



Munich Personal RePEc Archive

The Changing World of Work and No-Work

Dipa Mukherjee

Dept of Economics, Narasinha Dutt College

2003

Online at <http://mpa.ub.uni-muenchen.de/4865/>
MPRA Paper No. 4865, posted 12. September 2007

THE CHANGING WORLD OF WORK AND NO-WORK

Dipa Mukherjee*

Inadequate utilisation of available manpower is a perennial problem in India, with Open Unemployment being a major evil. Two other issues that have often been sidelined are Lack of Regular employment (Underemployment or Semi-Open Unemployment), and Lack of Adequate Returns from jobs (incidence of poverty among more or less regular workers or Non-Employment). The present paper explores both National and Regional aspects of these issues, their trends and patterns, and also their various correlates. Four NSSO Surveys (1983-84, 1987-88, 1993-94, 1999-2000) are considered. This enables us to consider movements during 1993-99 as Post-Reform trends. The results indicate increased casualisation and polarisation of workforce in the post-reforms era. These are also closely associated with socio-economic inequality and decline in living standards. Policies like growth impetus, flexible technology, infrastructural expansion and public expenditure programme will go a long way in solving these problems.

I. INTRODUCTION

The world is changing and nowhere is the change more perceptible than in the world of work. Composition of output, nature of jobs, working environment, labour contract and industrial relations and the composition of workforce are all changing, specially over the last decade in India. While inadequate utilisation of available man power has been a perennial problem in India, a different dimension of it has evolved in the post liberalisation era. An effort has been made in this paper to briefly analyse such trends and patterns, their implications, correlates and policy issues.

*Lecturer, Narasinha Dutt College, Howrah, West Bengal. The author is indebted to Prof. Ashok Mathur for his invaluable suggestions. The responsibility of all remaining errors is solely hers.

Open unemployment (OU) has always been recognised as a major evil in India. The fact that it is 'open' makes it a potential threat to not only the socio-economic system, but also to political leadership. Consequently it has received wide attention and policies have been framed to mitigate this problem. There are however two other issues that have been often sidelined. They are lack of regular employment (Underemployment or Semi-open unemployment - SOU) and lack of adequate returns from jobs (incidence of poverty among regular workers or Non-Employment - NE)¹. Pioneering work in these two issues was by Mathur (Mathur, A. 1999) who concentrated at the national level. The present paper explores both National and Regional aspects of these issues and also their interlinkages. It has seven sections. The next section discusses the methodology and databases used. The subsequent sections deal with National Trends in OU, SOU and NE; the regional pattern and trends in them, and their correlates. The sixth section summarises the findings and the last one provides a few policy implications.

II. METHODOLOGY AND DATABASE

Extensive, systematic and regular data regarding employment in India are being provided by National Sample Survey Organisation (NSSO) through reports of their employment surveys. As natural for a developing economy, a number of ambiguities regarding concepts and definition of employment (and unemployment) have been cropping up. The NSSO has attempted to solve these issues by putting forward four concepts - Usual Principal Status (UPS), Usual Principal and Subsidiary Status (UPSS), Current Weekly Status (CWS), and Current Daily Status (CDS). Of these, UPSS covers both regular and part time jobs and so UPSS Unemployment (UPSSU) would be the most visible or open unemployment. The CDS Unemployment (CDSU) would cover those who are unemployed for periods ranging from one day and above. These would thus include both open unemployment and intermittent unemployment. The difference between CDSU and UPSSU would give us a measure of underemployment or SOU. The problem of lack of adequate returns from jobs is sought to be quantified by measuring the incidence of poverty among regular workers. NE would thus be given by excess of poor people over and above those who are openly or semi-openly unemployed, i.e. (Poverty minus CDSU). Conceptually, this would also include those poor who are outside the workforce. It would however be fair to assume that this magnitude would be negligible as the poor can ill afford to

remain outside the workforce voluntarily. Also, most of the previous studies on this and related topics have used only the various ‘Rates’ reported by NSSO. In this paper, the absolute number of OU, SOU and NE are also computed using NSSO estimates of population and WPR, and trends in them are also studied. This would enable us to perceive the magnitude of the problem in absolute terms.

We consider four NSSO surveys – 38th (1983-84), 43rd (1987-88), 50th (1993-94) and 55th (1999-2000) in our study for data on employment and unemployment. Movements during 1987-93 and 1993-99 can be considered as pre- and post-reform trends respectively. Other data sources are various issues of Statistical Abstract of India, and Planning Commission Reports.

With these words, let us venture into the real world of work and no-work.

Table 1
Work Participation, Employment and Unemployment Trends in India

<i>Usual Work Participation Rate</i>													<i>Current Work Participation Rate</i>		
<i>Rural</i>			<i>Urban</i>			<i>Total</i>	<i>Rural</i>			<i>Urban</i>		<i>Total</i>			
<i>Number of persons in labour force per 1000 population</i>															
	<i>M</i>	<i>F</i>	<i>T</i>	<i>M</i>	<i>F</i>	<i>T</i>		<i>M</i>	<i>F</i>	<i>T</i>	<i>M</i>	<i>F</i>	<i>T</i>		
1983	559	345	454	544	162	363	432	521	218	372	521	118	330	362	
1987	549	331	442	534	162	359	421	525	222	377	523	125	336	366	
1993	561	330	449	543	165	363	424	534	232	387	532	132	343	374	
1999	540	302	423	542	147	354	404	515	220	370	528	123	335	360	

