Is Employment Driving India's Growth Surge?

A Reality Check

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Recent literature either celebrating the successes of India's growth surge or reflecting on its future course has tended to be rather simplistic in its treatment of some key trends and issues. For instance, a recent article in *EPW* (Rodrik and Subramanian, April 17, 2004 issue, henceforth referred to as R and S) argues that economic growth in India can be sustained at 7 per cent per annum, based on several assertions. We address some of R and S assumptions and what they refer to as 'reflections' in the context of employment trends in India as also briefly, the institutional and policy-making constraints. In doing so, we suggest (not by any means originally) that productivity and better employment outcomes cannot be taken for granted, nor, as Kerala and Sri Lanka showed us several decades ago (and as Bangladesh may yet show to us), a necessary condition for better outcomes in the social sector and for female employment. There is no denying that growth is the key to development; but in India's case, will it be driven by labour productivity? And what does growth mean for increased employment?

We specifically address the issue of labour force growth and participation that R and S base a large part of their projections on. It appears that the foundation for their estimates of labour force projections is population growth, specifically changes in working age population. However, a more nuanced approach to labour as a factor of production is required for a number of reasons. First, growth of labour force (or working age population), as we know, does not mean growth in employment. Second, it certainly does not mean growth in the quality of employment. Thus, projections of productivity to our mind ought to be based on a detailed analysis of sectoral employment data and not merely projections of labour force growth. In this paper, we conduct a careful empirical analysis of employment trends over the last three decades to understand what happened in these 30 years – of which the last 10 years were a period of rapid economic growth. The release of the latest NSS employment and unemployment survey results, covering the period 1999-2000 allows for such an evaluation of trends in employment during the period 1983-2000.

Let us start with some basic theoretical propositions intrinsic to models of economic development, most of which are implicit in the R and S article as well. First, a key assumption of these theories is the importance of education in growth and conversely, the importance of growth in the spread of education. Thus, human capital theories tend to focus – at the macro level – on the importance of education in changing the labour force composition; and – at the micro level – on the role of education in providing higher returns to education and helping households rise out of poverty. These are no longer hypotheses, but have become axioms in a major part of the development literature. Thus developing countries are exhorted to invest in education with the expectation that skilled workers will be able to find skilled employment. This expectation was summed up succinctly in the *World Development Report,* 1995 – the World Bank publication which focused on employment almost 10 years ago, but which nevertheless remains the basis for the dominant view on labour and employment:

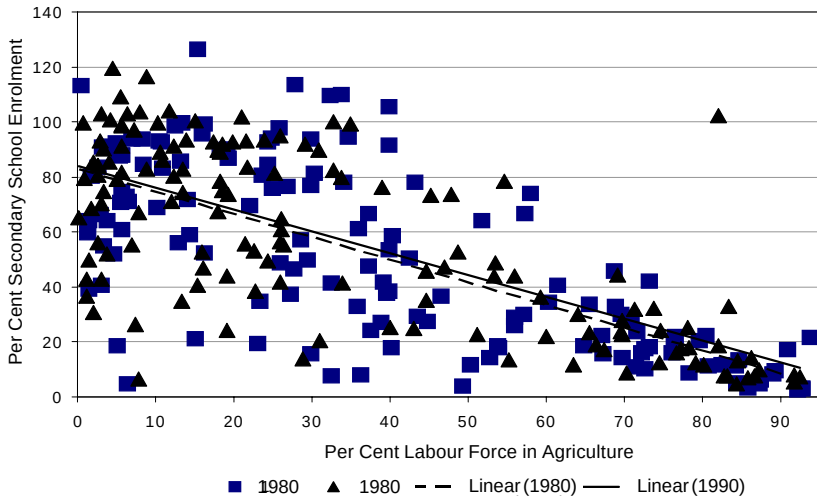
> Increasing the skills and capabilities of workers is key to economic success in an increasingly integrated and competitive global economy. Investing in people can boost the living standards of households by expanding opportunities, attracting capital investment, and increasing earning power. Better health, nutrition and education also have value in their own right, enabling people to lead more fulfilling lives. The importance of investing in human capital, especially education, for economic growth and household welfare is recognised worldwide; this realisation has contributed to unprecedented global schooling in recent decades (*World Development Report,* 1995, p 36).

