

Education and Occupation in India

Educational Status and Social Class

Educational attainment levels in India are substantially lower by international standards. Even in 2004, more than 30 % of the people are illiterate, and only about 20 % have completed secondary schooling.¹ Within such low standards, the situations of the *Excluded Castes* are still worse. 45 % of OBCs, 60 % of STs, and 55 % of SCs are illiterate, compared to only 27 % for the *Advanced Castes* (Table 1). Secondary schools have been completed by only about 8–11 % of the excluded class workers. If we consider different Gender classes, it is observed that women are placed much below the men. While 16 % of males are illiterate, more than 38 % of females are illiterate. At the other end of the scale, only about 20 % of females have passed secondary schools and above compared to 35 % of males. There are however disparities among different generations and age groups regarding educational levels. Children and young people are having better educational levels than their parents and older age group persons (Fig. 1). Also, standards have improved over the 1993–2004 period. Alarming, gender discrimination is pretty strong and illiteracy among Daughters is more than double compared to that among Sons. The upward mobility witnessed is more prominent among the advanced castes and marginal among the excluded castes, especially for the women.

Occupational Hierarchy

One of the major factors affecting income distribution is the hierarchical structure of different occupations and the occupational distribution of the workers. Occupational segregation leads to perpetuation and also accentuation of income

¹ From the NSSO data, individuals can be grouped into any of the following Educational categories—Illiterate, Literate but below Primary level education, Primary School (Class 5) Passed, Middle School (Class 8) Passed, Secondary School (Class 10) Passed, Higher Secondary (Class 12) Passed, Graduate and above.

Table 1 a, b Educational attributes of different generation groups in India—1993–2004 (%),
c Educational attributes of different age groups in India: 1993–2004 (%)

Generation group	Educational group	1993				2004			
		ST	SC	OBC	GEN	ST	SC	OBC	GEN
(a)									
All	Illiterate	50.1	41.0	na	20.9	60.5	55.2	44.8	26.8
	Literate below Pr	8.2	8.4	na	6.6	11.2	10.2	10.5	9.5
	Primary passed	8.6	8.9	na	8.4	10.1	11.3	12.7	12.6
	Middle passed	15.9	19.6	na	22.1	9.2	11.3	14.1	15.3
	Secondary passed	8.0	11.2	na	17.6	3.7	5.3	7.7	12.5
	Hr Sec passed	6.4	7.6	na	12.2	2.6	3.3	4.6	8.3
	Grad and above	2.9	3.4	na	12.2	2.6	3.4	5.6	14.9
Fathers	Illiterate	71.3	66.3	na	40.2	60.7	56.0	43.6	25.1
	Literate below Pr	13.7	15.6	na	18.9	15.5	14.1	16.1	13.4
	Primary passed	8.2	8.7	na	14.1	11.8	11.3	14.6	15.2
	Middle passed	3.3	5.3	na	10.6	6.0	8.1	11.2	14.2
	Secondary passed	2.0	2.6	na	8.7	2.9	5.5	7.3	14.4
	Hr Sec passed	0.8	0.9	na	3.0	1.0	2.2	3.1	6.2
	Grad and above	0.7	0.6	na	4.5	2.2	2.8	4.1	11.5
Mothers	Illiterate	90.2	89.0	na	68.7	86.8	83.8	74.4	52.2
	Literate below Pr	4.3	5.6	na	10.9	4.6	6.3	8.3	12.1
	Primary passed	2.8	3.3	na	9.4	4.3	5.0	8.5	13.2
	Middle passed	1.6	1.3	na	5.9	2.6	3.0	5.1	10.0
	Secondary passed	0.9	0.6	na	3.3	0.7	1.3	2.3	6.2
	Hr Sec passed	0.2	0.1	na	0.8	0.5	0.4	0.8	2.2
	Grad and above	0.1	0.1	na	1.0	0.5	0.2	0.6	4.0
(b)									
All	Illiterate	50.1	41.0	na	20.9	60.5	55.2	44.8	26.8
	Literate below Pr	8.2	8.4	na	6.6	11.2	10.2	10.5	9.5
	Primary passed	8.6	8.9	na	8.4	10.1	11.3	12.7	12.6
	Middle passed	15.9	19.6	na	22.1	9.2	11.3	14.1	15.3
	Secondary passed	8.0	11.2	na	17.6	3.7	5.3	7.7	12.5
	Hr Sec passed	6.4	7.6	na	12.2	2.6	3.3	4.6	8.3
	Grad and above	2.9	3.4	na	12.2	2.6	3.4	5.6	14.9
Sons	Illiterate	33.7	43.5	na	17.9	26.3	20.1	14.9	7.8
	Literate below Pr	12.3	12.7	na	9.6	13.8	10.5	8.8	6.5
	Primary passed	14.5	13.9	na	12.8	17.6	16.2	14.5	10.8
	Middle passed	17.2	14.0	na	19.6	20.3	23.4	24.5	19.2
	Secondary passed	10.6	7.7	na	16.5	9.6	11.7	14.3	17.4
	Hr Sec passed	8.2	6.0	na	12.3	6.7	9.5	10.7	15.6
	Grad and above	3.6	2.2	na	11.3	5.8	8.7	12.3	22.8
Daughters	Illiterate	67.3	73.0	na	42.0	49.9	45.7	37.5	15.8
	Literate below Pr	8.8	6.9	na	9.4	11.2	9.4	9.1	7.0
	Primary passed	8.3	7.8	na	10.8	10.6	11.8	12.5	11.8
	Middle passed	7.9	6.0	na	12.9	14.3	14.2	17.2	18.5
	Secondary passed	4.4	2.9	na	10.0	5.4	7.2	9.5	13.8
	Hr Sec passed	2.3	2.1	na	6.9	4.2	5.6	6.6	12.2
	Grad and above	1.0	1.3	na	7.9	4.4	6.0	7.6	20.9