<i>Usual Employment Rates</i>							<i>Usual Unemployment Rates</i>							
<i>Number of persons employed/unemployed per 1000 workforce</i>														
<i>Rural</i>			<i>Urban</i>			<i>Total</i>	<i>Rural</i>			<i>Urban</i>		<i>Total</i>		
	<i>M</i>	<i>F</i>	<i>T</i>	<i>M</i>	<i>F</i>	<i>T</i>		<i>M</i>	<i>F</i>	<i>T</i>	<i>M</i>	<i>F</i>	<i>T</i>	
1983	97.9	98.6	98.1	94.1	93.2	93.9	97.3	2.1	1.4	1.9	5.9	6.9	6.1	2.7
1987	98.2	97.6	98.0	94.8	93.8	94.6	97.2	1.8	2.4	2.0	5.2	6.2	5.4	2.8
1993	98.6	99.4	98.9	95.9	93.9	95.6	98.1	1.4	0.6	1.1	4.1	6.1	4.4	1.9
1999	98.3	99.0	98.6	95.6	94.6	95.2	97.8	1.7	1.0	1.5	4.5	5.7	4.7	2.3

<i>Current Daily Employment Rates</i>							<i>Current Daily Unemployment Rates</i>							
<i>Number of persons employed/unemployed per 1000 workforce</i>														
<i>Rural</i>			<i>Urban</i>			<i>Total</i>	<i>Rural</i>			<i>Urban</i>		<i>Total</i>		
	<i>M</i>	<i>F</i>	<i>T</i>	<i>M</i>	<i>F</i>	<i>T</i>		<i>M</i>	<i>F</i>	<i>T</i>	<i>M</i>	<i>F</i>	<i>T</i>	
1983	92.5	90.8	92.0	90.8	89.8	90.6	91.7	7.5	9.0	7.9	9.2	10.5	9.4	8.3
1987	95.4	93.2	94.8	91.2	88.0	90.6	93.8	4.6	6.7	5.2	8.8	12.0	9.4	6.2
1993	96.8	96.6	96.9	93.2	89.4	92.4	95.7	3.2	3.4	3.1	6.8	10.6	7.6	4.3
1999	92.8	92.7	93.0	92.8	90.2	92.2	92.8	7.2	7.0	7.1	7.3	9.4	7.7	7.3

Source: Author’s Calculations based on NSSO (1983a, 1990, 1992, 1994, 2001).

III. NATIONAL TRENDS

It has been observed that both Usual and Current employment as a proportion of workforce had been increasing consistently during the pre-reform periods, i.e. from 1983 to 1987, and from 1987 to 1993 (Table 1). This trend, however, has reversed in

the post-reform period and the employment rates have decreased during 1993 to 1999. This has led to a rise in Open Unemployment rate. CDSU has more than doubled in the rural areas during 1993 to 1999 period after a secular decline during the earlier decade. The only exception to this broad trend is the urban female group, where the proportion of workforce employed has increased in the post-reform period. Along with this rising magnitude of OU, this period has also witnessed increasing casualisation, which is evident from the rising magnitude of SOU after a consistent decline of it in the earlier decade (Table 2). SOU is more severe for the female workers, the proportion being almost 4-5 times of the corresponding male figures in both rural and urban areas. However, there has been a decline in the proportion of NE in the 1993-99 period. This indicates that visible unemployment (OU) and casualisation (SOU) are increasing whereas concentration of poor within the more or less regular workers (NE) is declining. A polarisation of the workforce is clearly perceptible. On one hand proportion of regular employees are declining along with improvement in their position, and on the other hand proportion of casual workers and unemployed are increasing whose living standard are naturally deteriorating. This trend of increasing inequality in the world of work is thus casting its shadow on the society, and is a matter of great concern.

Table 2
Underemployment and Non-Employment Trends in India

	<i>Underemployment (SOU)</i>						<i>Non-Employment</i>			<i>Poverty</i>			
	<i>Number of persons per 1000 workforce</i>									<i>% of population</i>			
	<i>Rural</i>			<i>Urban</i>			<i>Total</i>	<i>Rural</i>	<i>Urban</i>	<i>Total</i>	<i>Rural</i>	<i>Urban</i>	<i>Total</i>
	<i>M</i>	<i>F</i>	<i>T</i>	<i>M</i>	<i>F</i>	<i>T</i>							
1983	11.6	41.2	22.6	7.2	27.8	11.5	20.4	42.7	37.7	41.5	45.7	40.8	44.5
1987	8.7	44.1	21.6	6.8	32.6	12.3	19.6	36.6	34.2	36.0	39.1	38.2	38.9
1993	6.4	31.5	15.4	4.6	22.4	8.3	13.6	36.1	29.8	34.4	37.3	32.4	36.0
1999	9.8	31.5	17.3	5.2	19.0	7.9	15.0	26.5	20.9	24.9	29.1	23.5	27.6

Source: Same as Table 1, and also Planning Commission (1993), Malhotra (1997) and Sundaram (2003).

If we now look at the absolute number of persons, certain interesting results crop up. It is observed that the size of workforce and the number of people employed

have increased consistently throughout the period of study (Table 3 and 4). In the pre-reform period growth in UPSS Employment (UPSSE) exceeded growth in workforce, and hence the employment rates increased. But in the post-reform period, growth in UPSSE fell short of growth in the workforce, and hence the employment rates declined. The same is true for CDS Employment (CDSE) also. More significant however, is the fact that the rise in UPSSE rate for urban female in the post-reform period is not a sign of enthusiasm. It is observed to be caused by a decline in UPSSE and a more than proportional decline in Workforce. Urban females are withdrawing themselves from the UPSS workforce. It is generally accepted that this is an outcome of prolonged unemployment, and when work is not available even after a long wait, a large proportion of females withdraw themselves from the labour force rather than report as unemployed. However, the post reform increase in current employment rate for urban female is due to an increase in workforce along with a more than proportional increase in employment. The virtue of this phenomenon has been questioned and economists have pointed out that this may have been caused by increased availability and employment of females in irregular and low paid jobs specially in the service sector. The fact that females are available at lower wages than male (and are less prone to form labour organisations) may have tilted the balance in their favour.