In spite of some recognition that an increase in education by itself does not lead to higher levels of economic growth, by and large, investing in human capital is seen to be a solution to a variety of evils.

Second, the relationship between employment and growth is based on the assumption that economic development leads to a shift from labour force employed in agriculture to that employed in non-agricultural sectors, and that this transformation in turn drives further growth. Supposedly, education and skill acquisition are key drivers of this sectoral shift. But what of the less skilled or unskilled labour force? The available data on educational attainment and labour force employed in agriculture shows that there has been a striking increase in education in large parts of the world over the past few decades. However, economic development as well as related increase in skilled jobs does not seem to have kept pace.

Let us a look at some global trends in this context. Figure 1, based on the data from 138 countries shows that there is a strong correlation between the proportion of population with secondary education and employment in the agricultural sector. In countries with higher education, fewer individuals are employed in agriculture. However, this figure shows two very interesting results: (1) while countries in which a majority of the population is employed in agriculture have very low levels of education, the converse is not necessarily true. There is considerable spread in agricultural employment for countries at various levels of education. (2) Between1980 and 1990, in spite of considerable built in relationship and a mere 10-year gap, the upward shift in the slope of the line relating education to employment indicates that an increase in education does not lead to the same level decrease in agricultural employment in 1990 as it did in 1980. These observations suggest a need for a deeper examination of the link between increasing education

Figure 1: Labour Force in Agriculture by Secondary School Enrolment – 1980-90



Source: World Development Indicators 2000.

and its impact on labour market outcomes.

Third is the 'how' question. All too often developing countries are chided for not changing policy in a 'rational' manner, not 'cutting their losses' and 'maximising their gains'. For instance, R and S take India to task for not making the most of the institutional foundations on which it should have built rational policy. We submit first that institutions are themselves the result of policy and it is policy that led to the growth trajectory that India embarked upon in the last decade and a half. Comparisons are also routinely made between India and China without due attention to the political economy of reform and the constraints the same institutions pose in the case of India. For instance, as Amartya Sen has pointed out in the context of famine and chronic malnutrition, Indian democracy is both the bane and the boon of India's development path, helping to prevent famine, but not allowing enough headway in malnutrition. It is not as if Indian policy-makers are unaware of the policy solutions and options (in the case of employment for instance, see the *Report of the Planning Commission Task Force on Employment*, 2001), but the reality of policy-making, and even more – of implementation, is far more complex.

In the context of the dominant view on growth and reforms in India, we address the question: has higher education in India increased the ability of individuals to secure white-collar job? For a moment lets leave aside the unskilled labour and ask - has the skilled labour force got skilled employment? We are aware that an analysis that questions the assumptions in growth policy or its effects is liable to be branded anti-growth or one that seeks to undo the positive effects of growth [Bhagwati 2004]. In fact, in the recent writings, any questioning of the growth models is immediately and simply regarded as retrograde. We do not deny by any means the importance of growth, but present some conundrums that argue for more nuanced and cautious predictions, based on an analysis of the labour market.

Macro Employment Trends

In education, India has witnessed substantial increase over the last 30 years, although it has not kept up with expectations, and still lags behind several

Table 1: Distribution of Workers (Usual Status) by Category of Employment

	Category of Employment		
	Self-Employment	Regular Salaried	Casual
Rural			
1977-78	62.6	7.7	29.7
1983	61.0	7.5	31.5
1987-88	59.4	7.7	32.9
1993-94	58.0	6.4	35.6
1999-00	56.0	6.7	37.3
Urban			
1977-78	42.4	41.8	15.8
1983	41.8	40.0	18.2
1987-88	42.8	40.3	16.9
1993-94	42.3	39.4	18.3
1999-00	42.1	40.1	17.8
Rural+Urban(All)			
1977-78	58.9	13.9	27.2
1983	57.4	13.9	28.7
1987-88	56.0	14.4	29.6
1993-94	54.8	13.2	32.0
1999-00	52.9	13.9	33.2

Source: Planning Commission, GOI, 2001.