(continued)

Table 1 (continued)

Age Cohort	Educational group	1993				2004			
		ST	SC	OBC	GEN	ST	SC	OBC	GEN
(c)									
All	Illiterate	50.1	41.0	na	20.9	60.5	55.2	44.8	26.8
	Literate below Pr	8.2	8.4	na	6.6	11.2	10.2	10.5	9.5
	Primary passed	8.6	8.9	na	8.4	10.1	11.3	12.7	12.6
	Middle passed	15.9	19.6	na	22.1	9.2	11.3	14.1	15.3
	Secondary passed	8.0	11.2	na	17.6	3.7	5.3	7.7	12.5
	Hr Sec passed	6.4	7.6	na	12.2	2.6	3.3	4.6	8.3
	Grad and above	2.9	3.4	na	12.2	2.6	3.4	5.6	14.9
20–40	Illiterate	59.4	50.6	na	29.6	53.0	45.6	35.8	19.9
	Literate below Pr	9.7	10.7	na	9.7	12.1	10.9	10.2	8.4
	Primary passed	10.4	11.5	na	12.4	11.6	13.2	13.8	12.8
	Middle passed	9.8	12.7	na	16.7	11.9	14.7	17.6	17.4
	Secondary passed	4.9	7.4	na	13.2	4.7	6.8	9.4	13.9
	Hr Sec passed	4.0	5.0	na	9.3	3.5	4.6	6.1	10.7
	Grad and above	1.8	2.2	na	9.2	3.2	4.4	7.1	17.0
40+	Illiterate	73.9	76.7	na	46.2	70.8	67.1	54.6	32.9
	Literate below Pr	12.6	8.0	na	10.0	10.4	10.0	11.2	10.5
	Primary passed	6.9	5.6	na	11.8	8.0	9.2	11.8	12.5
	Middle passed	2.5	6.5	na	11.0	5.1	6.8	10.1	13.7
	Secondary passed	3.2	1.8	na	9.7	2.3	3.4	5.8	11.0
	Hr Sec passed	0.0	0.6	na	4.0	1.3	1.5	2.6	5.7
	Grad and above	0.9	0.9	na	7.2	1.9	2.1	3.7	13.8

Source Author's calculations based on data sources mentioned in the text

inequality over generations. Therefore, examining the occupational distribution of workers becomes an important issue.