Table 3
Growth in Numbers of Workers and Employees

	<i>Growth Rate of Usual Workers</i>							<i>Growth Rate of Current Workers</i>						
	<i>Rural</i>			<i>Urban</i>			<i>Total</i>	<i>Rural</i>			<i>Urban</i>			<i>Total</i>
	<i>M</i>	<i>F</i>	<i>T</i>	<i>M</i>	<i>F</i>	<i>T</i>		<i>M</i>	<i>F</i>	<i>T</i>	<i>M</i>	<i>F</i>	<i>T</i>	
1983-87	0.9	0.1	0.6	4.2	4.2	4.2	1.4	1.6	1.6	1.6	4.8	5.8	5.0	2.3
1987-93	1.7	1.0	1.5	4.0	4.4	4.1	2.1	1.6	1.8	1.7	4.0	5.0	4.3	2.3
1993-99	1.8	1.2	1.5	1.3	-0.5	1.0	1.4	1.8	1.8	1.8	1.2	0.3	1.0	1.6
	<i>Growth Rate of Usually Employed Persons</i>							<i>Growth Rate of Usually Unemployed Persons</i>						
	<i>Rural</i>			<i>Urban</i>			<i>Total</i>	<i>Rural</i>			<i>Urban</i>			<i>Total</i>
	<i>M</i>	<i>F</i>	<i>T</i>	<i>M</i>	<i>F</i>	<i>T</i>		<i>M</i>	<i>F</i>	<i>T</i>	<i>M</i>	<i>F</i>	<i>T</i>	
1983-87	1.0	-0.1	0.6	4.4	4.4	4.4	1.3	-3.1	14.4	2.8	1.1	1.5	1.2	2.1
1987-93	1.8	1.4	1.6	4.3	4.4	4.3	2.2	-2.5	-19.8	-8.3	0.0	4.1	0.6	-4.0
1993-99	1.7	1.1	1.5	1.2	-0.3	0.9	1.3	5.1	10.2	6.9	2.8	-1.6	2.1	4.3
	<i>Growth Rate of Currently Employed Persons</i>							<i>Growth Rate of Currently Unemployed Persons</i>						
	<i>Rural</i>			<i>Urban</i>			<i>Total</i>	<i>Rural</i>			<i>Urban</i>			<i>Total</i>
	<i>M</i>	<i>F</i>	<i>T</i>	<i>M</i>	<i>F</i>	<i>T</i>		<i>M</i>	<i>F</i>	<i>T</i>	<i>M</i>	<i>F</i>	<i>T</i>	
1983-87	2.3	2.3	2.3	4.9	5.2	5.0	2.9	-10.2	-5.5	-8.6	3.5	9.4	4.7	-4.8
1987-93	1.9	2.4	2.0	4.4	5.3	4.6	2.7	-4.4	-9.0	-6.7	-0.3	2.8	0.7	-3.7
1993-99	1.1	1.1	1.1	1.1	0.4	0.9	1.1	16.5	14.8	16.9	2.4	-1.7	1.2	10.8

Source: Same as Table 1.

Table 4

Growth in Numbers of Underemployed and Non-Employed													
<i>Underemployment (SOU)</i>							<i>Non-Employment</i>			<i>Poverty</i>			
<i>Number of persons per 1000 workforce</i>											<i>% of population</i>		
<i>Rural</i>			<i>Urban</i>			<i>Total</i>	<i>Rural</i>	<i>Urban</i>	<i>Total</i>	<i>Rural</i>	<i>Urban</i>	<i>Total</i>	
<i>M</i>	<i>F</i>	<i>T</i>	<i>M</i>	<i>F</i>	<i>T</i>								
1983-87	-6.1	1.9	-0.5	2.9	8.5	5.9	0.3	-2.5	2.0	-1.5	-2.6	2.8	-1.3
1987-93	-3.4	-4.4	-4.2	-2.6	-1.9	-2.6	-3.9	1.0	1.5	1.2	0.4	1.1	0.6
1993-99	9.2	1.2	3.5	3.2	-3.1	0.3	3.1	-2.6	-4.4	-3.1	-1.6	-3.9	-2.2

Source: Same as Table 2.

IV. REGIONAL PATTERN

1. Severity of the Problem

There have been regions where the magnitude of the problems of OU, SOU and NE are more severe compared to the national level. OU has been relatively greater in Kerala, West Bengal, Tamil Nadu, Orissa, Rural Punjab and Urban Himachal Pradesh consistently. Since the 1990s, the problem has been severe in Bihar also. SOU has been significantly higher than national level in Kerala, Tamil Nadu, Gujarat, Rural West Bengal, Rural Maharashtra and Urban Andhra Pradesh all along. The problem has become acute in Himachal Pradesh and Orissa in the 1990s. NE has been comparatively severe in Madhya Pradesh, Orissa, Uttar Pradesh, Bihar, Rural West Bengal, Urban Andhra Pradesh. The problem had been severe in Tamil Nadu and Maharashtra in the 1980s but has subsided thereafter.

We are however more concerned with temporal trends in OU, SOU, and NE, specially their movements in the immediate pre- and post-reform periods.

2. Regional Trends

The post-reform trends towards greater OU and SOU evident at the National level is not all pervasive. Proportion of workers usually employed has increased for the states of Gujarat, Rural Haryana and Urban Areas of Madhya Pradesh, Punjab and Tamil Nadu and consequently OU has declined in these regions. CDS employment rates in the post reform period have increased in Gujarat, Haryana, Karnataka and Urban areas of Andhra Pradesh and West Bengal. However, more alarming has been the decline in the absolute number of usually employed persons specially in the post-reform period. Whereas the number declined only for urban Gujarat during 1983-87, it declined for Madhya Pradesh, Rural Punjab, Rural Tamil Nadu, Urban Kerala and Urban Orissa during 1987-93. During 1993-99 it declined in Rural areas of Himachal Pradesh, Kerala, Orissa and Urban areas of Uttar Pradesh, Andhra Pradesh and West Bengal. Similar pattern is exhibited by current employment. There have been sporadic

instances of marginal decline in female employment in some other cases also. Consequently, reduction in open unemployment has been adversely affected in the post-reform period. During 1987-93 absolute number of openly unemployed persons declined for all states except Bihar, West Bengal, and urban areas of Gujarat, Maharashtra and Uttar Pradesh. On the contrary it increased in the next period for all states except for Gujarat, Madhya Pradesh, rural areas of Haryana and Karnataka and Urban areas of Punjab, Tamil Nadu and West Bengal.