Table 2: Distribution of Primary Occupations

	1983		1987-88		1993-94		1999-2000	
	Male	Female	Male	Female	Male	Female	Male	Female
White collar/ professional	10.24	1.50	10.11	1.85	10.46	2.09	9.14	2.01
Merchant, sales, business	8.05	1.57	9.20	1.78	10.18	1.78	10.51	1.62
skilled labour	16.28	3.80	16.32	3.63	16.75	3.40	15.37	3.48
Farmer	33.55	16.61	31.38	15.50	29.54	14.18	28.84	13.93
Unskilled labour	29.06	16.56	30.10	16.02	30.64	16.21	32.89	18.49
Out of labour force/ unemployed	2.82	59.95	2.89	61.23	2.42	62.34	3.25	60.47

Source: Authors' calculations based on NSS 38th, 43rd, 50th and 53rd rounds for individuals aged 30-50.

Table 3: Proportion with Higher Secondary and College Education among Various Occupational Groups

	1983		1987-88		1993-94		1999-2000	
	Male	Female	Male	Female	Male	Female	Male	Female
White collar/ professional	30.30	26.70	35.03	33.72	60.30	56.54	60.81	55.59
Merchant, sales, business	5.88	0.63	7.53	1.21	18.82	3.16	21.59	3.72
Skilled labour	1.45	0.15	2.09	0.36	8.74	2.09	11.19	1.96
Farmer	0.87	0.02	1.46	0.10	5.58	0.20	7.87	0.42
Unskilled labour	0.18	0.02	0.33	0.03	1.34	0.06	1.76	0.10
Out of labour force/ unemployed	4.14	1.06	5.02	1.69	15.17	4.59	18.56	5.61

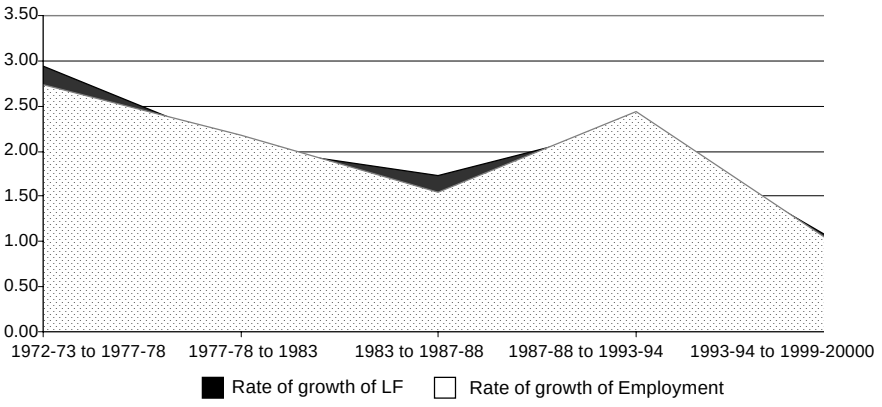
Source: Authors' calculations based on NSS 38th, 43rd, 50th and 53rd rounds for individuals aged 30-50.

Table 4: Proportion with White Collar/Professional Jobs among Various Educational Groups

	1983		1987-88		1993-94		1999-2000	
	Male	Female	Male	Female	Male	Female	Male	Female
Uneducated	0.89	0.24	0.69	0.21	0.87	0.19	0.74	0.26
Primary school	3.89	0.87	3.48	0.74	2.76	0.73	2.14	0.60
Middle and secondary school	26.43	11.72	23.02	11.25	13.51	5.90	10.99	4.90
Higher secondary and college	72.57	37.86	67.13	36.33	52.06	28.11	42.74	23.69

Source: Authors' calculations based on NSS 38th, 43rd, 50th and 53rd rounds for individuals aged 30-50.

Figure 2: Rates of Growth of Labour Force and Employment



Source: Planning Commission, based on NSSO.

countries like China and Sri Lanka. The gross secondary school enrolment has increased from 24 per cent in 1970 to almost 49 per cent in the mid-1990s and education is considered one of the pillars of development and economic well-being. Concomitantly, the last 15 years have also witnessed rapid economic growth buttressed by a policy of economic liberalisation. The results are evident in the rapid growth of the GDP; the declining share of agriculture and the corresponding increase in the share of manufacturing and services in the GDP. The GDP growth rate has risen from an average of about 3 per cent per annum in the 1970s to an average of about 6.5 per cent in the 1990s and 8 per cent for 2003. In the 1970s, agriculture contributed over 45 per cent of the GDP, but its share fell to about 31 per cent in the 1990s. Industry and services contributed almost 19 and 36 per cent respectively to the GDP in 1970, and their respective shares increased to almost 28 and 41 per cent in the 1990s.