We have used the Indian NCO-1968 classification in our study and workers have been divided into 10 occupational classes. Arranged in descending order of hierarchy, average remuneration, and prestige, these are—Technical and Scientific Personnel, Professionals, Administrative workers, Clerical workers, Sales workers, Service workers, Farmers, Production related workers, Transport workers, and Labourers not elsewhere classified. Occupational structure and mobility is discussed in terms of this structure. We have at the second level clubbed similar occupations to form 3 broad groups—Grade-I (White Collar jobs—Technical and Scientific Personnel, Professionals, and Administrative workers); Grade-II (Pink Collar Jobs—Clerical, Sales, and Service workers); and Grade-III (Blue Collar jobs—Farmers, Production related workers, Transport workers, and Labourers not elsewhere classified). This hierarchical structure has also been used in our study.

It is observed that the workers of the *Excluded Castes* are much more concentrated in Grade-III jobs compared to the *Advanced Castes*, while the proportion of the latter in Grade-I jobs is unduly large (Tables 2 and 3). In 2004, more than 90 % of the backward class workers were engaged in Grade-III occupations and only about 4–7 % in Grade-1 occupations. Contrary to this, just about 50 % of the

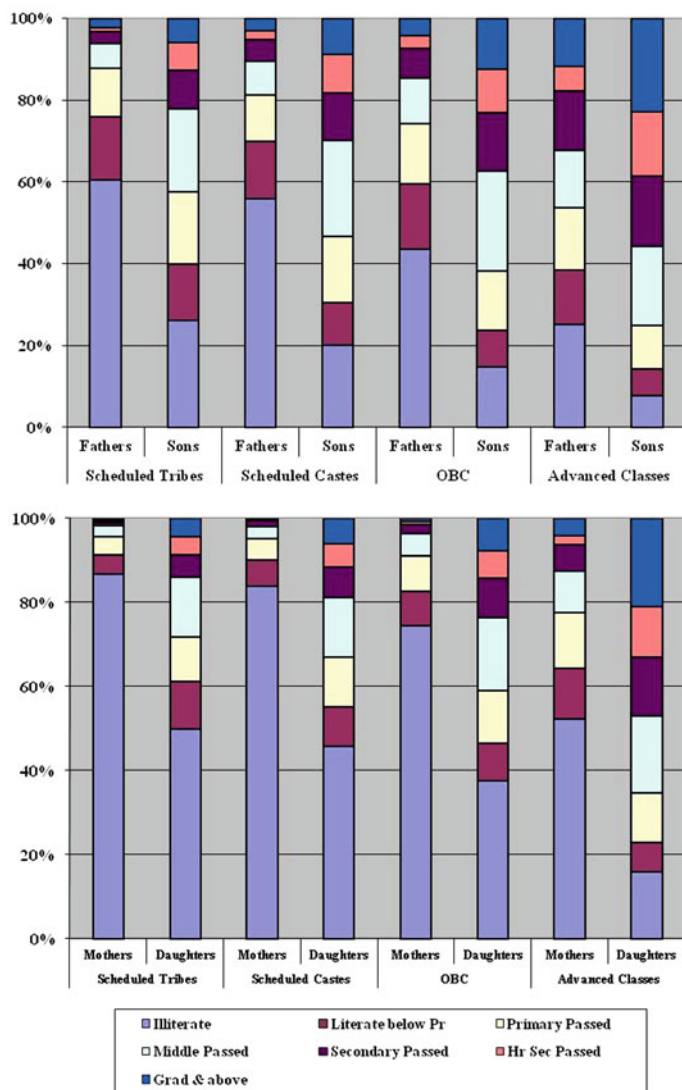


Fig. 1 Educational qualifications of 20+ population in India across generations—2004. *Source* Author's calculations based on data sources mentioned in the text

advanced class workers were in Grade-III jobs and more than 15 % were in Grade-I jobs. What is more disheartening is to note that over the 1993–2004 period, the occupational structure of excluded social groups have shifted more towards Grade-III workers while that of the socially advanced groups have improved. This talks of increasing disparity in the labour market and reinforcement of exclusion along lines of caste in India in recent times.

