argue that evidence of "backwardness" of a social group – even one pertaining to educational attainments – does not automatically establish the presence of "unfair" access to higher education in terms of enrolments. They are of even less help in measuring the extent of under-representation which is so essential to assess the appropriateness of a 'X' per cent reservation for a social group. Apart from drawing attention to the burden of "history" embedded in measures defined over open-ended age-intervals and the crucial distinction between enrolments and attainments, we focus on a critical facet of higher education: the fact that beyond the elementary stage, entry at each step of the educational pyramid is conditional on the successful completion of the preceding stage of education.

Before entering into a detailed discussion of the two issues, a brief word on the data base used in our empirical analysis would be in order.

I
Data Base

All the empirical results reported in this paper are based on an analysis of the unit record data of the NSS 55th round consumer expenditure and employment-unemployment surveys for 1999-2000. Of the two surveys, while estimates of poverty are based on the consumer expenditure survey, bulk of the analysis is based on the employment-unemployment survey which enables us to examine not only the workforce characteristics of the population but also, crucially for our analysis, offers a detailed coding of those attending educational institutions as also of the completed level of education of the population.

In both these surveys, the population is classified into four social groups: the scheduled tribes, the scheduled castes, the Other Backward Classes and, a residual category of "Others". This classification is entirely based on the self-reported caste-affiliation of the household.

Given the fact that these surveys were carried out well before the recent policy pronouncements on reservations for the OBCs, the reporting by the survey respondents on their caste affiliation and, therefore, also the resulting caste-structure of the population and the further characterisation of the population in each caste-group in terms of education, may be expected to be less biased by the policy pronouncements.

Another important concern when we operate with estimates from sample surveys – even, large-scale, nationwide sample surveys as in the quinquennial, "thick" rounds of the national

sample survey – would relate to sampling variability. Now, in the 55th round, the consumer expenditure survey (CES, for short) and the employment-unemployment survey (EUS for short) were canvassed on independent sets of households drawn from the same universe of population. And, in both surveys the self-reported caste-group affiliation was recorded. This enables us to make a comparison of the estimated shares of the four social groups identified in the two surveys in the all-India rural and urban populations (Table 1).

As can be readily seen, the estimated shares from the two surveys are fairly close to one another indicating relatively small sampling variability.

Given an estimated share of OBCs in rural India of under 38 per cent and in urban India of under 31 per cent and a 73:27 rural-urban split of the total all-India population (as per the 2001 Census), the share of the OBCs in the total all-India population would be a little over 36 per cent. This is substantially below the 52 per cent share of the OBCs projected by the Mandal Commission. The proponents of reservation of seats in higher education for the OBCs could argue that, either because of incompleteness of OBC lists or because of OBCs wrongly declaring themselves as belonging to the upper castes, the survey estimates of the share of OBCs are lower than their true value. As we shall show subsequently, even though a correction for such a misclassification of OBCs as belonging to the non-SC/ST others would raise the share of OBCs in the total population, it would, simultaneously, reduce the gap between the share of OBCs in the population eligible for entry into higher education and their share among those attending institutions for higher education.

Table 1: Share of Social Groups in All-India Rural and Urban Population, 1999-2000: Alternative Estimates from Consumer Expenditure and Employment-Unemployment Surveys
(Percentage shares of social groups)

Social Group	Rural		Urban	
	From CES	From EUS	From CES	From EUS
Scheduled tribes	10.5	10.9	3.4	3.9
Scheduled castes	20.5	21.6	14.4	14.2
Other backward castes	37.6	37.0	30.4	30.9
Others	31.5	30.6	51.8	51.1
All	100.0	100.0	100.0	100.0

Source: Computed from unit record data, NSS 55th round consumer expenditure and employment-unemployment surveys, 1999-2000.

Table 2: Poverty across Social-Groups in Rural and Urban Areas of India: All-India, 1999-2000
Panel A: Rural India (poverty line: Rs 335.46)

Social Groups	Head Count Ratios	Poverty Gap	Squared Poverty Gap	Mean PCTE among Poor	Mean Poverty Gap among Poor
(1)	(2)	(3)	(4)	(5)	(6)
	Percentages			(Rs 0.00)	
Scheduled tribes	48.02	11.45	3.84	255.47	79.99
Scheduled castes	38.38	7.92	2.41	266.23	69.23
Other backward castes	29.04	5.48	1.56	272.22	63.24
Others	16.29	2.89	0.79	275.88	59.59
All	28.93	5.79	1.73	268.30	67.16

Panel B: Urban India (poverty line: Rs 451.19)

Social Groups	Head Count Ratios	Poverty Gap	Squared Poverty Gap	Mean PCTE among Poor	Mean Poverty Gap among Poor
Scheduled tribes	35.15	8.98	3.35	335.93	115.27
Scheduled castes	37.84	8.77	2.89	346.67	104.52
Other backward castes	28.99	6.25	1.95	353.98	97.21
Others	14.68	3.01	0.91	358.60	92.59
All	23.09	5.04	1.60	352.78	98.42

Source: Computed from unit record data of the NSS 55th round consumer expenditure survey.

Such a correction would make the proposed 27 per cent reservation of seats in higher education for the OBCs even more untenable.

I
Caste, Poverty and Backwardness

A substantially higher than average prevalence, depth and severity of poverty is a defining economic characteristic of the two constitutionally recognised disadvantaged groups: the scheduled tribes and the scheduled castes. How do the OBCs fare relative to the SCs and the STs on the one hand and the residual category of others on the other?

Three measures, the head count ratio, the poverty gap ratio and the squared poverty gap, are widely used to capture, respectively, the prevalence, depth and severity of poverty. Table 2 presents estimates of these three measures for the four social groups – the STs, the SCs, the OBCs and the others, separately for the rural (Panel A) and the urban (Panel B) populations at the all-India level. Also presented are the estimates of the mean per capita expenditure (PCTE) of the poor (column 5) and the mean of the poverty gaps among the poor (column 6). These estimates for 1999-2000 are based on the NSS 55th round consumer expenditure survey.