Now we turn to the employment picture. First, in spite of high growth rates trends in labour force participation rates have remained flat. In fact, contrary to the assertions of R and S, trends show that employment growth has not kept pace with rate of growth of labour force (Figure 2). Overall, in the period 1972-2000, employment grew at 1.97 per cent per annum, while labour force grew at 2.01 per cent per annum.

Thus, while both growth in labour force and employment registered a decline in the last 20 years and also in aggregate terms (and especially between 1993-94 and 1999-2000), the decline in the growth of employment outstripped decline in growth of the labour force. While the decline in the labour force is to a large extent attributable to increasing share of the younger cohorts still remaining in school, there are other explanations for the decline in employment growth. The Planning Commission summed it up succinctly.

> The low employment elasticity in the 1990s reflects the fact that employment growth decelerated in this period while GDP growth accelerated...Much of the slowdown in total employment growth was due to developments in two important sectors, viz, agriculture (including forestry and fishing) and community social and personal services. These sectors, accounting for almost 70 per cent of total employment, experienced no growth in employment in the period 1993-94 to 1999-2000. Employment elasticity in agriculture and manufacturing sectors was therefore 0.00 and 0.07, respectively whereas the elasticity used in the Ninth Plan projections was 0.50. Employment growth in manufacturing also slowed down reflecting a continuing decline in the employment elasticity from 0.33 in the period 1983 to 1993-94 to 0.26 in the period 1993-94 to 1999-2000 but this was almost identical to the level of 0.25 assumed in the Ninth Plan [Planning Commission 2001:45].

Second, preferred formal employment inevitably declined with the cut-back in public sector jobs. By implication, this has meant a corresponding or greater growth in informal employment and this trend will continue. Moreover, there has been a decline in self-employment (Table 1), and an increase in casual employment during the period 1993-2000. While some of the trends can be explained by the increasing time spent in school and college, there has also been an actual increase in the proportion of workers doing casual wage work. A focus on formal employment is particularly important because unemployment rates in India have always been low, hovering around 4-5 per cent [Visaria and Minhas 1991]. It is normal for people to find some activity, however poorly remunerated, when faced with periods of prolonged unemployment. So a study of quality of employment needs to focus on better paying jobs rather than unemployment statistics. Increase in poorly paid casual employment reflects increased vulnerability of the labour force.

In this context, if we see growth in skilled workforce as an engine of economic growth, it is important to examine the quality of employment for educated workers and to see if this relationship has changed over time.

We use data collected by the National Sample Survey (NSS) on employment in 1983, 1993-94 and 1999-2000, with all four waves pooled into a single data file. Our analysis depends on the occupational status of prime working age men and women, those between ages 30 and 50. We omit individuals below 30 and in the process drop college students and scholars. Also, by age 30, any 'discouraged workers' settle down into the next best occupation. We also omit individuals above 50 because retirement age in India is between 55 and 60 for various organisations and some individuals do take early retirement. The final sample consists of 317,147 men and 302,021 women.

Dependent variable: Our dependent variable has six categories and is based on three digit occupational categories for the usual principal status (i e, the activity on which a person spent relatively large amount of time in the past 365 days) of each individual according to the National Classification of Occupations. These fine categories were then coded into the following large categories:

(1) Professionals, managers, white collar workers: Eg doctors, lawyers, engineers, government officials, teachers, engineers and technicians. Note that while this category covers a broad spectrum of occupations, all occupations require higher (skilled) education.

(2) Merchants, business and sales in both informal and formal jobs.

(3) Other skilled workers (non-white collar).

(4) Unskilled workers – Farm labourers, manual labourers, fishermen, loggers, etc.

(5) Unemployed, out of labour force – rentiers, pensioners, unemployed, beggars, prostitutes etc.

(6) Farmers and planters – Owners of small and large farms, planters, poultry

farmers, dairy farmers, etc, (largest category of employment and hence reference or base).