Table 2 a, b, c Occupational attributes (1-digit NOC) of different groups in India: 1993–2004 (%)

Generation group	Occupational group	1993				2004			
		ST	SC	OBC	GEN	ST	SC	OBC	GEN
(a)									
All	Technical	4.3	5.4	na	4.8	1.1	1.5	1.6	2.6
	Professionals	1.7	1.8	na	4.8	1.6	1.7	2.3	6.1
	Administrative	2.1	1.0	na	3.8	1.2	1.6	3.0	6.8
	Clerical	1.4	2.9	na	5.4	1.3	2.1	2.4	5.0
	Sales	3.5	6.0	na	13.1	2.8	4.8	7.9	12.8
	Service	1.4	5.0	na	3.5	1.8	5.7	4.4	3.7
	Farmers	65.2	48.6	na	38.8	76.0	57.3	57.2	44.1
	Production etc.	11.3	21.0	na	20.0	7.9	18.0	16.8	14.0
	Transport	0.9	2.7	na	3.0	1.2	3.1	2.6	3.3
	Labourers nec	8.1	5.7	na	2.7	5.0	4.1	2.0	1.8
Fathers	Technical	1.8	2.4	na	2.4	0.7	1.1	0.9	2.3
	Professionals	0.9	1.2	na	3.4	1.4	1.6	1.6	5.1
	Administrative	0.5	1.1	na	3.4	0.9	2.3	3.7	7.6
	Clerical	1.9	2.5	na	3.8	1.9	3.7	2.7	4.7
	Sales	2.1	4.6	na	9.4	1.9	4.7	8.4	13.0
	Service	1.0	4.0	na	2.8	0.9	5.2	3.6	2.6
	Farmers	83.0	67.7	na	62.4	83.1	58.7	64.0	53.1
	Production etc.	5.4	12.4	na	9.8	6.5	15.7	12.4	8.7
	Transport	0.6	1.4	na	1.4	0.7	3.3	1.7	1.9
	Labourers nec	2.7	2.7	na	1.1	1.9	3.6	0.9	0.8
Mothers	Technical	2.3	4.0	na	4.1	1.4	1.6	1.8	1.5
	Professionals	0.3	0.2	na	2.8	0.7	0.4	0.7	3.8
	Administrative	0.8	1.1	na	1.4	0.5	1.6	1.5	2.9
	Clerical	0.3	0.6	na	1.1	0.3	1.0	0.7	2.0
	Sales	3.7	3.1	na	4.3	1.8	2.8	4.8	5.2
	Service	1.4	5.9	na	3.4	1.3	10.5	4.4	3.5
	Farmers	87.5	76.1	na	75.1	90.0	73.3	77.8	71.3
	Production etc.	3.1	7.8	na	7.1	3.0	7.6	7.9	8.7
	Transport	0.1	0.0	na	0.0	0.0	0.0	0.0	0.1
	Labourers nec	0.6	1.1	na	0.7	1.0	1.2	0.5	1.1
(b)									
All	Technical	4.3	5.4	na	4.8	1.1	1.5	1.6	2.6
	Professionals	1.7	1.8	na	4.8	1.6	1.7	2.3	6.1
	Administrative	2.1	1.0	na	3.8	1.2	1.6	3.0	6.8
	Clerical	1.4	2.9	na	5.4	1.3	2.1	2.4	5.0
	Sales	3.5	6.0	na	13.1	2.8	4.8	7.9	12.8
	Service	1.4	5.0	na	3.5	1.8	5.7	4.4	3.7
	Farmers	65.2	48.6	na	38.8	76.0	57.3	57.2	44.1
	Production etc.	11.3	21.0	na	20.0	7.9	18.0	16.8	14.0
	Transport	0.9	2.7	na	3.0	1.2	3.1	2.6	3.3
	Labourers nec	8.1	5.7	na	2.7	5.0	4.1	2.0	1.8

(continued)

Table 2 (continued)