As can be readily seen, in both population segments and on all the three measures, poverty is less marked for the OBCs relative to both the STs and the SCs. However, relative to the residual category of others, they are worse off. This is more so in terms of depth and severity of poverty and in urban India. As between the STs and the SCs, the former are distinctly worse-off in rural India but are slightly better-off in urban India.

Even though the OBCs are clearly worse-off relative to the non-SC/ST group of others on all the three measures of poverty, if we focus on the sub-set of the poor in each social group we have a striking result. In terms of differences in the mean PCTE of the poor households taken as a group, there is very little gap between the two social groups – a little over 1 per cent. With similarly small gaps between the OBCs and the SCs, and the SCs and the STs, even the difference in mean PCTE of the poor separating the worst-off (the STs) and the best-off (the others), at 6-7 per cent is still fairly small. Even in terms of the difference in the mean of poverty gaps among the poor, the gap between the OBCs and the non-SC/ST others (Rs 3.7 in rural India and Rs 4.6 in urban India) is quite small. The differences are sharper as between the OBCs and the SCs and as between the SCs and the STs.

This absence of sharp differences between the poor among the OBCs and the poor in the non-SC/ST social group others is also seen in the distribution of population by means of livelihood (MoL for short) categories, occupational structure of workers on the usual principal plus subsidiary status and in the proportion of population with "secondary and above" level of education.

Thus, in rural India, the proportion of the poor among the OBCs located in the MoL category with the lowest level of poverty – the self-employed in agriculture – is just 1 percentage point lower than the corresponding proportion for the poor among the (non-SC/ST) others. However, the difference in the proportion of the poor of the two social groups located in agricultural labour households (the MoL category with the highest level of poverty) is higher at 4.6 percentage points (Table 3). This absence of sharp divergence in the distribution of the poor population of the two social groups across MoL categories is clearer still in urban India: while 46.0 per cent of the OBC-poor are self-employed, for the

Table 3: Distribution of Social Group Population by Means of Livelihood Categories for All Households and Poor Households in Rural and Urban India: All-India, 1999-2000

Panel A: Rural India (Percentage Shares)

Social Group/ MoL Categories	All Households					Poor Households				
	ST	SC	OBC	Others	All	ST	SC	OBC	Others	All
SE ag	39.5	19.3	39.4	45.8	37.1	33.4	15.1	30.7	31.9	27.2
SE non-ag	5.3	12.5	15.9	15.4	13.9	4.6	9.1	14.4	16.2	11.8
Ag labour	38.5	49.5	26.6	17.7	30.0	50.5	61.9	40.9	36.3	47.2
Other labour	9.3	9.8	7.2	5.8	7.5	7.5	8.7	6.5	6.9	7.3
Others	7.4	8.9	10.9	15.2	11.4	3.9	4.7	7.5	8.7	6.4
All	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Panel B: Urban India (Percentage Shares)

MoL Categories	All Households					Poor Households				
	ST	SC	OBC	Others	All	ST	SC	OBC	Others	All
SE ag	25.3	29.7	43.1	40.9	39.4	23.1	34.4	46.4	45.6	42.1
RWS-workers	37.9	38.7	34.5	40.6	40.3	14.9	19.7	22.3	24.6	22.1
Casual labour	27.5	26.5	16.5	7.8	14.0	51.3	41.6	26.6	24.2	30.5
Others	9.2	5.0	5.8	6.7	6.3	10.6	4.3	4.7	5.5	5.2
All	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Notes: SE ag: self-employed in agriculture; SE non-ag: self-employed in non-agriculture; Ag labour: agricultural labour; RWS-worker: regular wage/salary workers.
Source: Computed from unit record data, NSS 55th round employment-unemployment survey.

Table 4 R: List of Top Five Occupations of UPSS Workforce in Poor Households across Social Groups: All-India, Rural, 1999-2000

(Top Five Occupations Ranked by Share in Workforce)

Social Group/Rank of Occupation	Scheduled Tribes	Scheduled Castes	Other Backward Castes	Others
1	Agricultural labourers	Agricultural labourers	Agricultural labourers	Residual farmers, fishermen, hunters, etc
2	Residual farmers, fishermen, hunters, etc	Residual farmers, fishermen, hunters, etc	Residual farmers, fishermen, hunters, etc	Agricultural labourers
3	Labourers not elsewhere classified	Labourers not elsewhere classified	Sales workers	residual direct production process workers
4	Bricklayers and other construction workers	Bricklayers and other construction workers	Residual services mostly to households	Sales workers
5	Sales workers	Residual services ancilliary to production process	Labourers not elsewhere classified	Labourers not elsewhere classified

Source: Based on detailed tabulation from unit record data, NSS 55th round employment-unemployment survey, 1999-2000.

Table 4 U: List of Top Ten Occupations of UPSS Workforce in Poor Households across Social Groups: All-India, Urban, 1999-2000

(Top Ten Occupations Ranked by Share in Workforce)

Social Group	Scheduled Tribes	Scheduled Castes	Other Backward Castes	Others
1	Agricultural labourers	Agricultural labourers	Sales workers	Sales workers
2	Labourers not elsewhere classified	Labourers not elsewhere classified	Residual farmers, fishermen, hunters, etc	Residual direct production process workers
3	Residual farmers, fishermen, hunters, etc	Residual farmers, fishermen, hunters etc.	Residual services mostly to households	Transport equipment operators
4	Sales workers	Bricklayers and other construction workers	Agricultural labourers	Labourers not elsewhere classified
5	Bricklayers and other construction workers	Sales workers	Labourers not elsewhere classified	Residual services mostly to households
6	Residual services ancilliary to production process	Transport equipment operators	Residual direct production process workers	Residual farmers, fishermen, hunters etc.
7	Residual services, mostly to households	Residual universal services associated with production process	Bricklayers and other construction workers	Spinners, weavers, knitters, dyers and related workers
8	Transport equipment operators	Residual farmers, fishermen, hunters, etc	Transport equipment operators	Bricklayers and other construction workers
9	Maids and other housekeeping service workers	Residual direct production process workers	Residual universal services Associated with production process	Machinery fitters, machine assemblers and precision instrument makers
10	Material handling and related equipment operators	Maids and other housekeeping service workers	Spinners, weavers, knitters, dyers and related workers	Agricultural labourers

poor among the "Others", this proportion was 45.6 per cent. The difference between the two social groups in terms of the proportion of their poor population located in households with the earnings from regular wage/salary (RWS) earners as the principal source of income (RWS-households for short) is a little over 2 percentage points.