Contrary to the national trend, casualisation (or SOU) has declined in the post reform period in Haryana, Himachal Pradesh, Karnataka, Rural areas of Orissa and Tamil Nadu and Urban areas of Andhra Pradesh and West Bengal (Table 5).

Table 5
Semi-Open Unemployment Trends at the Regional Level (as % of Workforce)

	1983			1987			1993			1999		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
Andhra Pr	22.8	13.6	21.2	17.7	14.6	17.1	16.8	11.6	15.5	17.8	8.9	16.0
Bihar	20.5	7.2	19.2	15.2	7.8	14.3	12.1	4.8	11.2	14.0	5.0	12.9
Delhi	22.1	2.7	3.9	-2.1	5.8	5.5	0.2	-1.1	-1.1	1.5	0.6	0.7
Gujarat	23.5	12.0	20.2	21.8	8.9	18.5	17.9	8.9	15.3	18.4	8.8	15.5
Haryana	19.8	6.0	17.6	27.2	10.0	23.1	22.5	11.6	19.5	16.6	6.4	13.8
Himachal P	21.0	5.4	20.1	20.8	6.0	20.0	21.4	9.4	20.8	19.4	5.1	18.5
Karnataka	16.2	12.6	15.3	16.0	12.6	15.1	17.5	8.2	14.7	14.3	6.8	12.1
Kerala	35.2	26.1	33.6	23.1	20.8	22.6	21.5	17.4	20.8	26.5	19.7	24.8
Madhya Pr	17.3	9.9	16.1	16.9	7.7	15.3	17.1	7.5	15.7	16.2	8.7	14.7
Maharashtra	23.6	10.5	20.1	16.8	8.9	14.5	17.2	7.0	13.4	16.5	6.1	12.8
Orissa	20.5	8.6	19.2	14.9	10.1	14.3	21.6	9.3	20.5	20.1	11.0	19.0
Punjab	32.4	10.1	27.8	29.4	9.7	24.3	14.1	3.7	10.6	17.0	8.0	14.2
Rajasthan	15.5	13.0	15.0	14.0	10.9	13.4	13.7	7.4	12.6	13.8	8.5	12.9
Tamil Nadu	30.3	15.7	26.1	16.7	11.3	15.1	23.3	10.2	18.6	21.8	10.0	17.3
Uttar Pr	20.7	10.0	19.1	12.8	6.9	11.7	15.2	7.0	13.3	15.8	7.5	14.2
W Bengal	27.7	9.5	23.3	19.7	7.6	16.4	19.6	7.1	15.5	22.6	6.2	17.8
India	22.6	11.5	20.4	21.6	12.3	19.6	15.4	8.3	13.6	17.3	7.9	15.0

Note: For Delhi, negative SOU indicates presence of current workers who are not usually in workforce, e.g. students working in summer.

Source: Author's calculation based on sources mentioned for Table 1.

During this period the absolute number of casual workers increased at the national level but declined for Haryana, Himachal Pradesh, Karnataka, rural areas of Madhya Pradesh, Orissa, Tamil Nadu and urban areas of Andhra Pradesh, Maharashtra, Uttar Pradesh and West Bengal (Table 6). It may be noted that a decline in casualisation may occur due to 'moving in' of casual workers into regular jobs or due to 'pushing out' of casual workers to open unemployment. It is observed that the post-reform decline in casual workers has been accompanied by a decline in Usual employment in Rural Himachal Pradesh, Rural Orissa, Urban areas of Andhra Pradesh, Uttar Pradesh and West Bengal indicating de-employment of casual workers

in these regions. On the contrary, in Haryana, Karnataka, Rural Madhya Pradesh, Rural Tamil Nadu and Urban Himachal Pradesh and Urban Maharashtra, the decline in casual workers is accompanied by a rise in usual employment, indicating some sort of regularisation of casual workers. This indicates that one cannot adopt 'blanket policies' to counter casualisation.

Table 6
Growth in Numbers of Underemployed at the Regional level in Pre- and Post Reform period

State	Semi Open Unemployment						Non-Employment					
	Pre-Reform '87-93			Post-Reform '93-99			Pre-Reform '87-93			Post-Reform '93-99		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
Andhra Pr	0.8	1.7	1.0	2.4	-6.7	1.1	-4.0	4.9	-0.4	7.7	-8.2	1.2
Bihar	-1.6	-5.8	-1.9	4.4	1.5	4.2	3.5	-3.9	2.7	0.2	5.6	0.7
Delhi	-	-	-	91.5	-	-	-9.9	19.1	18.5	NA	-6.1	-4.9
Gujarat	-1.6	4.4	-0.7	2.0	2.0	2.0	-3.4	-2.0	-2.8	-1.4	-5.9	-3.1
Haryana	-2.8	6.4	-1.6	-4.3	-9.1	-5.0	15.4	5.5	13.4	-19.2	-11.2	-17.7
Himachal P	3.9	10.1	4.0	-1.8	-5.5	-1.9	14.4	17.5	14.3	-8.4	-25.9	-8.5
Karnataka	3.4	-3.2	2.1	-2.0	-2.7	-2.1	-1.2	0.9	-0.4	-1.5	-13.3	-5.5
Kerala	-0.6	-5.4	-1.4	3.2	10.4	4.5	0.8	-10.6	-1.9	-13.9	6.9	-8.8
Madhya Pr	-2.6	-6.5	-3.0	-1.0	7.9	-0.2	-4.0	-6.1	-4.4	-2.7	1.4	-1.8
Maharashtra	1.0	1.4	1.0	1.2	-1.1	0.7	-0.7	4.1	1.2	2.2	-4.6	-0.4
Orissa	10.2	-4.3	9.2	-1.4	8.6	-0.9	0.1	-4.9	-0.7	2.6	7.2	3.2
Punjab	-13.3	-11.1	-13.0	6.8	14.9	7.9	2.5	7.3	4.1	-4.0	-28.9	-6.6
Rajasthan	2.3	-4.8	1.4	0.9	4.5	1.3	-0.8	-3.0	-1.3	-12.0	-9.3	-11.2
Tamil Nadu	5.1	2.1	4.5	-1.3	1.2	-0.8	-7.4	5.6	-2.8	-3.1	-7.8	-4.9
Uttar Pr	3.7	6.4	4.0	2.1	-1.4	1.7	1.2	2.6	1.7	-5.6	-4.7	-5.6
W Bengal	0.8	3.8	1.2	4.0	-3.4	3.1	-2.0	-3.6	-2.0	3.1	-11.2	0.8
India	-4.2	-2.6	-3.9	3.5	0.3	3.1	1.0	1.5	1.2	-2.6	-4.4	-3.1