Generation group/Age Cohort	Occupational group	1993				2004			
		ST	SC	OBC	GEN	ST	SC	OBC	GEN
Sons	Technical	3.0	2.2	na	3.0	1.1	1.8	1.8	2.2
	Professionals	1.2	0.9	na	2.5	1.5	2.3	2.4	4.1
	Administrative	0.8	0.4	na	2.8	1.4	1.8	3.2	6.4
	Clerical	1.7	0.8	na	2.9	1.1	1.7	1.9	3.2
	Sales	5.2	2.1	na	11.5	3.1	7.0	11.1	17.3
	Service	2.4	0.8	na	2.3	1.8	4.0	3.5	1.9
	Farmers	64.3	77.3	na	56.3	70.5	49.7	52.3	44.2
	Production etc.	14.8	8.5	na	14.0	10.4	22.0	18.0	14.4
	Transport	2.0	0.9	na	2.5	1.9	4.3	3.7	4.0
	Labourers nec	4.6	6.2	na	2.2	7.2	5.4	2.2	2.3
Daughters	Technical	5.7	3.3	na	4.5	1.7	1.5	2.5	2.1
	Professionals	1.4	0.9	na	4.2	1.6	2.9	4.3	13.0
	Administrative	0.2	1.8	na	1.2	0.2	1.5	1.4	3.6
	Clerical	0.2	0.2	na	1.9	0.5	0.5	1.4	3.2
	Sales	0.6	1.5	na	1.5	0.6	2.1	2.3	2.5
	Service	3.4	0.9	na	1.9	1.0	4.0	2.0	1.9
	Farmers	78.8	85.6	na	74.0	85.8	74.0	74.3	62.0
	Production etc.	7.9	3.7	na	9.8	4.8	12.1	11.3	10.9
	Transport	0.1	0.0	na	0.0	0.0	0.2	0.1	0.3
	Labourers nec	1.7	2.2	na	1.0	3.9	1.0	0.5	0.5
(c)									
All	Technical	4.3	5.4	na	4.8	1.1	1.5	1.6	2.6
	Professionals	1.7	1.8	na	4.8	1.6	1.7	2.3	6.1
	Administrative	2.1	1.0	na	3.8	1.2	1.6	3.0	6.8
	Clerical	1.4	2.9	na	5.4	1.3	2.1	2.4	5.0
	Sales	3.5	6.0	na	13.1	2.8	4.8	7.9	12.8
	Service	1.4	5.0	na	3.5	1.8	5.7	4.4	3.7
	Farmers	65.2	48.6	na	38.8	76.0	57.3	57.2	44.1
	Production etc.	11.3	21.0	na	20.0	7.9	18.0	16.8	14.0
	Transport	0.9	2.7	na	3.0	1.2	3.1	2.6	3.3
	Labourers nec	8.1	5.7	na	2.7	5.0	4.1	2.0	1.8
20–40 years	Technical	2.7	3.4	na	3.4	1.1	1.5	1.8	2.5
	Professionals	1.0	1.2	na	3.3	1.8	2.0	2.6	6.0
	Administrative	1.3	0.7	na	2.7	1.2	1.5	3.0	6.5
	Clerical	0.8	2.0	na	3.8	1.1	1.8	2.0	4.5
	Sales	2.1	4.0	na	9.5	2.9	5.2	8.4	13.8
	Service	0.9	3.3	na	2.5	2.0	5.6	4.2	3.8
	Farmers	78.9	65.3	na	55.6	73.9	54.0	53.4	40.2
	Production etc.	6.8	14.3	na	14.8	8.6	20.1	19.1	16.7
	Transport	0.6	1.9	na	2.3	1.3	3.6	3.1	3.9
	Labourers nec	5.0	3.9	na	2.0	6.0	4.6	2.4	2.2

(continued)

Table 2 (continued)

Age Cohort	Occupational group	1993				2004			
		ST	SC	OBC	GEN	ST	SC	OBC	GEN
40+ years	Technical	1.8	4.9	na	3.4	1.1	1.4	1.3	2.9
	Professionals	1.6	0.9	na	4.1	1.5	1.5	1.9	6.6
	Administrative	0.9	0.3	na	2.3	1.2	1.7	3.0	7.6
	Clerical	1.3	0.9	na	3.6	2.0	3.1	3.4	6.5
	Sales	3.1	4.0	na	5.7	2.7	4.2	7.1	11.3
	Service	0.2	2.3	na	1.8	1.5	6.2	4.6	4.0
	Farmers	70.6	47.2	na	43.4	79.2	61.2	62.0	46.8
	Production etc.	6.8	7.5	na	6.0	6.7	15.0	13.4	10.3
	Transport	12.2	30.8	na	29.1	0.9	2.3	1.9	2.6
	Labourers nec	1.4	1.1	na	0.6	3.2	3.5	1.3	1.3

Source Author's calculations based on data sources mentioned in the text

Table 3 Occupational attributes (occupational grade) of different groups in India—1993–2004

