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# India's Employment Challenge

CREATING JOBS, HELPING WORKERS

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*Creating Jobs, Helping Workers*

Poverty Reduction and Economic  
Management Unit, South Asia

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# Abbreviations

ADB	Asian Development Bank	GDP	Gross Domestic Product
ASI	Annual Survey of Industries	GoI	Government of India
BIRA	Bombay Industrial Relations Act, 1946	GSDP	Gross State Domestic Product
BPL	Below Poverty Line	GVA	Gross Value Added
CAG	Comptroller and Auditor General	HYV	High-yielding Varieties
CBMI	Community-based Micro-Insurance	IDA	Industrial Disputes Act, 1947
CDS	Current Daily Status	ILO	International Labour Organization
CII	Confederation of Indian Industries	IRDA	Insurance Regulatory and Development Authority
CMIE	Centre for the Monitoring of the Indian Economy	ISIC	International Standard Industry Classification
CSO	Central Statistical Organisation	ITC	Industrial Training Centre
CSS	Centrally Sponsored Scheme	ITES	Information Technology Enabled Services
CWS	Current Weekly Status	ITI	Industrial Training Institute
DGE&T	Director General of Employment & Training	JGSY	Jawahar Gram Samridhi Yojana
DME	Directory Manufacturing Enterprise	JRY	Jawahar Rozgar Yojana
DRDA	District Revenue/ District Administration	KAM	Knowledge Assessment Methodology
DRER	Domestic Real Exchange Rate	M&E	Monitoring and Evaluation
EAS	Employment Assurance Scheme	MFI	Micro-Finance Institution
EE	Employment Exchange	MPCE	Mean Per Capita Expenditure
EGIP	Employer-Generated Implementation Plan	MRTU	Maharashtra Recognition of Trade Unions Act
EGS	Employment Guarantee Scheme	NCVT	National Council for Vocational Training
EPZ	Export Processing Zone	NDME	Non-directory Manufacturing Enterprise
FDI	Foreign Direct Investment	NES	National Employment Service
FICCI	Federation of Indian Chambers of Commerce and Industry		

NFFWP	National Food for Work Programme	PULP	Prevention of Unfair Labour Practices Act, 1971
NGO	Non-Governmental Organization	SC/ST	Scheduled Caste/Scheduled Tribe
NIC	National Industry Classification	SEWA	Self-Employed Women's Association
NREG	National Rural Employment Guarantee	SEZ	Special Economic Zone
NSS	National Sample Survey	SGRY	Sampoorna Grameen Rozgar Yojana
NSSO	National Sample Survey Organisation	SME	Small and Medium Enterprise
OAME	Own Account Manufacturing Enterprise	UHS	Universal Health Insurance Scheme
OBC	Other Backward Class	UPS	Usual Principal Status
OECD	Organisation for Economic Co-operation and Development	UPSS	Usual Principal and Subsidiary Status
PRI	Panchayati Raj Institution	VET	Vocational Education and Training
		VRS	Voluntary Retirement Scheme

# Executive Summary

## INTRODUCTION

Although labour market outcomes in the 1990s were better than what is commonly perceived and job growth has picked up markedly since 2000, India's employment situation is still a cause for concern. In the 1990s,<sup>1</sup> job growth in India decelerated but less sharply than official estimates suggest. Seen in terms of changes over two decades—1983–93 and 1993–2004—and taking both principal and subsidiary workers into consideration, employment growth was largely flat at 2 per cent or slightly declining—from 2.1 per cent (1983–93) to 1.9 per cent (1993–2004).<sup>2</sup> But, labour productivity and average wage growth were higher in the latter period than in the 1983–93 decade. Then, as economic growth accelerated post-2000, employment numbers too showed an increase. However, since 2000, there has been a deceleration in the growth of wages and earnings, especially for workers whose earnings fall in the middle of the wage spectrum. Additionally, as the large number of working poor (some 105 million persons or more than a quarter of all workers in 2004) indicates, many Indian workers are still trapped in jobs with low earnings.