Note: Figures for Delhi can not be calculated due to negative SOU in some cases.

Source: Author's calculation based on sources mentioned for Table 1 and Table 2.

Table 7
Non-Employment Trends at the Regional Level (as % of Workforce)

State	1983			1987			1993			1999		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
Andhra Pr	22.5	33.0	25.1	17.8	36.4	22.6	13.4	35.5	19.6	18.1	23.3	19.5
Bihar	61.8	45.4	59.7	51.9	47.2	51.3	56.3	32.1	53.0	49.3	41.5	48.3
Delhi	4.5	26.4	24.6	0.6	7.1	6.4	1.8	15.3	14.0	NA	8.8	8.1
Gujarat	27.8	36.8	30.7	26.0	34.5	28.8	19.8	25.8	21.9	16.8	15.4	16.3
Haryana	18.7	21.5	19.4	12.0	13.7	12.4	26.0	14.2	23.0	6.4	6.1	6.3
Himachal P	16.3	6.2	15.5	14.9	3.2	13.9	29.5	8.0	27.6	16.2	0.9	14.7
Karnataka	33.4	39.7	35.3	31.1	44.4	35.1	27.9	37.9	31.1	22.2	15.6	20.0
Kerala	30.6	38.0	32.1	22.2	30.6	24.3	20.7	18.0	20.1	8.9	16.6	10.9
Madhya Pr	48.1	51.4	48.8	41.3	45.8	42.3	39.5	46.2	41.2	31.4	36.7	32.7
Maharashtra	42.4	37.2	40.5	38.3	34.6	36.9	36.0	32.9	34.8	34.8	23.0	29.9
Orissa	64.2	46.4	62.0	55.6	39.1	53.5	47.2	38.3	46.0	53.7	39.0	51.5
Punjab	10.9	21.3	13.8	9.7	9.1	9.5	11.1	9.9	10.7	7.4	1.2	6.3
Rajasthan	32.3	36.3	33.1	31.1	40.2	33.2	26.0	29.7	26.9	10.3	14.3	11.2
Tamil Nadu	45.7	41.3	44.3	40.5	32.7	37.9	26.7	35.9	30.0	21.5	19.6	20.7
Uttar Pr	45.3	47.6	45.8	40.1	41.6	40.4	41.3	34.0	39.7	24.4	29.9	25.6
W Bengal	58.1	27.4	49.9	45.7	28.8	41.1	37.8	17.9	32.2	38.7	9.1	30.4
India	42.7	37.7	41.5	36.6	34.2	36.0	36.1	29.8	34.4	26.5	20.9	24.9

Source: Author's calculation based on sources mentioned for Table 2.

The National declining trend of NE in the post reform period is evident in all the states except Orissa, Rural areas of Andhra Pradesh and West Bengal and Urban Bihar (Table 7). This is in contrast to the 1987-93 period during which this proportion increased for Bihar, Haryana, Himachal Pradesh, Punjab, Rural UP and Urban areas of Madhya Pradesh and Tamil Nadu.

The absolute numbers increased during 1993-99 for Bihar, Orissa, Rural areas of Andhra Pradesh, Maharashtra, West Bengal, Urban Kerala and Urban Madhya Pradesh (Table 6).

Thus there appears to be diverse trends regarding SOU and NE in the pre- and post-reform periods, as also across regions. Specific factors at the State level seem to be operating. In the following section we try to analyse some of them.

V. POSSIBLE CORRELATES

We now explore the possible correlates of the problems of semi-open unemployment and non-employment. We will try to explore both factors affecting pattern of SOU and NE and also the factors that are affected by these two.

1. Factors Affecting SOU and NE

It has already been observed that substantial regional variation exists regarding the magnitude and severity of SOU and NE. A distinct break in their trend in the post reform period is also observed. What are the factors responsible for these phenomena?

The foremost factor that has been identified is lack of satisfactory economic growth. A significant negative association between PCNSDP of the states and rates of both SOU and NE therein are observed for all the time points (Table 8a and 8b). Moreover, the correlation coefficient between SOU and NE rates of a particular year and growth rate of NSDP and PCNSDP during the preceding time interval is observed to be negative. This indicates that SOU and NE are relatively higher in the states with lower income as also in those with slower economic growth. The growth effect on employment is thus still very much operative in India. Faster growth may not be sufficient but is necessary to mitigate the problems of underemployment and incidence of poverty among regular employed.