Descriptive results: Table 2 describes the occupational distribution of our sample of 30-50 year old men and women and changes between 1983 and 2000. The results show that the overall picture of employment changes in India over this period is that of stagnation. There are marginal changes, as fewer proportion of individuals classify themselves as farmers and professionals, more as unskilled labourers and merchants/ salesmen; but on the whole, the occupational distribution in 2000 looks remarkably similar to that in 1983. Most men in India are farmers or labourers. Most women either work at home or as farmers/labourers. The proportion of people who classify themselves as professionals or white-collar workers is only about 10 per cent for men and 2 per cent for women.

In contrast, changes in educational attainment present a picture of significant change. Illiteracy has dropped and higher education has increased substantially; the proportion with middle and secondary schooling in the sample has gone from 21 to 25 per cent for men and from 7 to 13 per cent for women; the corresponding change in higher secondary and college education changed from 4 to 13 per cent for men and 1 to 5 per cent for women respectively.

This stagnation in employment structure with increasing education suggests that while higher education has increased significantly, there has not been a commensurate increase in jobs that require higher education. Tables 3 and 4 clearly demonstrate this. If we look at men in white collar professions, the proportion of individuals with higher secondary and college education in them has gone up from 30 to 60 per cent. However, if we look at men who have higher secondary/college education, the proportion able to obtain white collar jobs has declined from 73 to 43 per cent. Thus, the education requirement for these professional occupations has gone up substantially and perhaps even lower-end jobs within these occupations require more education now than they did earlier, substantiating the anecdotal evidence and our earlier analysis.

Socio-economic background factors: While we find the descriptive statistics to be fairly convincing, it is important to note that the educational growth has been concentrated in certain regions of India and among certain social groups. Thus, it is important to control for such family background factors as region, urban residence, caste, and religion. Appendix Tables 2 and 3 present the results from multinomial logistic regression models where we examine the impact of education on the likelihood of belonging to one of these six occupational categories. Since the bulk of the population is employed in farming, farmer is the base category against which all other categories are compared.

In our multivariate analysis, we use a number of individual and household level independent and control variables. Descriptive statistics for these variables are presented in Appendix Table 1. Education is the main independent and control variable. Region of residence, caste and religion are other key variables. We undertake the analyses separately for males and females since each group has vastly different employment trajectories. We include two dummy variables denoting scheduled caste (SC) and scheduled tribe (ST) in our analysis with non-SC/ST being the reference category. Almost 18.39 of the sample is SC and 8.62 is ST. Religion is coded as three dummy variables for Muslim, Christian and other religions, while Hindu

Appendix Table 1: Variable Coding and Means

Variables	Coding	Distribution		
		38th Round	43rd Round	50th Round
Dependent variables				
Professionals	Dummy	4.05 per cent	5.57 per cent	4.73 per cent
Farmers	Dummy (Reference Category)	26.59 per cent	24.80 per cent	23.52 per cent
Agricultural Labourers	Dummy	17.42 per cent	16.92 per cent	17.34 per cent
Other skilled occupations	Dummy	21.26 per cent	22.33 per cent	22.98 per cent
Out of the Labour force	Dummy	30.69 per cent	30.38 per cent	31.43 per cent
Independent variables			*Means*	
Sex	Dummy 0 if male 1 if female	.49	.49	.49
Age	In years	39.0	38.9	38.7
Region				
North	Dummy (Reference category)	.15	.15	.13
South	Dummy	.22	.22	.22
East	Dummy	.09	.09	.09
West	Dummy	.13	.13	.13
North-east	Dummy	.09	.11	.12
Urban/Rural	Dummy 0 if rural 1 if urban	.24	.23	.26
Education				
No education	Dummy (Reference category)	.56	.49	.42
Primary	Dummy	.23	.24	.23
Secondary	Dummy	.16	.20	.26
College	Dummy	.03	.05	.07
All post-primary	Dummy	.20	.26	.56
Caste				
Upper caste	Dummy (Reference category)	.74	.74	.75
SC	Dummy	.17	.17	.18
ST	Dummy	.089	.090	.086
Religion				
Hindu	Dummy (Reference category)	.84	.83	.84
Muslim	Dummy	.10	.10	.09
Christian	Dummy	.04	.05	.05
Other religions	Dummy	.03	.03	.03
Marital status	Dummy 0 if not married 1 if married	.89	.90	.91
Household size	Continuous	5.2	5.9	5.5
Survey rounds				
38	Dummy		30.18 per cent	
43	Dummy		32.25 per cent	
50	Dummy		37.57 per cent	

is the base. We control for urban residence as well as region of residence with north-central region (UP, Bihar, MP) being the omitted category.