Of the 413 million prime-aged persons in the Indian labour force in 2004–5, the overwhelming majority, about 90 per cent, are employed in low productivity informal sector jobs.<sup>3</sup> The share of formal sector and manufacturing in total employment has remained low and strikingly unchanged over the two decades since 1983. Although the open unemployment rate, at about 2.8 per cent, is low, it is chronic in nature and markedly higher among the youth (6.7 per cent), in urban areas (5 per cent), in certain regions (for example, West Bengal), and among the better educated.<sup>4</sup> Unemployment and underemployment, taken together, have increased since the year 2000 and now apply to more than 8 per cent of the labour force. These developments have evoked considerable public concern in India, leading to the enactment of the National Rural Employment Guarantee Act that guarantees 100 days of employment in public works to each rural household.

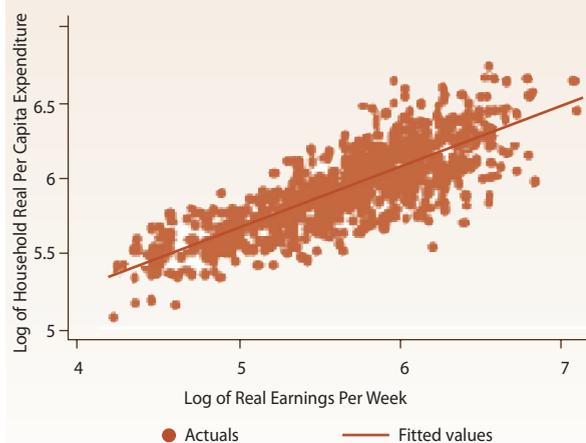
The concern caused by labour market outcomes in India is thus not misplaced. For most Indians, especially the poor and marginalized, labour is their principal asset. The tight relationship between wage earnings, income, and household expenditures across India's different regions (Figure 1) suggests that labour markets are the main channel through which economic growth is distributed across regions and people. Pro-poor growth requires not only increasing the earnings of the current 105 million working poor but also creating productive jobs for the 90 million or so new entrants expected to join the labour force over the next decade. The key challenge is to create good jobs that increase productivity. Achieving economic growth rates of 8 to 10 per cent per annum over the next decade, as is being discussed currently, will require that labour productivity grow by 6 to 8 per cent per annum.<sup>5</sup>

This report analyses the available evidence on India's labour market developments in the aforementioned context and with the following objectives: (i) to assess developments in labour

markets (the next section); (ii) to identify key employment challenges (the third section); and (iii) to make recommendations for improving labour market outcomes (the fourth section). Based on wide-ranging consultations with central and state government officials, private sector representatives, trade unionists, and academics, this report addresses six major questions in its six chapters:

- What are the main developments in India's labour markets?
- What is happening to the volume and quality of jobs being created in the informal sector?
- Why has formal sector employment growth, especially in manufacturing, been slow?
- What has contributed to the persistence of 'dualism'—the large gap in productivity and earnings between the formal and informal sectors—within the manufacturing sector and between rural and urban areas?
- How do labour market outcomes differ across regions and why? What do these differences imply?
- How do labour market regulations affect outcomes? Specifically, which policies are the most binding and what reforms are needed to remove constraints?
- In what way can the active labour market policies pursued by Union and state governments be made more effective? How can the skills of the workforce be increased?

**Figure 1 Real Per Capita Expenditure Plotted Against Real Weekly Earnings for NSS Regions, Estimated from Five Thick Round Surveys (1983–2004)**



Source: Authors' estimates from NSS Data.

Note: An increase of wage earnings explains about 66 per cent of the variation in household per capita expenditure by itself.