Group	Occupational group	1993				2004			
		ST	SC	OBC	GEN	ST	SC	OBC	GEN
All	White	9.1	9.6	na	15.5	4.0	4.8	6.9	15.5
	Pink	7.0	16.3	na	25.2	6.0	12.7	14.6	21.5
	Blue	83.9	74.1	na	59.3	90.0	82.5	78.5	63.1
Fathers	White	3.2	4.7	na	9.3	3.0	5.0	6.2	15.1
	Pink	5.0	11.1	na	16.1	4.7	13.6	14.7	20.3
	Blue	91.8	84.2	na	74.7	92.3	81.4	79.1	64.6
Mothers	White	3.4	5.4	na	8.3	2.6	3.6	4.0	8.2
	Pink	5.4	9.6	na	8.8	3.4	14.3	9.8	10.6
	Blue	91.3	85.0	na	82.9	94.0	82.1	86.2	81.2
Sons	White	5.1	3.5	na	8.2	4.0	5.9	7.4	12.6
	Pink	9.2	3.7	na	16.8	6.1	12.7	16.4	22.4
	Blue	85.7	92.9	na	75.0	89.9	81.4	76.2	65.0
Daughters	White	7.4	6.0	na	9.9	3.5	6.0	8.2	18.7
	Pink	4.2	2.6	na	5.3	2.1	6.7	5.6	7.6
	Blue	88.5	91.4	na	84.8	94.5	87.3	86.2	73.7
20–40 years	White	4.9	5.3	na	9.5	4.1	5.0	7.3	14.9
	Pink	3.8	9.3	na	15.8	6.1	12.6	14.6	22.1
	Blue	91.3	85.4	na	74.7	89.8	82.4	78.1	63.0
40+ years	White	4.9	8.8	na	13.7	3.8	4.5	6.3	17.1
	Pink	5.2	10.5	na	15.5	6.2	13.4	15.1	21.9
	Blue	89.8	80.7	na	70.8	90.0	82.0	78.6	61.0

Source Author's calculations based on data sources mentioned in the text

Some improvements in occupational structure are observed across generations whereby proportion of workers in hierarchically superior occupations is higher for the current generation of sons and daughters relative to their parents (Fig. 2). However, the rate of improvement is much more pronounced for the advanced

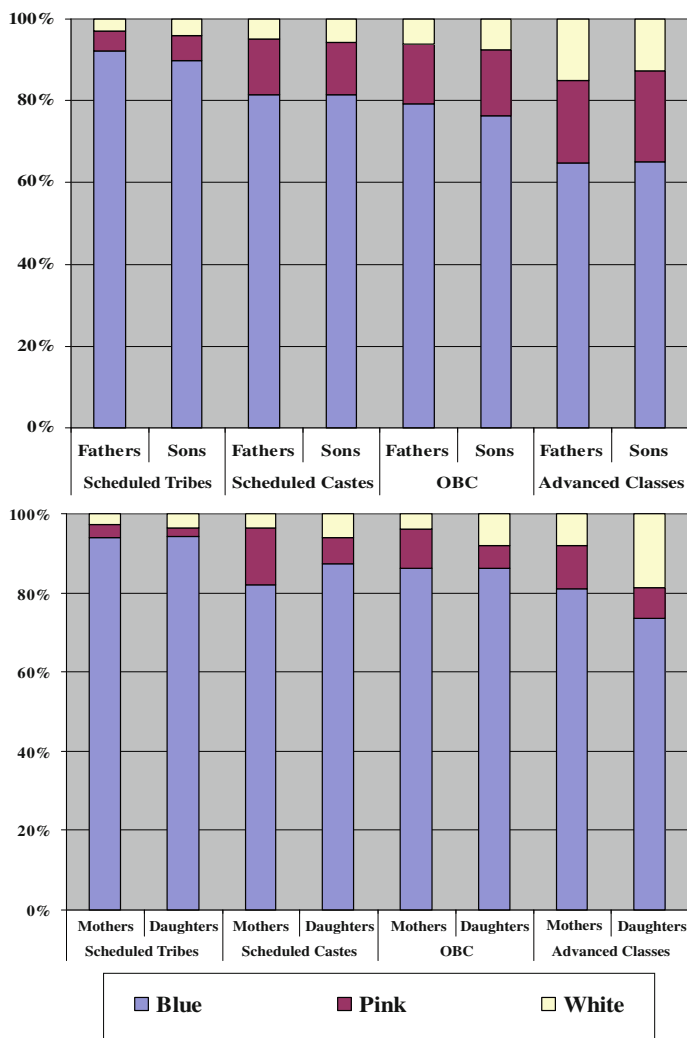


Fig. 2 Broad occupational groups of 20+ workers in India across generations—2004. *Source* Author's calculations based on data sources mentioned in the text

castes. Moreover, share of workers in the Grade-III jobs have increased for the Parents and the Daughters belonging to Scheduled Tribes.