To see these numbers in perspective, in rural India, taking both the poor and the non-poor households together, the proportion of the population of the social group Others self-employed in agriculture (45.8 per cent) is over 6 percentage points higher than that for the OBCs (39.4 per cent). Similarly, in urban India, the proportion located in RWS households was 10 percentage points higher for the social group Others (44.6 per cent) relative to the OBCs (34.5 per cent).

This fairly close correspondence between the distribution by MoL categories of the poor among the OBCs and the non-SC/ST Others is also in evidence when we examine the occupational structure of the usual (principal plus subsidiary) status workers (Table 4R for rural India and 4U for urban India) located in poor households.

In rural India, ranked by the share of each occupation group in the total workforce in poor households of each social group, the list of top five occupation groups has three or more common categories in any pair of the four social groups.

In urban India, which has a more diversified occupational structure, Table 4.U lists the top 10 occupational groups for each of the four social groups, again ranked by the share of each occupation group in the total workforce in poor household of each social group. As between the OBCs and the (non-SC/ST) Others, there are eight common categories. Across any pairing of the four social groups there are at least six common occupational categories.

This broad correspondence in the occupational structure of the workers in poor households is also seen in the educational attainments of the population in poor households across social groups. Thus, in rural India, the proportion of poor population in OBC households having a "secondary and above" level of education (4.3 per cent) is lower than that for the poor among the (non-SC/ST) Others (5.7 per cent) by less than 1.5 percentage point. In urban India, the proportion of population in poor households with secondary and above level of education, at 12.4 per cent for the social group Others is higher than the corresponding proportion for the OBCs (9.7 per cent) by less than 3 percentage points, with just 1 percentage point separating the two groups in terms of the proportion of graduates and above among them.

Again, to judge the scale of these differences, let us note that, for the total (poor plus non-poor) population, in urban India, close to 44 per cent of those in the Others had a secondary and above level of education, whereas for the OBCs, the corresponding proportion was a little under 25 per cent. More significantly, the bulk of this difference is in the proportion of population with a graduate and above level of education (5.6 per cent for the OBCs and 16.4 per cent for the Others). In rural India too, the contrasts in educational attainments as between the OBCs and the Others is sharper when we focus on the total as opposed to the poor population. In the social group Others, 16.9 per cent had a secondary and above level of education. For the OBCs, this proportion was just 9.2 per cent.

Our discussion above suggests that while there is a clear hierarchy of the four social groups in terms of differences in levels of living, poverty, educational attainments and means of livelihood, with the OBCs sandwiched between the SC/STs at the

lower end of the scale and the (non-SC/ST) Others at the top, for the poor among them, there is more of a continuum across the caste-groups with strikingly small differences as between the OBCs and the (non-SC/ST) Others. Having already recognised the SCs and the STs as clearly disadvantaged social groups, it would be more appropriate to club the poor among the OBCs and the (non-SC/ST) Others as a backward *class* rather than divide them further along caste lines.

We had noted above that when we compare the educational attainments of the total (poor plus non-poor) population across the four social groups we find a fairly sizeable difference in the proportion having a graduate and above level of education as between the OBCs and the non-SC/ST others – especially in urban India.[1] Does this form an adequate basis for the proposed 27 per cent reservation of seats in institutions of higher education? We examine this issue in the rest of this paper.

III
OBCs and Fair Access to Higher Education

In the context of the proposal for reservation of 27 per cent of seats in higher education for the OBCs, the key question is whether the OBCs of college going age with the qualifying level of education are under-represented in enrolments to higher education to the extent of 27 per cent or more of the total enrolments.

In seeking an answer to this question three issues embedded within this question need to be sorted out. These are: age cut-off; the distinction between enrolments and completed level of education; and, crucially, the caste composition of the population with the qualifying level of education for entry into a given (next higher) level of education.

Consider first the issue of age cut-off:

The estimates of proportion of the population of each social group who have a graduate and above level of completed education noted in the previous section relates to the total, all-age population. In the absence of a lower age cut-off, the denominator includes a sizeable population of those below 20 years who, individual exceptions apart, cannot have obtained a graduate degree and this depresses the resulting proportions artificially. Depending on the demographic history, the share of the 0-19 population could also vary across the four social groups.

Specifying an upper age bound is equally necessary for the chosen indicator to reflect the situation in the more immediate past without the burden of history embedded in the educational structure of the older population captured in an indicator for population in the open-ended age-interval "20 and above".

Secondly, from the perspective of the policy focus on reservation of "seats", indicators relating to completed levels of education, even when more narrowly restricted to population in, say, the 20-30 age-group (for graduate and above level of education) are inappropriate. For, differences in failure/drop-out rates across social groups would convert even an initial "fair" allocation at the enrolment stage into an "unfair" outcome in terms of proportions with a given level of completed education.

Fortunately, in the NSS employment-unemployment survey, a closer approximation to the structure of enrolments is available in terms of the population reporting current attendance in educational institutions (further classified by course of study) as their usual activity status.