The report draws primarily on fresh research by a team of Indian economists and World Bank staff. Major labour market data sets, such as the quinquennial 'thick' Rounds of the National Sample Survey (that is, NSS surveys from 1983 to 2004–5), reports from the Annual Survey of Industries, information from the Labour Bureau of the Government of India, and the Informal Sector Modules of the NSS have been used for analysis in this report. Finally, the research

also draws on databases from the World Bank Investment Climate and Doing Business surveys and those produced by the Centre for the Monitoring of the Indian Economy (CMIE). The database prepared by Besley and Burgess (2004) was used to derive new labour regulatory indices that distinguish between the complexity and rigidities caused by regulations in Indian states. It is worth stressing that while the discussion on trends in the labour markets draws on the latest 'thick' Round survey of 2004–5, most of the *analysis* of these trends draws on the 'thick' Round survey of NSS ending in 2000 because the latest 'thick' Round survey was released only recently.

This report elaborates on three main themes. First, as noted earlier, while labour market outcomes in the 1990s were better than what is commonly perceived and job growth has accelerated in recent years, overall outcomes still present concerns for at least three reasons. One, a comparison of the trends in job growth over two decades, 1983/1993–4 and 1993–4 to 2004–5, suggests that job growth has been flat over the long term. Two, the spurt in employment since 2000 has been accompanied by a marked deceleration in real wage growth and even in a decline for many workers; the number of working poor has increased in the past five years. Three, low paying, relatively unproductive, informal sector jobs continue to dominate labour markets.

Second, looking ahead, India faces formidable employment challenges. The overarching challenge is to increase the earnings of workers, especially of the 105 million who live in poverty (2004–5), while meeting the demand for jobs by new entrants to the labour force. Given that 60 per cent of India's population is below 30 years of age, the Indian economy can enjoy a 'demographic dividend' of some 123 million persons who will enter the prime working age over the next decade, lowering the dependency ratio and raising growth

prospects. However, this can happen only if the economy is capable of providing productive jobs to the 90 million or so persons in this age-group who will likely seek work over the coming decade. This will require: (i) raising productivity and job quality in the informal sector, including in agriculture; (ii) stimulating formal sector employment growth; and (iii) addressing persistent regional, gender, and social disparities in labour market outcomes.

Third, meeting these challenges will require reforms in labour market policies along two directions. One, regulatory reforms are required to remove barriers to the growth of formal sector jobs and labour-intensive manufacturing. Current labour regulations that are intended to help workers actually end up hurting them by constraining job growth. By imposing excessive rigidity in the formal manufacturing labour market, the regulations create disincentives for employers to create jobs. This study estimates that the Industrial Disputes Act (IDA) has caused about 3 million less jobs to be created in formal sector manufacturing. Two, regulatory reforms need to be complemented with effective and active labour market policies that can help workers, especially those in the informal sector, become more productive, obtain more protection against unemployment, and enhance skills.

### **STRUCTURAL CHANGES IN THE INDIAN ECONOMY AND LABOUR MARKET DEVELOPMENTS SINCE THE 1990s**

Although economic growth in India accelerated significantly in the past two decades, structural changes in the economy were relatively slow, especially compared to other fast-growing Asian economies. The economic growth rate averaged about 6 per cent per annum since the mid-1980s. Growth accelerated further in the last three years and is now more than 8 per cent. There was a rapid increase in trade and, more recently, in the investment rate which increased to over 30

per cent of the gross domestic product (GDP). Economic development in India, from the early 1950s to the present, has been broadly consistent with the experience of other countries in that the share of agriculture in GDP declined from more than 50 per cent to less than a quarter, while the shares of industry and services increased. However, in some key respects, India's pattern of structural change has been different from most other developing countries. First, most of the increase in economic activity took place in services, which now account for more than 50 per cent of the GDP. While the share of industry increased to around a quarter of GDP, manufacturing's share increased minimally and today accounts for less than 15 per cent of GDP, compared to much higher shares in other developing countries. While the pace of transformation accelerated after 1990, when India's largely closed and regulated economy started liberalizing to become more open and competitive, the shares of industry and manufacturing remained largely unchanged throughout the 1990s. Second, most of the increases in services and industry took place in relatively skill-intensive and capital-intensive sectors, and less in labour-intensive industries.