Results

We estimated multinomial logistic regressions for the likelihood of being in specific occupational categories separately for males and females (Tables 2 and 3 in Appendix). Model 1 included all independent variables of interest as well as educational categories. Model 2 added period specific interaction terms for each educational category with the three historical periods 1987-88, 1993-94, 1999-2000, with 1983 forming the base year, thus modelling change over time.

Our primary interest is in comparing the likelihood of being a white-collar worker vis-a-vis being self-employed farmer. Results from Model 1 in Appendix Tables 2 and 3 for males and females respectively, show that higher education significantly improves the chances of being a white-collar worker vis-à-vis being a farmer for both men and women. This is consistent with much of the development literature. However, Model 2 is more instructive. When we interact education with survey period, the interaction terms are negative and statistically significant, suggesting that returns to education in the form of securing white-collar jobs, seem to decline over time, as more people gain education. For example, while the coefficient of 5.45 for college education for the likelihood of being in professional jobs vis-a-vis farming for males reflects both worker and employer preference for recruiting educated workers in white-collar jobs, the interaction term becomes increasingly negative over time, going from -0.13 in 1987-88 to -1.23 in 1999-2000.

Thus, Models 2 for men and women suggest that increasingly over time, the likelihood of being in a white collar job for college educated individuals is declining in comparison to the omitted category, farming. The logarithmic scale used in a logistic regression masks the magnitude of this change but translated into odds ratio, these results reflect that holding other factors constant, a high school or college graduate male was 235 times as likely to get a professional job as an uneducated man in 1983 but this odds ratio had dropped to 68 times in 1999-2000. Similar declines are noticeable for primary and secondary education.

While it is plausible that if white-collar jobs are scarce, as the population becomes more educated, education may not be sufficient to gain a coveted professional position, a look at the second tier jobs is even more surprising. Results show that for males even the positive impact of education on second tier jobs like owning shops, petty businesses or small-scale production units seems to decline. This has occurred in conjunction with a shift away from the final category, out of labour force/ unemployment for educated workers.

Thus, while on the whole, educated workers may much rather remain unemployed and look for a job than become farmers, this distaste for farming has begun to decline as competition increases. Educated workers have also increasingly begun to accept skilled and unskilled manual positions. Thus, while managerial and administrative posts continue to require high levels of education with more than 60 per cent of the occupants of these posts having secondary or higher level of education, over time, education has become a necessary but not sufficient condition for obtaining high paying jobs. Results for women are similar to those for men, but are complicated by the higher propensity of educated women to stay out of the labour force[1] and consequently very small cell sizes for higher educated women in some occupations.

Access and Inequality

The results presented in this paper show that in spite of a growing economy and a declining share of agriculture in "the GDP, labour market opportunities in India appear to have stagnated. While much has been written on the failure of education to keep up with expectations and with other countries" successes and the intrinsic value of education is undisputed, yet, the supply of educated individuals seems to outweigh demand in the job-market.