If we look at age groups instead of biological generations, similar picture emerges. Moving from population aged 40+ years to those between 20–40 years of age, there is a marginal upward movement among the OBCs, while for the SCs there is a tendency towards concentration in mid-level occupations. For the STs, there is a clear downward movement with proportion of Blue Collar workers increasing.

Disparities: Statistical Examination

Results so far indicate that average educational and occupational levels of specific social classes are lower than others. However, to conclusively infer that there exist significant social disparity in terms of education and occupation, we must subject the data to rigorous statistical tests. We use the 2004 data for this exercise.

Educational Disparity

Educational level was transformed to a new variable that indicates completed years of schooling and the averages were computed for each social group, separately for Parents and Children as also for the two age-cohorts. Since this is now a scale variable, average values can be compared using standard tests for comparing means (e.g. *t* test). Whether social group can explain differences in educational level can also be examined by analysing between and within group differences (e.g. ANOVA).

Paired *t* test were carried out with the General/Advanced Class as the reference group and differences in completed years of education between this group and the other social groups were tested for significance. It is observed that average educational level of the present generation (*children* group) is higher than that of the earlier one (*parents* group), which is quite expected (Table 4). Similarly, the

Table 4 Educational disparity—paired *t* test results

Group	Social groups	N (in millions)	Mean (Years)	SD	t-value	p value
Parents	General/advanced class ^a	44,556	6.9	5.025		
	Scheduled tribe	17,032	4.8	4.721	49.6**	0.01
	Scheduled caste	21,058	3.8	4.432	80.5**	0.01
	Other backward classes	48,687	4.9	4.707	61.5**	0.01
Children	General/advanced class ^a	33,535	8.9	4.433		
	Scheduled tribe	10,677	6.8	4.493	44.9**	0.01
	Scheduled caste	12,499	6.3	4.697	53.7**	0.01
	Other backward classes	34,362	7.2	4.672	47.3**	0.01
20–40 age	General/advanced class ^a	49,120	8.4	4.639		
	Scheduled tribe	18,484	6.1	4.639	55.8**	0.01
	Scheduled caste	22,027	5.5	4.702	74.9**	0.01
	Other backward classes	53,663	6.7	4.734	57.8**	0.01
40–60 age	General/advanced class ^a	21,364	7.2	5.047		
	Scheduled tribe	7,622	4.6	4.721	41.2**	0.01
	Scheduled caste	8,957	3.6	4.407	63.2**	0.01
	Other backward classes	22,193	4.9	4.752	48.7**	0.01

Note a—Reference Group; Results for other social groups are paired against the control group; Dependent Variable—Average Years of Completed Education; Figures in Parenthesis are *p* values; ** indicates significance at 1 % level

younger cohort has better educational standard compared to the older one. However, our main interest is whether the gap between the advanced social class and the other three classes are statistically significant or not. It is observed that in all cases the reference group is significantly better than the three other social classes, as evident from statistically significant t-values. The gap is widest with the SCs and least with the OBCs. It is also evident that the gap has declined over generation/age cohort for the SCs and the OBCs, but has remained almost unchanged for the STs. This is clear proof of the relative stagnancy of the tribals in terms of education.

Tests involving ANOVA suggest that social group is an important factor in explaining differences in years of education as *between group* variations are significantly larger than corresponding *within group* variations (Table 5). Standard error from Games-Howell post-Hoc test confirms our inference that differences in educational levels among social groups are statistically significant (Table 6).

It is thus evident that the differences in average educational levels across social groups are systematic and statistically significant.