This shift of focus to attendance in educational institutions also helps specify the age limits more realistically. An analysis by age of the sample population reporting attendance in institutions

for graduate (and postgraduate) studies shows that the age-group 17-25 accounts for nearly 90 per cent. This would suggest the age-group 20-30 as appropriate for the population with the graduate and above level of completed education.

Finally, and even more importantly, assessments of fairness of access to higher education need to bear in mind that entry at each step in the educational pyramid is conditional on the successful completion of the preceding stage of education. Thus, holding a graduate degree is a must for entry into a postgraduate programme and a higher secondary or equivalent qualification is necessary for entry into an undergraduate programme, and so on down the line. It is only at the elementary or primary school stage that we are free of this consideration.

For all the three reasons noted above, a simple comparison of the share of a given social group in the population in the open-ended age-interval of 20 and above with their share in the population (in the same open-ended age-interval) with a graduate and above level of completed education [Deshpande and Yadav 2006] can be extremely misleading.

In view of the above, to assess whether the OBCs (or, any other social group) have had a fair share in enrolments to under-graduate programmes, we need to know their share among those with a higher secondary certificate or an equivalent qualification. This will involve, in the case of enrolments or rather attendance in institutions for undergraduate studies, a comparison of the share of a social group in the population with a higher secondary certificate in the 17-25 age-group with their share among those in the 17-25 attending these institutions and reporting higher secondary as their highest level of completed education.

Let us elaborate.

The codes used in the survey to describe the level of education for which persons are attending educational institutions cover broad categories such as secondary and higher secondary and graduate and above. In terms of completed level of education, however, secondary and higher secondary are coded as separate levels of education.

Now, those attending institutions for graduate and above level of education will include both the undergraduate students and the postgraduate students. While the former, i e, the under-graduate students will have higher secondary as the highest level of completed education, the postgraduate students will have a graduate and above level of completed education.

For examining the question of fair access to undergraduate enrolments we focus on the social group composition of the population in the 17-25 age-group attending institutions for graduate and above level of education with higher secondary as their highest level of completed education. Similarly, for access to postgraduate enrolments we focus on the population in the 20-30 age-group who are also attending institutions for graduate and above level of education but with graduate and above level of completed education.

It needs to be stressed that, as defined by us, the eligible population for entry into, say, an undergraduate programme, consists of all those who have *passed* the higher secondary school certificate (or equivalent) examination, *without any reference whatever to percentage of marks obtained or any other rank-ordering indicators.*

Let us now turn to a discussion of our empirical results based on an analysis of the unit record data of the 55th round employment-unemployment survey.

Tables 5 and 6, respectively, present our estimates of the percentage shares of the social groups in population in the 17-25

age-group – both total and those with a higher secondary certificate or equivalent level of education – and among those attending institutions for graduate (or, rather, undergraduate) studies. In each table, panel A presents the results for all households, while the results for the non-poor ("above poverty-line") and the poor households are presented in panels B and C. Both for the total and the non-poor households, separate estimates are presented for those attending (under) graduate programmes in technical subjects (agriculture, engineering and medicine, taken together for reasons of sample size); the other subjects; and, all subjects. However, for poor households, sample size considerations have led us to present the estimates only for all subjects taken together.

Consider first, the results for rural India. Both for all households and the non-poor households, the STs, the SCs and the OBCs have a smaller-than-average proportion of their population in the 17-25 age-group who have a higher secondary certificate (or equivalent) level of education. This reduces the share of each and all of the three groups in the population with a higher secondary certificate – the eligible set for entry into an undergraduate programme – below their respective shares in the total population in the 17-25 age-group. Focusing on the OBCs, their share in the eligible set (31.1 per cent) is lower than their share in the total 17-25 population (36.6 per cent) by 5.5 percentage points.

In relation to their share among those having a higher secondary certificate or equivalent qualification (31.1 per cent), in 1999-2000,

the OBCs in rural India had a 27.6 per cent share among those attending an undergraduate programme. So that, they are under-represented by 3.5 percentage points. With a 33 per cent share among those attending an undergraduate programme in technical subjects, the OBCs are marginally over-represented in this set.

The extent of OBC under-representation is even smaller (0.9 per cent) for the over 70 per cent of those households who have an "above poverty line" level of living. Poor households by contrast have a much greater degree of OBC under-representation among those attending educational institutions for undergraduate studies – by a little over 12 percentage points.

In urban India, parallel results in Table 6 shows that, relative to their share in the population with a higher secondary certificate in the 17-25 age-group (26.5per cent), the OBCs had a 22.6 per cent share among those attending undergraduate studies in technical subjects and a 25.2 per cent share among those attending undergraduate studies in all subjects taken together. This will translate to an OBC-under-representation of a shade under 4 percentage points for technical subjects and a little over 1 percentage point (1.3 percentage points, to be exact) overall.

In respect of the urban non-poor households (those above the poverty line), the difference between the share of OBCs in the population with a higher secondary certificate (24.9 per cent) and their share among those attending institutions for graduate studies (24.5 per cent), at 0.4 percentage point could just reflect the margin of error surrounding these estimates.

Table 5: Percentage Shares of Social Groups in the Population in 17-25 Age-Group (Total and with Higher Secondary Certificate) and among Those Attending Institutions for Graduate Studies in Rural India by Poverty-Status of Households: All-India 1999-2000

(Percentage shares of social groups)

Panel A: Rural All-Households

Social Group	Total Population	Population with Higher Secondary Certificate	Attending Institutions for Graduate Studies		
			Tech Subjects*	Other Subjects	All Subjects
ST	10.4	9.0	4.6	12.9	11.8
S C	21.4	13.8	8.4	13.0	12.5
OBC	36.6	31.1	33.0	26.8	27.6
Others	31.6	46.2	54.0	47.3	48.1
All	100.0	100.0	100.0	100.0	100.0

Panel B: Rural Non-Poor Households

Social Group	Total Population	Population with Higher Secondary Certificate	Attending Institutions for Graduate Studies		
			Tech Subjects*	Other Subjects	All Subjects
ST	8.5	9.1	4.9	13.1	12.1
S C	19.9	12.6	7.8	12.2	11.7
OBC	36.7	30.3	33.0	26.8	27.5
Others	35.0	48.0	54.2	47.9	48.7
All	100.0	100.0	100.0	100.0	100.0

Panel C: Rural Poor Households

Social Group	Total Population	Population with Higher Secondary Certificate	Attending Institutions for Graduate Studies All-Subjects
ST	16.7	7.8	4.5
S C	26.4	28.9	33.5
OBC	36.4	41.0	29.5
Others	20.5	22.3	32.3
All	100.0	100.0	100.0

Notes: * Covers agriculture, engineering and medicine.