Another major factor is the composition of growth. It is generally perceived that in the post reform period there is a shift in technology towards more capital intensive technique specially in the organised sector. The demand pattern is also

changing towards capital intensive consumer durables as reflected by their rising share in Private Final Consumption Expenditure (PFCE). This has resulted in a decline in labour absorption capacity of the economy. Estimates of aggregate elasticity of employment to output growth in the economy (ratio of rate of aggregate employment growth to rate of growth of NSDP or NNP) show a distinct decline in 1999 compared to 1993 or 1987 levels for all the states as well as the nation (Table 9). The reforms, stressing more on market forces, have thus supported a less employment intensive growth. A dual force is operative - the pace of growth is slackening, and whatever growth is occurring is not being transformed to proportional rise in employment opportunities.

Table 8a

Correlation Coefficients of Underemployment Rates with Different Causal Variables - 1993

	<i>Underemployment (SOU)</i>			<i>Non-Employment (NE)</i>		
	<i>Rural</i>	<i>Urban</i>	<i>Total</i>	<i>Rural</i>	<i>Urban</i>	<i>Total</i>
PCNSDP	-0.470	-0.479	-0.576**	-0.677**	-0.510	-0.653**
Gr in NSDP ^a				-0.450		-0.478
Phy inf ^b	-0.727**	-0.589**	-0.760**	-0.678**	-0.397	-0.554**
Fin inf ^c	-0.760**	-0.570**	-0.756**	-0.584**	-0.329	-0.440
Soc Inf ^d	-0.750**	-0.513	-0.735**	-0.586**	-0.362	-0.456
Infra ^e	-0.758**	-0.554**	-0.754**	-0.598**	-0.350	-0.460
PC Ex Ed ^f					-0.733**	-0.474
PC Ex Trn ^g					-0.454	
RDI ^h				-0.583**	-0.544**	-0.675**

Notes: a - Growth rate of PCNSDP in the preceding period; b - Physical Infrastructure Index; c - Financial Infrastructure; d - Social Infrastructure; e - Composite Infrastructural Index; f - Per Capita Capital Expenditure on Education, Science and Technology; g - Per Capita Capital Expenditure on Transport and Communication; h - Rural Development Index.

** indicates significant at 1% level, coefficients with significance level above 10% are not reported.

Source: Author's calculation.

Table 8b

Correlation Coefficients of Underemployment Rates with Different Causal Variables - 1999

	<i>Underemployment (SOU)</i>			<i>Non-Employment (NE)</i>		
	<i>Rural</i>	<i>Urban</i>	<i>Total</i>	<i>Rural</i>	<i>Urban</i>	<i>Total</i>
PCNSDP	-0.472	-0.379	-0.559**	-0.586**	-0.743**	-0.654**
Gr in NSDP ^a				-0.554**	-0.591**	-0.591**
Phy inf ^b	-0.376	-0.266	-0.485	-0.523**	-0.550**	-0.554**
Fin inf ^c	-0.733**	-0.462	-0.745**	-0.397	-0.425	-0.415
Soc Inf ^d	-0.685**	-0.385	-0.680**	-0.411	-0.424	-0.424
Infra ^e	-0.714**	-0.440	-0.734**	-0.684**	-0.789**	-0.726**
PC Ex Ed ^f	-0.666**	-0.509	-0.641**	-0.523**	-0.540**	-0.537**
PC Ex Trn ^g				-0.531**	-0.596**	-0.561**
RDI ^h	-0.520**	-0.338	-0.569**	-0.438	-0.538**	-0.473

Notes: a,b,c,d,e,f,g and h - explanations as in Table 8a.

** indicates significant at 1% level, coefficients with significance level above 10% are not reported.

Source: Author's calculation.

The third factor identified is the lack of proper infrastructural facilities. Inadequate infrastructure leads to dormant economic activities thereby leading to

underemployment and non-remunerative employment. Composite indices of Physical, Financial and Social infrastructure are built up for the states using a wide number of indicators². It is observed that both SOU and NE have significantly negative association with all three dimensions of infrastructure. While the association of SOU is stronger with financial infrastructure, NE is more affected by physical infrastructure. Considering the fact that physical infrastructure is most basic to economic activities and directly related to poverty alleviation, stronger association between them is quite natural. A single composite index of infrastructural availability is also constructed from the sectoral indices. It is observed that the association of SOU and NE with this index is also significantly negative.

Table 9
Elasticity of Employment with respect to Output Growth

	<i>Usual Status Employment</i>			<i>Current Status Employment</i>		
	<i>1983-87</i>	<i>1987-93</i>	<i>1993-99</i>	<i>1983-87</i>	<i>1987-93</i>	<i>1993-99</i>
Andhra Pr	1.04	0.53	0.16	1.76	0.61	0.13
Bihar	0.05	1.32	-1.88	0.51	1.70	-1.50
Delhi	0.95	0.22	0.44	0.90	0.42	0.39
Gujarat	-0.46	0.30	0.39	-0.73	0.38	0.38
Haryana	1.02	0.21	0.39	0.63	0.34	1.10
Himachal Pr	0.52	0.59	-0.02	0.54	0.57	0.05
Karnataka	0.55	0.44	0.24	0.55	0.46	0.36
Kerala	0.50	0.12	0.17	2.26	0.22	0.02
Madhya Pr	3.88	-0.62	0.30	3.96	-0.63	0.37
Maharashtra	0.33	0.25	0.66	0.75	0.27	0.71
Orissa	0.92	0.76	0.42	2.31	0.43	0.89
Punjab	0.19	0.00	4.54	0.46	0.60	3.36
Rajasthan	-0.97	0.35	0.15	-1.28	0.38	0.14
Tamil Nadu	0.37	0.17	0.09	1.07	0.06	0.15
Uttar Pr	0.29	0.45	0.41	0.78	0.37	0.27
West Bengal	0.61	0.42	0.11	1.23	0.46	0.03
India	0.35	0.39	0.15	0.75	0.46	0.12

Source: Author's calculation based on sources mentioned for Table 1 and Table 4, and also from Statistical Abstract, CSO, various issues.