Appendix Table 2: Results from Multinomial Logistic Regression: Males

Variables	Professional Compared to Self-Employed Farmer		Agricultural Labourers Compared to Self-Employed Farmer		Other Occupation Compared to Self-Employed Farmer		Out of the Labour Force Compared to Self-Employed Farmer	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Age	0.13***	0.13***	0.05***	0.05***	0.08***	0.08***	-0.35***	-0.35***
Age squared	0.00***	0.00***	0.00***	0.00***	0.00***	0.00***	0.00***	0.00***
Urban	2.61***	2.61***	-0.10***	-0.10***	3.14***	3.14***	2.32***	2.33***
Primary educated	0.93***	1.03***	-0.67***	-0.69***	0.37***	0.47***	-0.21***	-0.13*
Secondary educated	2.65***	2.99***	-1.52***	-1.65***	0.69***	0.78***	0.18***	0.39***
College degree	4.73***	5.17***	-2.67***	-2.63***	1.12***	1.37***	0.96***	1.20***
SC	0.47***	0.47***	1.57***	1.57***	0.87***	0.87***	0.86***	0.86***
ST	-0.25***	-0.25***	0.47***	0.47***	-0.16***	-0.16***	-0.25***	-0.26***
Muslim	0.84***	0.84***	0.57***	0.57***	0.85***	0.85***	0.67***	0.65***
Christian	0.15**	0.15**	0.10*	0.10**	0.03	0.03	0.60***	0.59***
Other religions	0.08+	0.09+	0.11**	0.11***	0.11***	0.11***	0.29***	0.29***
Married	0.17***	0.16***	0.07**	0.07**	0.25***	0.24***	-1.86***	-1.87***
HH Size	-0.06***	-0.06***	-0.10***	-0.10***	-0.07***	-0.07***	-0.01+	-0.01+
East	0.50***	0.50***	0.77***	0.77***	0.49***	0.49***	0.54***	0.55***
West	0.53***	0.53***	1.05***	1.05***	0.46***	0.47***	0.65***	0.64***
South	0.64***	0.64***	0.92***	0.92***	0.52***	0.52***	0.88***	0.87***
North-east	0.32***	0.32***	-0.59***	-0.59***	-0.20***	-0.20***	-0.23**	-0.22**
Survey year 1987-88	0.11***	0.28***	0.17***	0.18***	0.23***	0.32***	0.19***	0.27***
Survey year 1993-94	-0.13***	0.43***	0.25***	0.24***	0.16***	0.25***	0.00	0.11*
Primary * 1987-88		-0.03		0.01		-0.15***		-0.12
Primary * 1993-94		-0.26**		0.05		-0.13***		-0.12
Secondary * 1987-88		-0.26**		0.10+		-0.14***		-0.26***
Secondary * 1993-94		-0.74***		0.20***		-0.14***		-0.31***
College * 1987-88		-0.44***		-0.28		-0.31***		-0.51**
College * 1993-94		-0.79***		0.06		-0.33***		-0.21
Constant	-7.18***	-7.45***	-0.87***	-0.86***	-2.46***	-2.54***	4.49***	4.41***

Note: *** p <= 0.001 ** p <= 0.01 * p <= 0.05 + p <=0.1

Source: Rural, uneducated, upper caste, Hindu, unmarried, north-central region and survey year 1983 are the omitted categories.

Even jobs at the middle levels of occupational strata have not grown commensurately, and consequently, newly educated individuals are unable to find jobs in first or second tier occupations, leaving them with little option but to become farmers or skilled or unskilled labourers. This has not been accompanied by rising open unemployment rates, confirming the widely held view that open unemployment in India is a luxury [Visaria and Minhas 1991; Dev 2000].

Our findings through rigorous empirical research refute the assumptions of R and S that education will in coming years secure increasing 'private returns' which in turn will drive growth. Our results are particularly salient in the new economic climate where financial returns to white-collar work have increased far beyond returns to other occupations [Desai 2003]. Here, education appears to be a screening device, while other add-ons like private coaching, fluency in English, social networks and preferential access to information are all perhaps acting as additional sorting mechanisms. Two related caveats are in order – first, as pointed out earlier, the intrinsic value of education for a country and for its citizens is in no doubt. What is in doubt here is its role as the driver of productivity and growth. Second, the intrinsic value of growth in an economy is also in no doubt – what is in doubt is its potential to provide employment without specific employment generating interventions.

Our results are also significant in the context of the development of the new Indian middle class. In industrialised societies such as the US or UK [Butler and Savage 1995; Blumin 1989; Archer and Blau 1993], the middle class (often defined as the salaried class of managers and administrators), was growing both in number and in power as education was expanding. Thus, education formed a crucial asset for a middle class status in these societies. In contrast, in India (and possibly in other developing societies), educational growth seems to precede real growth in upper level white-collar jobs, or even lower level white-collar jobs. Thus, education in itself is not enough to provide access to these coveted posts and other sorting mechanisms are put in place in determining who will get these jobs. Nepotism, discriminatory educational systems, and emphasis on language, or other cultural symbols that favour one group over other become far more important in these settings, all ultimately contributing to increased inequalities.