Table 5 Educational disparity—ANOVA results

Group	Sources of variance	Sum of square	Mean square	F-value	p value
Parents	Between groups	173,023	57,674	2,527**	0.01
	Within groups	2,997,015	23		
	Total	3,170,038			
Children	Between groups	91,234	30,411	1,457**	0.01
	Within groups	1,900,392	21		
	Total	1,991,626			
20–40 age	Between groups	159,395	53,132	2,421**	0.01
	Within groups	3,144,461	22		
	Total	3,303,856			
40–60 age	Between groups	110,692	36,897	1,597**	0.01
	Within groups	1,389,072	23		
	Total	1,499,764			

Note Dependent Variable—Average Years of Completed Education; Categorical variable used for ANOVA is *Social Group*; ** indicates significance at 1 % level

Table 6 Educational disparity—standard errors from Games-Howell post-hoc test

Social group pairs	Parents	Children	20–40 age	40–60 age
General versus scheduled tribe	0.043**	0.043**	0.043**	0.043**
General versus scheduled caste	0.043**	0.043**	0.043**	0.043**
General versus OBC	0.043**	0.043**	0.043**	0.043**
OBC versus scheduled tribe	0.042**	0.042**	0.042**	0.042**
OBC versus scheduled caste	0.042**	0.042**	0.042**	0.042**
Scheduled caste versus scheduled tribe	0.047**	0.047**	0.047**	0.047**

Note Variable—Average Years of Completed Education; ** indicates significance at 1 % level

Occupational Disparity

Occupation levels are categories themselves and hence are not amenable to *t* test or ANOVA. Therefore to statistically examine whether occupational pattern varies significantly across social groups we have used two different procedures—the Segregation Index, and the Cross-tabulation.

The Segregation Index is commonly used for measuring inter-group differences in occupational pattern and is given by

$$D = \frac{1}{2} \sum_i |p_{i1} - p_{i2}|;$$

(1)

where p_{i1} and p_{i2} are proportion of Group-1 and Group-2 workers respectively in the i th occupation, assuming that the second group is notionally the disadvantaged group. If there are k occupational groups, then D will vary between 0, indicating perfect similarity between the two groups, to $(k/2)$ for perfect mismatch between them. D can thereafter be normalised by dividing by $k/2$ so as to lie between 0 and 1. This normalised value of D (or d) is reported here. We have computed d for the SCs, STs, and the OBCs separately, each with the General/Advanced Class as the reference group.

It is observed that the occupational patterns of the disadvantaged classes are significantly different from that of the advanced class, as indicated by values of the normalised segregation index (Table 7). Segregation Index for the SCs and the OBCs are lower for the current generation (*children*) and the 20–40 age cohort compared to the previous generation (*parents*) and the 40+ age cohort, indicating that occupational pattern of these two social groups are coming nearer to that of

Table 7 Occupational disparity—segregation index and cross-tabulation results

Groups	Social group	d (Normalised segregation index)	Cross-tabulation results	
			Chi square	Likelihood ratio
Parents	Scheduled tribe	0.22	7,611.5**	7,578.6**
	Scheduled caste	0.22		
	Other backward classes	0.15		
Children	Scheduled tribe	0.31	4,466.9**	4,381.5**
	Scheduled caste	0.20		
	Other backward classes	0.14		
20–40 age	Scheduled tribe	0.27	7,741.8**	7,609.3**
	Scheduled caste	0.20		
	Other backward classes	0.14		
40–60 age	Scheduled tribe	0.22	3,783.7**	3,784.2**
	Scheduled caste	0.24		
	Other backward classes	0.17		

Note Segregation index calculated with reference to the general/advanced group; ** indicates significance at 1 % level

the general/advanced class over generation and time. However, for the STs, measure of segregation has increased, indicating that workers of this social group have remained concentrated in their traditional occupations, thereby increasing the disparity with the others. This is an early indication of slow occupational mobility of the STs.

We have also cross-tabulated occupational groups with social groups and computed cell frequencies. This provides us with the standard tests of association between the two qualitative variables—the Chi square test and the Likelihood Ratio test. Results indicate that strong association exists between social group and occupational group as all the coefficients are statistically significant.

Results therefore suggest that there is systematic difference between the social groups in terms of occupational pattern and caste-membership is an important factor in determining occupational groups of individuals.

Summary Observations

It thus transpires that in India two crucial aspects of livelihood—education and labour market—have witnessed disparity across social groups based on caste. There are signs of continuity and stagnation rather than dynamic changes and social hierarchy along caste lines have remained more or less unchanged, even being reinforced on occasions, creating wide divide between the lagging social classes and the advanced classes. Whether this is due to intergenerational transmission of human capabilities and occupational choice will be our main enquiry in the following chapters.



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