The structure of employment was, until recently, surprisingly resistant to change. There was little shift in employment away from agriculture and the sector still provides employment to nearly half of India's workers. The share of employment in agriculture has declined, from 65 per cent in the early 1980s to 55 per cent at present, but much less so than the decline of agriculture's share in GDP. During the same period, the share of manufacturing employment has matched the share of manufacturing GDP and remains at less than 15 per cent of all employment. Between 1999–2000 and 2004–5, however, there were faster changes in employment, especially in rural areas, away from agriculture to construction and trade, hotels and restaurants,

and transport and communications in the services sector, and to some extent to manufacturing. However, contrary to expectations, employment is still overwhelmingly dominated by small-scale, informal sector activity in all sectors, more than a decade after the liberalization of the 1990s.

While overall job growth in the 1990s slowed down, the deceleration was considerably less than official estimates. Fresh estimates, based on combining data from NSS surveys with 2001 census data, suggest that employment growth among prime-age workers may have declined from 2.1 per cent in 1983–93 to 1.6 per cent in 1993–2000, that is, a decline of about 0.5 percentage points.<sup>6</sup> Official estimates, on the other hand, show a halving of the employment growth rate from 2 per cent to about 1 per cent over the same period. An important implication of these fresh estimates is that while the growth elasticity of employment—the response of employment growth to GDP growth—declined, it did not decline by nearly as much as what is implied by official estimates of employment trends.

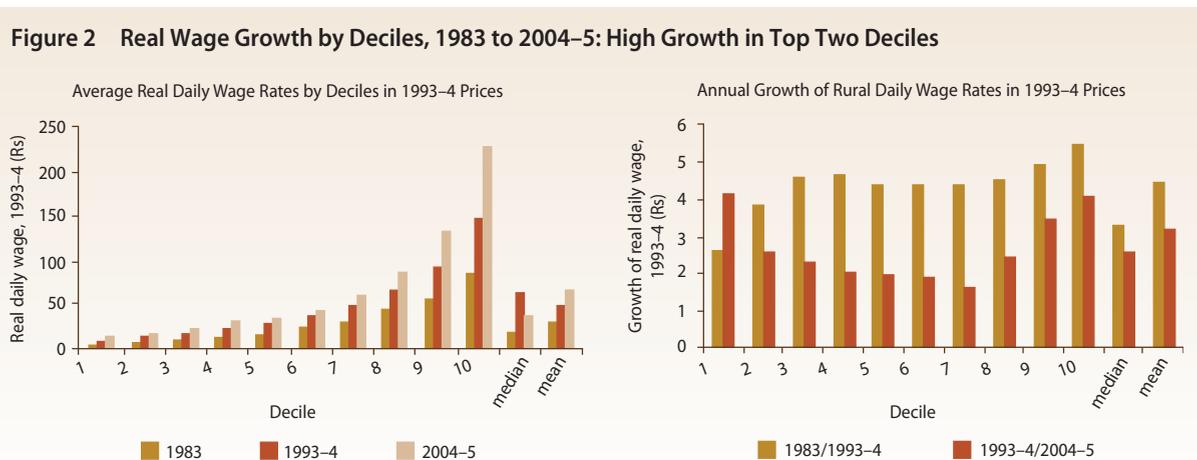
On the other hand, while job growth has picked up since 2000, the job growth rate has remained unchanged over the past two decades. The recent acceleration in job growth for the prime-age population, to about 2.3 per cent between 1999–2000 and 2004–5, reflects both supply and demand side factors. On one side, the working-age population has increased, leading to an increase in the number of workers looking for jobs and a rise in self-employment. On the other side, the job growth also reflects the acceleration in economic growth since 2003, indicated by the growing share of construction, trade, and manufacturing jobs. Several factors suggest that it is the growing supply of workers which is mainly driving this growth: (i) most of the job growth has been in subsidiary (part-time) workers and in self-employment; growth of employment for