Table 6: Percentage Shares of Social Groups in the Population in 17-25 Age-Group (Total and with Higher Secondary Certificate) and among Those Attending Institutions for Graduate Studies in Urban India by Poverty-Status of Households: All-India 1999-2000

(Percentage shares of social groups)

Panel A: All-Households

Social Group	Total Population	Population with Higher Secondary Certificate	Attending Institutions for Graduate Studies		
			Tech Subjects*	Other Subjects	All Subjects
ST	3.7	2.7	3.4	2.5	2.7
S C	14.6	8.6	7.2	8.5	8.3
OBC	32.1	26.5	22.6	25.9	25.2
Others	49.7	62.2	66.9	63.2	63.9
All	100.0	100.0	100.0	100.0	100.0

Panel B: Non-Poor Households

Social Group	Total Population	Population with Higher Secondary Certificate	Attending Institutions for Graduate Studies		
			Tech Subjects*	Other Subjects	All Subjects
ST	3.3	2.7	3.3	2.5	2.6
S C	12.8	8.3	6.5	8.2	7.9
OBC	30.2	24.9	22.8	24.9	24.5
Others	53.7	64.2	67.4	64.5	65.0
All	100.0	100.0	100.0	100.0	100.0

Panel C: Poor Households

Social Group	Total Population	Population with Higher Secondary Certificate	Attending Institutions for Graduate Studies All-Subjects
ST	5.7	3.3	3.0
S C	22.0	12.5	16.0
OBC	39.9	46.9	40.9
Others	32.4	37.3	40.1
All	100.0	100.0	100.0

Notes: * Technical subjects: Agriculture, engineering and medicine.

For enrolments for postgraduate studies, the relevant comparison is between the percentage share of a social group in the population in the age-group 20-30 who have a graduate degree and their share among those attending institutions for postgraduate studies. The relevant estimates are presented in Table 7. They are presented separately for the rural (Panel A) and the urban (Panel B) populations. For each population segment, results are presented separately for all households, the non-poor households and the poor households.

Again focusing on the OBCs and taking the poor and the non-poor households together, we find that in rural India, their share among those attending institutions for postgraduate studies (26.4 per cent) is lower than their share in the population in the 20-30 age-group with a "graduate degree" (27.9 per cent) by just 1.5 percentage points.

In urban India, the OBCs, with a 19.6 per cent share among those attending institutions for postgraduate studies compared to their 19.3 per cent share among those with a graduate degree in the 20-30 age-group, are marginally over-represented. The gap or the extent of OBC under-representation for the poor among them is close to 5 percentage points.[2]

To summarise our results in this section, for the OBC population as a whole, and, especially for the over 70 per cent of the OBCs who are above the poverty line, the extent of OBC under-representation in higher education is less than 5 per cent.

Before drawing policy inferences from the above results it is necessary to resolve two issues.

First, what would be the impact of any possible mis-classification of the OBCs as belonging to the residual category of (non-SC/ST) Others either because of mis-declaration by the respondents or, because of incompleteness of OBC lists used when the respondents were not sure? Quite obviously, any correction for such a mis-classification would raise the share of OBCs in the total population. However, as would be equally obvious, any transfer of the sample population from the category of "Others" who are over-represented in enrolments for higher education relative to their share in the elgible population, would narrow

Table 8: Percentage Shares of Social Groups in the Population in 17-25 Age-Group (Total and with Higher Secondary Certificate) and among Those Attending Institutions for Graduate Studies in Rural India by Poverty-Status of Households in 1999-2000 (All-India Excluding Karnataka and Tamil Nadu)

(Percentage shares of social groups)

Panel A: All Rural Households					
Social Group	Total Population	Population with Higher Secondary Certificate	Attending Institutions for Graduate Studies		
			Tech Subjects*	Other Subjects	All Subjects
ST	11.0	9.9	5.0	14.0	12.8
SC	20.7	12.7	8.9	12.0	11.6
OBC	34.7	27.4	28.6	23.9	24.5
Others	33.6	50.0	57.6	50.2	51.1
All	100.0	100.0	100.0	100.0	100.0

Panel B: Rural Non-Poor Households					
Social Group	Total Population	Population with Higher Secondary Certificate	Attending Institutions for Graduate Studies		
			Tech Subjects*	Other Subjects	All Subjects
ST	9.0	10.0	5.4	14.2	13.1
SC	19.3	11.8	8.2	11.2	10.9
OBC	34.6	26.5	28.7	23.8	24.4
Others	37.2	51.7	57.8	50.7	51.6
All	100.0	100.0	100.0	100.0	100.0

Panel C: Rural Poor Households			
Social Group	Total Population	Population with Higher Secondary Certificate	Attending Institutions for Graduate Studies
			All-Subjects
ST	17.8	8.4	5.2
SC	25.2	26.1	31.0
OBC	35.3	40.1	26.5
Others	21.7	25.4	37.3
All	100.0	100.0	100.0

*Notes: * Covers agriculture, engineering and medicine.*

Table 7: Percentage Shares of Social Groups in Population in the 20-30 Age-Group (Total and with Graduate and above Degree) and among Those Attending Institutions for Postgraduate Studies in India by Poverty Status of Households: All-India, 1999-2000