Finally, our results are important for research and policies in two different areas. First, much of the discourse on fertility and education is built around the notion that parental desire to invest in children leads to increased expenditure on education and curtailment of fertility [Bledsoe, Casterline, Johnson-Kuhn and Haaga 1999]. However, if lack of employment opportunities curtails parental incentive to invest in schooling [Kingdon and Unni 1997] then some of the demographic expectations built on continued parental investments in children (and fertility decline) may not occur with the expected speed. Second, much of the current discourse surrounding economic growth is built around continued educational expansion and growth of employment in the 'modern' sector. However, Indian experience of economic growth without significant expansion of opportunities in the formal sector suggests that for foreseeable future agriculture and petty commodity production will continue to be major sectors of employment. Hence, development policies in which these sectors are ignored in favour of other sectors may lead to underinvestment in sectors which provide primary employment, impeding the ability to provide livelihoods.

We conclude with some reflections of our own. As far as growth and the availability of high-end jobs is concerned, there are several potentially positive alternatives to consider – one is that the growth of the last decade will see better employment effects after a lag and that we have not reached that magic point yet. Second, that policy has not liberalised enough (which is what several writers seem to suggest) to create the jobs needed. As pointed out earlier, it is not as if policy-makers do not know what to do or the fact that the needs of several different segments of the labour force must be addressed. However, generating employment for the unskilled labour force is easier than creating jobs for an increasingly skilled workforce. Here it is important to address the less debated issue of how policy can liberalise enough, especially within the new reality of coalition politics and the structure of the Indian federalism. EPW

Appendix Table 3: Results from Multinomial Logistic Regression: Females

Variables	Professional Compared to Self-Employed Farmer		Agricultrural Labourers Compared to Self-Employed Farmer		Other Occupations Compared to Self-Employed Farmer		Out of the Labour Force Compaerd to Self-Employed Farmer	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Age	0.07*	0.07*	-0.03+	-0.03+	0.04+	0.04+	-0.19***	-0.19***
Age Squared	0.00*	0.00**	0.00	0.00	0.00**	0.00**	0.00***	0.00***
Urban	2.47***	2.47***	0.19***	0.19***	2.95***	2.95***	2.30***	2.30***
Any Education	1.81***	3.05***	-0.84***	-0.89***	0.25***	0.16***	0.87***	0.89***
SC	0.59***	0.58***	1.54***	1.54***	0.95***	0.95***	0.38***	0.38***
ST	-0.56***	-0.58***	0.51***	0.51***	-0.15***	-0.15***	-0.88***	-0.88***
Muslim	0.59***	0.57***	0.66***	0.66***	1.20***	1.20***	1.29***	1.29***
Christian	0.96***	0.94***	0.06	0.07	0.08	0.09	0.00	0.00
Other religions	0.79***	0.80***	0.48***	0.48***	0.58***	0.58***	0.90***	0.90***
Married	-0.31***	-0.31***	-0.53***	-0.53***	-0.80***	-0.80***	0.48***	0.48***
HH Size	-0.09***	-0.08***	-0.08***	-0.08***	-0.06***	-0.06***	0.01***	0.01***
East	1.10***	1.11***	0.89***	0.89***	1.46***	1.46***	1.28***	1.28***
West	-0.55***	-0.55***	1.08***	1.08***	0.13***	0.13***	-0.79***	-0.79***
South	-0.25***	-0.25***	1.25***	1.25***	0.81***	0.81***	-0.47***	-0.47***
North-east	-0.22*	-0.20*	-1.42***	-1.42*	0.24***	0.24***	0.52***	0.52***
Survey year 1987-88	1.21***	2.38***	0.05**	0.06**	0.20***	0.20***	0.06***	0.04**
Survey year 1993-94	0.28***	0.48***	0.02***	0.14***	0.13***	0.06*	0.08***	0.09***
Education * 1987-88		-1.95***		-0.06		-0.04		-0.01
Education * 1993-94		-0.38***		0.14*		0.24***		-0.04
Constant	-3.93***	-4.86***	0.34*	0.69*	-1.31***	-1.27***	3.93***	3.93***

Notes: *** p <= 0.001 ** p <= 0.01 * p <= 0.05 + p <=0.1

Source: Rural, uneducated, upper caste, Hindu, unmarried, north-central region and survey year 1983 are the omitted categories.

Note

1 See Das and Desai, 2003.

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