‘principal’ (full-time) workers has actually slowed down; (ii) allowing for the fact that 1999–2000, a year when the agricultural sector contracted, may have led to an unusual drop in employment in the rural areas, and looking at decadal changes from 1983 to 1993–4 and 1993–4 to 2004–5, employment growth has remained flat or slowed down slightly; (iii) unemployment rates have increased; and (iv) wage growth has decelerated markedly in recent years for almost all groups of workers.

Wages and productivity grew across the board in the 1990s but both slowed down post-2000. Mean wages grew by 3.4 per cent per annum, on average, between 1994 and 2000, tracking the growth in labour productivity. However, wage growth decelerated markedly in the past five years. At the same time, wage growth took place across all wage groups—including the most vulnerable agricultural casual worker group. There were also indications of a convergence in real wages across regions during the past two decades, including between rural and urban areas. Overall, in the space of six years from 1994 to 2000, the number of working poor fell by 12 million to 102 million.<sup>7</sup> Wage growth across individuals, however, was unequal. Most of the wage growth took place in the top two deciles of wage earners and, interestingly, for workers in the bottom decile. Further, for

most workers, wage growth was slower during the 1993–2004 period than in the previous decade (Figure 2), leading to a slight increase in the number of working poor. Since 2000, wage growth has decelerated for most workers and even declined for unskilled workers.

The evidence on deteriorating job quality needs to be interpreted with caution. Usually, the evidence cited for worsening job quality is the increase in the share of informal sector workers, especially casual workers (the ‘casualization’ of the workforce), and the poor growth of organized formal sector jobs. However, first, it is important to remember that in the 1990s, as wages and productivity rose, real earnings too rose for all categories of workers. In this sense, job quality improved for all categories. Second, not all jobs in the informal sector can be rated worse than formal sector jobs. An examination of household expenditures shows that among the top 30 per cent of workers, self-employed workers fare better in terms of household per capita consumption than similar, regular-salaried workers. Third, although aggregate numbers do show that there was some casualization of the workforce in the 1990s,<sup>8</sup> this was driven by trends in a few industries: agriculture, mining, and construction. Finally, between 1999–2000 and 2004–5, there



Source: Staff estimates.

was a converse movement where the share of casual workers decreased and was offset by a similar increase in self-employed workers. To the extent this movement was voluntary and not driven by the absence of opportunities, it would suggest that the quality of jobs within the informal sector improved in recent years. Comparison of per capita consumption suggests that self-employed workers are better off than casual workers.

Two major developments in the 1990s which underline the development challenges that India now faces, need to be reconciled: (i) the slowdown in job growth in the 1990s and the rise in real wages across all wage groups, and (ii) since 2000, the marked increase in job growth accompanied by the deceleration in wage growth. The deceleration in employment growth and wage increases in the 1990s took place because of a deceleration of growth in both labour supply and labour demand. *Supply* decelerated mainly because female workers in rural areas withdrew from 'subsidiary' jobs in favour of housework, childcare, and leisure. This happened in large part because higher household incomes and spouses' earnings made it possible for them to do so. Happily, child labour also fell significantly, though some 10 million children still remained in the workforce in 1999–2000.<sup>9</sup> In addition, the youth population, both men and women, withdrew from the workforce in favour of schooling or leisure. Our analysis reveals, however, that part of the slowdown in the supply of labour also happened because workers became discouraged and dropped out of the labour force due to fewer employment opportunities, leading to reduced labour supply. *Demand* for labour decelerated because agricultural growth fell sharply at the end of the 1990s and organized manufacturing growth was sluggish. Agricultural employment—still accounting for 59 per cent of the labour force in that period—stagnated as growth in agricultural

value-added employment decelerated sharply in the second half of the 1990s. Employment in the formal sector was also stagnant because while the public sector shed labour, adverse relative price changes against manufacturing, and regulatory policies, encouraged private producers to invest in more skill-intensive techniques that increased productivity instead of raising employment. Though the formal service sector, relatively unfettered by labour regulations, grew rapidly, its contribution to job creation was limited by its small share in overall employment.