(Percentage shares of social groups)

Panel A: Rural India									
	Total Population in 20-30 Age Group			Population in 20-30 with Graduate and Above Degree			Attending Postgraduate Schools in 20-30 Age Group		
Social Group	All Households	Non-Poor Households	Poor Households	All Households	Non-Poor Households	Poor Households	All Households	Non-Poor Households	Poor Households
ST	11.0	8.6	17.4	3.9	3.8	5.6	6.9	6.5	15.9
SC	21.5	19.4	26.9	13.2	11.8	29.2	11.9	11.7	16.5
OBC	36.7	37.0	36.0	27.9	27.3	34.7	26.4	25.1	55.0
Others	30.8	35.0	19.6	55.0	57.1	30.4	54.8	56.7	12.6
All	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Panel B: Urban India									
	Total Population in 20-30 Age Group			Population in 20-30 with Graduate and Above Degree			Attending Postgraduate Studies in 20-30 Age Group		
Social Group	All Households	Non-Poor Households	Poor Households	All Households	Non-Poor Households	Poor Households	All Households	Non-Poor Households	Poor Households
ST	3.7	3.2	5.7	2.2	2.2	3.4	2.5	2.5	4.3
SC	14.3	12.3	22.2	5.2	4.9	14.4	6.6	6.4	12.1
OBC	31.5	29.8	38.0	19.3	18.9	29.3	19.6	19.4	23.4
Others	50.6	54.7	34.2	73.3	74.1	52.9	71.4	71.7	60.3
All	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: In relation to their share in the 20-30 age group population, OBCs are under-represented to the extent of less than 13 per cent.

Table 9: Percentage Shares of Social Groups in Population in 17-25 Age-Group (Total and with Higher Secondary Certificate) and among Those Attending Institutions for Graduate Studies in Urban India by Poverty-Status of Households in 1999-2000 (All-India, Excluding Karnataka and Tamil Nadu)

(Percentage shares of social groups)

Panel A: All-Households

Social Group	Total Population	Population with Higher Secondary Certificate	Attending Education Institution for Graduate Studies		
			Tech Subjects*	Other Subjects	All Subjects
ST	3.9	3.0	3.9	2.7	2.9
S C	14.9	8.6	7.6	8.4	8.2
OBC	28.0	22.6	17.0	23.2	22.1
Others	53.2	65.9	71.6	65.7	66.8
All	100.0	100.0	100.0	100.0	100.0

Panel B: Urban Non-Poor Households

Social Group	Total Population	Population with Higher Secondary Certificate	Attending Institutions for Graduate Studies		
			Tech Subjects*	Other Subjects	All Subjects
ST	3.5	3.0	3.8	2.7	2.9
S C	13.2	8.3	7.0	8.1	7.9
OBC	25.9	21.0	17.0	22.3	21.3
Others	57.5	67.7	72.2	67.0	67.9
All	100.0	100.0	100.0	100.0	100.0

Panel C: Urban Poor Households

Social Group	Total Population	Population with Higher Secondary Certificate	Attending Institutions for Graduate Studies All-Subjects
ST	5.6	3.2	3.6
S C	22.2	11.4	15.5
OBC	36.9	42.8	38.0
Others	35.3	42.7	43.0
All	100.0	100.0	100.0

Notes: * Technical subjects: Agriculture, engineering and medicine.

down, and possibly eliminate totally, the small gap between the share of OBCs in the eligible population and their share in those among them who are attending institutions for higher education.

In this perspective, therefore, the estimates of the extent of OBC under-representation revealed by the estimates presented in Tables 5, 6 and 7 should be treated as upper-bound values of such under-representation.

The second question to ask is: are we getting these results because of the inclusion of Karnataka and Tamil Nadu which have a long history of reservations for OBCs in higher education?[3] Briefly, the answer is no.

As can be seen from the estimates presented in Tables 8 and 9 respectively for the rural and urban populations, for India excluding Karnataka and Tamil Nadu, the exclusion of these two southern states does indeed lower the OBC representation among those attending institutions for (under-)graduate studies. For all subjects, in rural India, their share falls from 27.6 per cent to 24.5 per cent when we exclude Karnataka and Tamil Nadu. In urban India, the exclusion of these two states results in a decline in the share of OBCs among those attending educational institutions for undergraduate studies in the 17-25 age-groups (all subjects) from 25.2 per cent to 22.1 per cent.

The exclusion of the two southern states, however, also reduces the share of OBCs in the population eligible for entry into higher education – for undergraduate studies, those with a higher secondary certificate or equivalent level of completed education. Thus in rural India, the share of OBCs in the eligible set goes down from 31.1 per cent to 27.6 per cent and in urban India from 26.5 per cent to 22.6 per cent.

With a larger reduction in the share of OBCs in the eligible population (relative to the reduction in their share among those attending undergraduate programmes, for all subjects taken together, the extent of OBC under-representation is reduced rather than raised by the exclusion of Karnataka and Tamil Nadu: from 3.5 percentage points to 3.1 percentage points in rural India, and from 1.3 percentage points to 0.6 percentage points in urban India. For technical subjects, in rural India, the OBCs in all

Table 10: Percentage Shares of Social Groups in Population in the 20-30 Age-Group (Total and with Graduate and Above Degree) and among Those Attending Institutions for Postgraduate Studies in India by Poverty Status of Households in 1999-2000 (All-India Excluding Karnataka and Tamil Nadu)

(Percentage shares of social groups)