Considering the state of the economy, public expenditure in India has been a major instrument in not only promoting growth but also for specified and targeted employment generation program. It is observed that there is a significant negative correlation between rates of SOU & NE in a state and per capita state planned capital expenditure. The association is particularly strong between Underemployment and expenditure on education, science and technology (EST); and between Non-employment and both expenditures on EST and on Transport & Communication. The Urban underemployment and non-employment rates are significantly negatively associated with expenditure on urban development.

To examine whether level of rural development of a state has any bearing on underemployment and non-employment, a rural development index (RDI)³ was prepared for the states. It is observed that both rural SOU and rural NE are significantly negatively associated with RDI. Quite surprisingly open unemployment rates were observed to be positively associated with RDI. One may explain this as a '*supply side phenomenon*' whereby greater rural development creates larger workforce by increasing WPR and thereby inflates open unemployment. On the demand side greater rural development leads to better utilisation of workforce and mitigates poverty resulting in a decline in SOU and NE.

If we consider the incremental effects using Regression technique we find that the rates of SOU and NE are significantly affected by rise in PCNSDP, RDI and Infrastructure - the latter having the largest impact.

So far, we have discussed factors affecting underemployment and non-employment. A few consequences of these two problems may also be briefly noted.

2. Impact of SOU and NE

The most natural consequence of under-utilisation of labour force and non-remunerative jobs is a drop in average living standard. The association between OU, SOU and NE with real per person MPCE and PFCE on food are observed to be significantly negative, indicating that average consumption standards are lower in states with high unemployment (of all kinds) problems (Table 10). Moreover, the drop in real per capita expenditure on food grains from the pre-reform to post-reform period can be directly linked with the worsening of the employment situation.

Greater OU & SOU not only decreases average living standard but also leads to greater inequality. The association between these rates and Gini coefficients (of expenditure) is observed to be positive. The association is stronger for the rural areas. However, the association between NE and Gini coefficient is found to be negative, specially for the rural areas, indicating that a lower NE is accompanied by higher inequality for the rural areas. This validates our earlier comment that the post-reform decline in NE and increase in OU and SOU is a reflection of polarisation of the workforce leading to socio-economic inequality.

Table 10
**Correlation Coefficients of Private Expenditure and Gini Coefficients with
 Underemployment Rates - 1993 and 1999**

	<i>Underemployment (SOU)</i>				<i>Non-Employment (NE)</i>			
	1993		1999		1993		1999	
	<i>Rural</i>	<i>Urban</i>	<i>Rural</i>	<i>Urban</i>	<i>Rural</i>	<i>Urban</i>	<i>Rural</i>	<i>Urban</i>
MPCE ^a			-0.284	-0.383	-0.629**	-0.608**	-0.723**	-0.791**
PCFC- Food ^b		-0.149		-0.313	-0.517	-0.612**	-0.612**	-0.758**
Gini Coeff ^c	0.506	0.296	0.634**		-0.615**		-0.331	

Notes: a - Monthly Per Capita Consumption Expenditure; b - Per Capita Monthly Final Expenditure on Foodgrains; c - Gini Coefficient of inequality in Consumption Expenditure. ** indicates significant at 1% level, coefficients with significance level above 10% are not reported.

Source: Author's calculation based on sources mentioned for Table 1, Table 2.

The fact that the post reform economic mechanism is not only decreasing the size of the cake but is also making increased unequal distribution of it is a matter of serious concern. Unless immediately addressed the situation may explode.

VI. SUMMARY FINDINGS

Let us now summarise the main findings-

- a) There is substantial under-utilisation of workforce due to not only open unemployment, but also due to irregular nature of employment.
- b) A large proportion of more or less regularly employed workers have inadequate returns from work leading to poverty.
- c) Both OU and SOU are increasing in the post reform period, while incidence of poverty among more or less regular workers is decreasing. This indicates increased polarisation of the workforce leading to greater socio-economic inequality.
- d) Substantial regional variation exists regarding the magnitude and severity of these problems.
- e) Important factors leading to these problems are slow economic growth, low-income level, changing composition of output in favour of non-labour intensive techniques, lack of infrastructural facilities and inadequate public expenditure programs.
- f) Greater rural development reduces SOU and NE but increases open unemployment by increasing WPR.
- g) This casualisation and polarisation of workforce is leading to lower average living standard and greater inequality.

VII. POLICY IMPLICATIONS

What do all these mean for policy formulations?

The first and foremost thrust should be on greater growth of the economy. Though the economic thinking in the early 1980s and the criticism of the post-reform policies seem to point out the inadequacy of ‘trickle down’ effect, one cannot accept this position fully⁴. Growth may not in itself be sufficient to create employment, but it is absolutely necessary. However, the composition of this growth is equally important. Growth, determined entirely by market forces has not been able to enhance labour absorption. Institutional catalysts like Infrastructural expansion, Asset redistribution, and Promotion of labour flexibility have to accompany growth. Containing upward wage-price spiral in the organised sector will mitigate the present trend of replacing labour by capital. As with infrastructural expansion, public works program also creates job-opportunities. However, this program and other targeted employment generation and poverty alleviation programmes need to be designed with a long-term perspective. Creation of durable and productive community assets that trigger off second round economic activities should be ensured. Given the huge stock of food grains (often rotting) in the FCI warehouses, ‘Food for Work’ program can be a major policy instrument. However, all these policies are long term in nature. The most visible impacts of lack of proper employment, namely, lower average living standards and greater inequality, have to be dealt with quick acting short-term measures of targeted group approach and redistribution of assets. But these are only temporary pain removers used to minimise suffering during the process of achieving long term goals of higher growth and employment for the economy. They should only be considered as stopgap solutions and not the ultimate objective, as sharing of poverty can never be an alternative to sharing of growth.

Notes

¹ The concept was first discussed loosely by Joan Robinson [Robinson (1960)], and then by Gautam Mathur (1999).