Despite the deceleration in job growth in the 1990s, real wages grew for several reasons. First, significant deceleration in labour supply matched deceleration in job growth, offsetting any dampening effects on wages. Second, wage growth followed productivity growth; productivity within sectors increased and workers moved from less productive jobs to more productive jobs in the non-farm sectors. In particular, the fast pace of growth in skill- and capital-intensive services, as well as the manufacturing sectors, increased productivity and wage growth in jobs which were already high-earning. Third, wage growth was also faster at the high end in urban salaried jobs due to institutional factors: firms using efficiency wages to retain skilled workers and the large increase in public sector salaries awarded by the Fifth Pay Commission. Due to these factors, while average wages grew robustly, median real wage growth rate was relatively anaemic at less than 2 per cent per annum. These contrasting trends of deceleration in job growth and unequal wage increases highlight the employment challenges that India faces.

Developments in labour market outcomes from 2000 to 2005 were almost a mirror image of developments in the 1990s.<sup>10</sup> Job growth in the first five years of the new century accelerated to about 2.3 per cent while real wage growth

decelerated appreciably and even declined for many workers. While regular worker jobs also increased significantly in this period, most of the job growth took place for self-employed workers in rural areas and their share increased markedly. Correspondingly, the share of casual workers fell. However, unemployment and underemployment rates, taken together over the entire period of 2000–5, increased. These developments suggest that the acceleration in job growth may have mainly reflected a rise in the supply of labour which was absorbed by rural, non-agricultural, self-employed occupations. Understanding these trends and their implications requires further study.

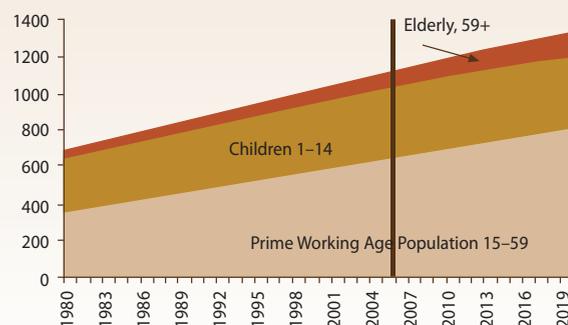
### MEETING INDIA'S EMPLOYMENT CHALLENGES

India's working-age population will grow at a fast rate over the next decade. The overarching challenge for the Indian economy will be to generate an equally fast growth of good quality, productive jobs for the new entrants. Due to demographic factors, the working-age population will increase by about 12 million persons a year over the next decade. About 8 to 9 million of these persons will look for jobs (see Figure 3) (Sundaram and Tendulkar 2006a). The number of entrants to the labour force will be even higher if female participation rates increase

in the same direction as East Asian and Latin American rates, as India approaches middle-income country status. In the 1990s, however, the economy generated only about 5.5 million net jobs per annum. This suggested that unless the economy performed better in creating productive jobs at a much faster rate, wages and earnings could become depressed while unemployment rates increased. In the event, wage rate growth decelerated and for some groups even declined between 2000 and 2005, even with a significant acceleration in job growth. This highlights the continued importance of job quality as an issue since most of the labour force continues to remain in the informal sector, working in relatively low productivity jobs. While growth in formal sector skill-intensive manufacturing and the tertiary sectors has picked up, their contribution to overall job growth is limited due to their small share in India's labour market.