Panel A: Rural India

Social Group	Total Population in 20-30 Age Group			Population in 20-30 with Graduate and Above Degree			Attending Postgraduate Schools in 20-30 Age Group		
	All Households	Non-Poor Households	Poor Households	All Households	Non-Poor Households	Poor Households	All Households	Non-Poor Households	Poor Households
ST	11.7	9.2	18.6	4.2	4.0	6.5	7.7	7.3	15.9
S C	20.8	19.0	25.7	12.3	11.1	27.2	10.9	10.7	16.5
OBC	35.0	34.9	35.2	25.5	24.6	35.9	20.5	18.7	55.0
Others	32.6	37.0	20.6	58.1	60.3	30.3	60.9	63.3	12.6
All	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Panel B: Urban India

Social Group	Total Population in 20-30 Age Group			Population in 20-30 with Graduate and Above Degree			Attending Postgraduate Studies in 20-30 Age Group		
	All Households	Non-Poor Households	Poor Households	All Households	Non-Poor Households	Poor Households	All Households	Non-Poor Households	Poor Households
ST	3.9	3.3	5.9	2.3	2.3	2.8	2.8	2.8	2.5
S C	14.7	12.8	22.0	5.1	4.9	12.5	6.1	5.9	9.2
OBC	27.1	25.2	34.7	15.9	15.4	28.3	14.4	14.1	23.9
Others	54.3	58.7	37.5	76.7	77.5	56.4	76.7	77.1	64.4
All	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

households and in non-poor households, continue to be marginally over-represented, but for the poor households, the extent of under-representation is greater: up from 11.8 to 13.6 percentage points. In urban India, also, the OBC under-representation for technical subjects is larger at 5.6 percentage points. But, for undergraduate studies for other subjects, the OBCs are marginally over-represented.

Table 10 presents the results for postgraduate studies for India excluding Karnataka and Tamil Nadu. In both rural and urban segments the extent of OBC under-representation is increased by the exclusion of the two southern states. While in rural India the gap widens to 5 per cent, in urban India a marginal over-representation gets converted to a 1.5 point deficit.

Our broad results stand: except for the 29 per cent poor among the OBCs who have a greater degree of under-representation (a little over 12 percentage points in rural India), the extent of OBC under-representation in higher education is less than 5 per cent. For the over 70 per cent of the OBCs, and not just for the so-called "creamy layer", the extent of OBC under-representation is even smaller. As noted above, the exclusion of Karnataka and Tamil Nadu or, for that matter, the exclusion of all the four southern states (see Footnote 3) alters these results only fractionally if at all.

IV
Hasan-Mehta Paper

Before summarising our results, a few comments on the most recent paper on the subject that came to my notice after this paper was finalised [Hasan and Mehta 2006].

In one key respect, the Hasan-Mehta approach to the assessment of under-representation of disadvantaged social groups in higher education, namely, the setting-up of a comparison of their share in the eligible set against their share in the "college availing population" parallels the approach adopted in this paper. There are, however, important differences.

The key difference lies in how the eligible set and the college availing population are defined.

Formally, Hasan and Mehta define the eligible set or the minimally qualified as follows: "a student is minimally qualified to enter college only if he has completed Higher Secondary (HS) School" (p 3792). At first sight, this would appear to correspond exactly with what we have called "Population with a Higher Secondary Certificate".

However, in empirically implementing this definition – as reflected in the estimates of sample size and what they call imputed sub-population size in Table 1 of their paper (p 3792) – they would appear to have included in the set of "minimally qualified population", not only those who report Higher Secondary as their highest level of completed education but, crucially, also those who report graduate and above as their highest level of completed education. Thus, for "minimally qualified males aged 17-30" in rural areas, Hasan and Mehta report a sample size of 7062 and an imputed sub-population size of 10,612,781. Computations by us from unit record data reveals a sample size of 4625 and an estimated population of 7,185,416 for rural males with higher secondary as their highest level of completed education in the 17-30 age-group. It is only when you add to this the number of those who have graduate and above as their completed level of education (sample size: 2426, estimated population: 3,391,937), which will yield a combined sample size of 7051 and an estimated population total of 10,577,083, that we have a close match with their figures.

So that, de facto, the Hasan-Mehta eligible set is the sum of those (in the 17-30 age-group) who report higher secondary and of those who report graduate and above as their highest level of education.

As regards the college availing population, Hasan and Mehta have defined the same as those in the 17-30 age-group "who are either currently enrolled in college courses or who report having completed a college course" (p 3793). In the absence of any mention to the contrary the set of those "currently enrolled in college courses" would include all those with a graduate degree who are pursuing postgraduate studies. So that, this sub-set of graduates who are pursuing postgraduate courses would be counted twice in the college availing population: once as part of those who "report having completed a college course" and again as part of those "currently enrolled in college courses".

The Hasan-Mehta definitions of the eligible set (de facto) and of the college availing population has several implications. Firstly, the combining of those currently enrolled and those who have completed college courses obliterates the distinction between enrolment and successful completion and eliminates the role of differential drop-out/failure rates in understanding inter-group differences in educational outcomes. This also prevents a clearer focus on the issue of access to enrolments that is at the heart of the debate on quotas for the OBCs.

Secondly, a one-for-one counting of those with a completed graduate degree both in the eligible set and in the college availing population (with the sub-set of graduates pursuing postgraduate studies getting counted twice in the college availing population) would, ceteris paribus, tend to narrow the gap between the share of a social group in the eligible set and its share in the college availing population. More importantly, it robs this gap of any operational significance.

Thus, for OBC urban males, the difference between their share in the eligible set (24.55 per cent) and their share in the college availing population (23.03 per cent) does not imply that their number in college enrolments need to be raised by 1.52 per cent of 10.0 million – the number of "minimally qualified" urban males in the 17-30 age group. For included in this 10.0 million are about 4.5 million who have a graduate and above level of completed education.