² The composite indices are build up using Modified Principal Component Analysis method from the following indicators. Irrigation Intensity, Bank Credit to agriculture per hectare GCA, Power consumed for agricultural purpose, % of villages electrified, Per capita power generation, Road and Railway length per 1000 sq. km. area, % of roads surfaced are combined to yield Physical Infrastructure. Financial infrastructure is composed of Bank Branches per 1000 sq. km. area, Bank

credit to Industries per industrial worker, and Per capita SFC credit off-take. Social infrastructure consists of Hospitals and dispensaries, Primary schools, Higher educational institutions (all per 1000 sq. km. area), Medical personnel as % of population and State per capita expenditure on primary education.

³ RDI has also been constructed using MODPCA method to capture Cropping and Irrigation Intensity, NSDP from agriculture per hectare GCA, Rural Road Connectivity, % of villages having electricity, and Rural per capita expenditure on foodgrains.

⁴ Researchers have found that the association between Open Unemployment and Growth rate of PCNSDP has turned positive in the post-reform period from negative earlier. But the component responsible for this is the Urban Male cohort for whom the association has turned from significantly negative to significantly positive. This can be attributed to substantial immigration of workers into urban areas of the states experiencing higher growth.

References

Central Statistical Organisation, *Statistical Abstract of India* - Various Issues, Government of India, New Delhi.

Malhotra, Rajeev (1997), "Incidence of Poverty in India: Towards a Consensus on Estimating the Poor", *Indian Journal of Labour Economics*, Vol. 40, No. 1.

Mathur, Ashok (1999), "Economic Reforms, Employment and 'Non-Employment': Theory, Evidence and Policy", *Keynote paper for Technical Session VI of 82nd Annual Conference of the Indian Economic Association*, December, 1999.

Mathur, Gautam (1999), "The Analysis of Responsibility of Poverty", in B. Satyanarayan and Ch. Raghuram (eds.) *Essays in Political Economy : Selected Papers of Prof. Gautam Mathur*, Concept Publishing Company, New Delhi.

NSSO (1983), "Report on 3rd Quinquennial Survey on Consumer Expenditure, NSS 38th Round, Report No. 319", Government of India, New Delhi.

_____ (1983a), "Report on 3rd Quinquennial Survey on Employment and Unemployment, NSS 38th Round, Report No. 341 and 341/1 to 341/17", Government of India, New Delhi.

_____ (1987), "Tables with Notes on Consumer Expenditure, NSS 44th Round, NSS Report No. 370/1", Government of India, New Delhi.

_____ (1990), "Report on 4th Quinquennial Survey on Employment and Unemployment, NSS 43rd Round", *Sarvekhsana*, Special Issue, September, Government of India, New Delhi.

_____ (1992), "Report on 4th Quinquennial Survey on Employment and Unemployment, NSS 43rd Round", *Sarvekhsana*, Special Issue, January, Government of India, New Delhi.

_____(1994), *Report on 5th Quinquennial Survey on Employment and Unemployment, NSS 50th Round, Report No. 409*, Government of India, New Delhi.

_____(2001), *Report on 6th Quinquennial Survey on Employment and Unemployment, NSS 55th Round, Report No. 455, 458/1, and 458/2*, Government of India, New Delhi.

Planning Commission (1993), *Report of the Expert Group on Estimation of Proportion and Number of Poor*, Government of India, New Delhi.

Robinson, Joan (1960), *Exercises in Economic Analysis*, Macmillan, London.

Sundaram, K. and Tendulkar, S. D. (2003), 'Poverty in India in the 1990s : An Analysis of Changes in 15 Major States', *Economic and Political Weekly*, Vol. 38, No. 14, April 5-11.

Websites - www.worldbank.org, www.econpapers.hhs.se, www.planningcommission.nic.in.

Appendix

Appendix Table 1

Change in Correlates in Pre-Reform and Post-Reform Period

	Growth Rate in				Per Capita MPCE				Per Capita PFCE on Food			
	PCNSDP		NSDP		Rural		Urban		Rural		Urban	
	1987-93	1993-99	1987-93	1993-99	1993	1999	1993	1999	1993	1999	1993	1999
Andhra Pr	5.3	3.4	2.1	3.2	73	65	103	110	43	39	56	52
Bihar	1.6	-0.9	-3.1	-0.5	59	55	96	86	42	37	61	49
Delhi	6.1	7.4	3.2	2.1	na	171	na	258	na	76	na	106
Gujarat	8.3	4.8	3.0	6.4	87	102	131	165	59	61	76	82
Haryana	6.8	1.7	-0.4	4.4	124	113	152	145	74	63	82	66
Himachal Pr	5.8	6.4	4.7	3.8	na	117	na	213	na	66	na	96
Karnataka	6.1	4.5	2.8	4.4	82	85	129	155	51	50	72	72
Kerala	7.4	7.0	5.9	6.1	106	129	135	157	64	69	73	77
Madhya Pr	5.4	2.8	0.7	9.7	66	65	107	112	40	38	56	53
Maharashtra	9.1	2.2	0.0	6.7	91	90	178	177	54	49	94	80
Orissa	4.0	0.6	-0.6	2.1	71	64	130	105	48	41	75	60
Punjab	4.8	0.6	-1.3	2.8	137	119	162	144	79	62	86	68
Rajasthan	7.7	6.6	3.8	5.4	92	94	121	136	57	56	68	69
Tamil Nadu	6.7	4.2	3.1	5.6	83	84	124	159	52	50	68	73
Uttar Pr	4.2	1.3	-0.3	2.2	84	46	119	119	51	80	66	60
West Bengal	5.2	6.4	4.6	3.0	99	97	169	185	66	64	94	97
India	5.8	8.8	4.1	3.7	103	97	168	171	65	58	92	82

Source: Author's calculation based on sources mentioned for Table 1 and Table 4, and also from *Statistical Abstract of India*, CSO, Govt. of India, various issues.