What measures will be needed to meet this overarching challenge? Overall, sustaining economic growth and adjusting the pattern of growth to make it more broad-based and employment-intensive will be the key requirements. Growth is ultimately the main driver of employment. However, growth in the past decade was led by skill-intensive information technology (IT) and information technology enabled services (ITES), financial services, telecom and retail sectors, and skill-intensive manufacturing. The employment impact of these sectors was muted due to their relatively small share in total employment and the high level of skills they require from workers. To have larger employment impact, growth has to be more broad-based. This can be achieved by stimulating growth in labour-intensive manufacturing and increasing productivity in the low-end tertiary sectors which can absorb most of the relatively unskilled labour that shifts away from agriculture. Three intermediate

**Figure 3 More Than 9 Million Workers will Enter the Job Market Each Year**



Source: Derived from [www.ILO Laborsta.org](http://www.ILO Laborsta.org)

measures that can help make growth more broad-based are: (i) raising productivity and job quality in the informal sector; (ii) stimulating formal sector employment growth; and (iii) addressing persistent regional, gender, and social disparities in labour market outcomes.

### **Raising Productivity and Job Quality in the Informal Sector**

The informal sector dominates India's labour markets and will continue to do so in the medium term. Even if the definition of the formal sector is stretched to include all regular and salaried workers, some 335 million workers were employed in the informal sector in 2004–5.<sup>11</sup> Given the current barriers for entry into the formal labour markets, the informal sector will remain huge in the medium term. While some informal sector workers, the self-employed in particular, are engaged in high productivity work, most others are employed in low productivity jobs in the agriculture and tertiary sectors.

Stimulating productivity growth in informal sector manufacturing and the tertiary sectors is necessary for enhancing job growth in the short term. These sectors are important both in terms of the number of workers they employ, as also because they are well placed to receive workers moving out of agriculture. In the manufacturing sector, of a total of about 45 million workers, some 33.4 million are employed in unorganized sector firms (Unni 2006). In the late 1990s there was rapid growth in this sector—spurred by policy changes which dismantled small-scale reservations and unleashed the forces of competition, and policies which enhanced investment ceilings and gave other concessions, allowing firms to grow and upgrade their technology. Unlike formal sector manufacturing, however, this growth in value-addition in the informal manufacturing sector was passed on to workers in the form of higher wages and more employment. This sector is, therefore, essential to employment-creating strategies. At

the same time, it is worth stressing that average productivity in informal manufacturing still remains only one-eighth that of formal sector firms. The welfare consequences of having such low-productivity employment are huge—in terms of lower output and wages, poorer working conditions, insecurity, lost tax revenues, and constraints to financial development.<sup>12</sup>

Fostering productivity and employment growth in the agriculture sector should continue to claim priority because of the large size of the sector and its continuing potential for providing productive employment. Although, in the long term, development necessarily entails moving labour out of agriculture and into more productive jobs in manufacturing and the services sectors, more than half of the labour force in India currently remains in agriculture.<sup>13</sup> Thus, employment growth in this sector will continue to have a large impact on overall employment growth as well as on workers' earnings through its effect on wages. In the 1990s, employment growth in this sector slumped due to low growth, especially in the net sown area, as investments in irrigation and rural infrastructure declined. There is considerable potential for stimulating demand for labour and productivity in agriculture through diversification into horticulture (which has an employment elasticity of production twice that of cereals), livestock and other high-value products, and increasing the spread of irrigation. Irrigated farms can use 50 per cent more hired labour than rain-fed farms. The further spread of labour-intensive high-yielding varieties (HYVs) of rice, especially to the north-eastern regions where water is available but productivity is relatively low, offers potential in this respect. Expanding sustainable irrigation under the Bharat Nirman project of the government will help this process. Increase in agricultural activity will also likely lead to growth in off-farm employment opportunities through second-round effects, both supply side (as more

people are employed in marketing and food processing) and demand side (as more prosperous firms demand more goods and services). The fact that less than 2 per cent of India's fruits and vegetables are processed, compared to about 50–80 per cent in some East Asian economies, indicates the enormous employment potential in this area.