Thirdly, because of the lumping together of all those attending institutions for graduate and above level of education, we have a blurring of the key distinction between enrolments for under-graduate and postgraduate studies. For undergraduate studies, the relevant age group would be 17-25 and enrolments would be conditional on a higher secondary certificate. For postgraduate enrolments, on the other hand, the appropriate agegroup would be 20-30 and would require a graduate degree as the minimum qualification. This distinction is not merely academic: as our results show, while the OBCs are under-represented in the former, at least in urban India, in postgraduate enrolments, the OBCs are marginally over-represented.

Finally, their conclusion that the 27 per cent quota for the OBCs would only raise the fraction of minimally qualified OBCs availing of college education from 50.2 per cent to 53 per cent is conditional on their assumption that "the 27 per cent reservation for OBC students would include all those OBC students who would have otherwise secured an educational seat to the general category (i e, on basis of open competition) but choose instead to apply through the reserved category in order to maximise their likelihood of securing a seat" (footnote 13, p 3795).

This is not how the reservation system works. Students do not apply separately for a "quota" seat. They all apply for a given

course of study. And, all those who make it to the admission list on their own merit, in this case, all the OBC students who are currently availing of education without any quota provisions are mandated to be part of the open or general list. The quota seats will need to be filled-in additionally. So that, in a scenario where the total number of seats remains unchanged as it is in their numerical example, a 27 per cent quota for the OBCs would raise their share in college availing population to over 50 per cent – well above their share of the minimally qualified.

V
Summary and Conclusions

Let us begin by summarising the key results to emerge from the paper.

First, on a range of economic criteria – poverty, means of livelihood, occupational structure and educational attainments – there is a clear hierarchy among the four social groups studied in this paper, namely, the SCs, the STs, the OBCs and, the residual category of Others. The OBCs are sandwiched between the SC/STs at the lower end of the scale and the (non-SC/ST) Others at the top.

Second, separating the poor households within each social group, we find that for the poor among them, there is more of a continuum across the caste-groups with strikingly small differences between the OBCs and the (non-SC/ST) Others.

This would suggest that, with SC/STs already recognised as disadvantaged groups, the poor among the OBCs and the (non-SC/ST) Others should be treated together as a single backward class rather than divided then further along caste lines.

Third, on the issue of fair access to higher education, since entry into it is conditional on completion of the preceding stage of education, we argue that the extent of under- (or, over-) representation of a social group can only be judged by the comparison of a group's share in enrolments in a given level of education with their share in the population eligible for entry into that level of education. Setting-up such comparisons on the basis of our analysis of unit record data from the NSS 55th round employment-unemployment survey 1999-2000, we show that for the OBCs as, a group, and especially for the over 70 per cent of them, who are above the poverty line and not just for the so-called "creamy layer", the extent of under-representation is less than 5 per cent. We have also shown that these results are not affected even when we exclude Karnataka and Tamil Nadu, or for that matter, when we exclude all the four major southern states: Andhra Pradesh, Karnataka, Kerala and Tamil Nadu.

What conclusions follow from the above?

First, at least on grounds of fair access, the proposed 27 per cent reservation of seats in institutions for higher education are totally unjustified. To see this clearly, note that all quota seats are mandated to be over and above those that students from any beneficiary group (whether SC, ST or, in this case the OBCs) obtain on their own merit, i e, in a non-quota regime. So that, a 27 per cent quota for the OBCs would have the effect of raising the share of OBCs among those enrolled in (attending) institutions for undergraduate studies to a little over 54 per cent in rural India and over 52 per cent in urban India. This is to be compared to their share in the eligible population (those with a higher secondary certificate) of, respectively, 30.7 per cent and 26.5 per cent (Tables 5 and 6). For enrolments in postgraduate studies, the quota would raise the OBC share to 52.5 per cent in rural India and 45.6 per cent in urban India relative to their shares

in the population in the 20-30 age-group with a gradate degree, of 27.5 per cent in rural India and 19.1 per cent in urban India. A much simpler and vastly more cost-effective solution would be to work with slightly lower cut-offs for the OBCs to enable them to make-up for the very small deficit in their share in enrolments relative to their share among those having the basic qualification for entry into higher education [Rohini Somanathan 2006].

Second, as regards the poor among the OBCs and the non-SC/ST Others, as also for the SCs and the STs, the real solution to their small share in enrolments even relative to their share in the eligible set lies in tackling their poverty.

It may be argued that the purpose of the quota is to raise the proportion of OBCs having higher education. Undeniably, there is a need for raising the proportion of population with higher education and employable skills to meet the skilled manpower needs of our fast growing economy and the global trends towards outsourcing. However, this is true for all social groups and not just the OBCs. More importantly, the solution, lies not in prescriptive quotas in higher education for this or that social group. It is at the school stage that we need to provide more resources to raise the proportion of the population acquiring the basic qualification for entry into higher education – across the board. Quotas in higher education merely divert social attention and resources from the more difficult tasks lower down in the education pyramid. EPW

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Notes

1   In rural India, however, the inter-group difference in the proportion of graduate and above (1.2 per cent for OBCs and 3.1 per cent for the (non-SC/ST) Others) is much more muted.
2   If we take the share of OBCs in graduates in the 17-25 age-group (29 per cent in rural India and 19.9 per cent in urban India) as the relevant standard for comparison with their share among those attending post-graduate programme (in the 20-30 age-group) the extent of OBC under-representation is raised by a little over 1 percentage point in rural India. In urban India, a marginal over-representation is converted into an equally marginal under-representation.
3   Andhra Pradesh too has been operating with reservations in higher education for the OBCs though not for as long as Karnataka and Tamil Nadu. To allow for this and also remove the possible impact of higher levels of educational achievements in Kerala, we have also carried out an alternative set of calculations for India excluding all the four major southern states: Andhra Pradesh, Karnataka, Kerala and Tamil Nadu. These results, not reported here, show that even though the share of OBCs attending institutions for graduate studies is lowered, also reduced is their share in the population eligible for entry into higher education. So that the gap between the two – indicating the extent of OBCs under-representation – is more or less the same as the one discussed in the text for India including all the four southern states.

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