Both investment and regulatory reforms are needed in the informal agriculture and non-agriculture sectors to stimulate growth and increase incentives for firms to become formalized. At present, regulations restrict the marketing of agricultural produce under the Agriculture Produce and Marketing Act and the Essential Commodities Act, and the gathering of forest products under the Indian Forest Act (Saxena 2003). Storage of produce and storage rent are restricted in some large states. These restrictions depress both demands, for farm produce as well as farmers' earnings. The tens of millions of forest dwellers who depend on forestry products are hindered from harvesting non-timber forest products such as fruits, nuts, flowers, and twigs—activities that are ecologically sustainable. International evidence suggests that governments need to take two approaches to encourage firms to become formal (World Bank 2005f). First, they should recognize that expanding the formal sector takes time. In the interim, governments can provide a supportive environment for the growth of productivity and improvement in working conditions in the informal sector. But to support the growth of the formal sector, it is crucial to remove disincentives for growth—reserving sectors for small-scale firms, regulations that raise transaction costs and costs when firms grow beyond a certain size, and other regulatory barriers discussed earlier. Second, governments can gradually improve enforcement by raising penalties for non-compliance. This approach requires cautious handling because eliminating

informality can lead to high costs in the short term by throwing firms and employees out of work.

### **Stimulating Formal Sector Employment Growth**

Increasing formal sector employment in India is another key challenge. The share of formal sector employment in total employment has been virtually at a standstill, even declining slightly, more than a decade after liberalization. In the second half of the 1990s, formal manufacturing employment growth slowed down, both because overall sectoral growth was relatively slow and because employment elasticity fell sharply. Our analysis suggests three factors were responsible for the latter: (i) an adverse movement of relative prices against manufacturing producers; (ii) firms investing heavily in increasing capacity as the economy opened up in the 1990s. When the expected manufacturing growth did not materialize, particularly in the second half of the 1990s, this had a dampening effect on employment. Trade also had an impact: while export-intensive sub-sectors increased their share in employment growth, the share of import-competing sectors fell slightly during this period of adjustment; and (iii) the choice made by firms to raise wages and productivity of existing workers rather than employ more people. India stands in striking contrast to other countries in that it has seen relatively faster growth in wages rather than employment in the manufacturing sector. It is important to note that despite the growth in wages the current wage bill of formal sector manufacturing firms in India is only about 8 per cent of total costs (*Business Standard*, 4 January 2006). What explains this? India's generous depreciation rate of 25 per cent for machinery and equipment for tax purposes, compared to 10 per cent in OECD (Organisation for Economic Co-operation and Development) countries, encourages firms to be capital intensive. This allowance, combined with labour market regulations that discourage labour

mobility, has dampened job growth in labour-intensive sectors.<sup>14</sup>

A specific task will be to mitigate dualism (or the concentration of production and employment in very small-scale and large-scale production) in manufacturing by accelerating growth in the 'missing' mid-sized plant group in manufacturing. Compared to other countries, Indian manufacturing is marked by the concentration of value-addition and employment in very large-scale and very small-scale firms, leading to the problem of a 'missing middle'. Currently, the incentive structure in the Indian manufacturing sector favours small and micro industries, while the dualism in the capital markets gives specific advantages to large firms if they opt for capital-intensive techniques that result in high wage per worker and low employment per unit of output. The mid-size firms are trapped in a disadvantaged no-man's land. This is problematic because international experience shows this 'middle' group is the most dynamic in terms of employment generation and entrepreneurial development. By introducing more competition, this group also promotes efficient manufacturing growth.

The dualistic pattern of job growth in the tertiary sectors also needs to be addressed. At one end, the main source of growth in the formal sector has been the rapidly expanding ITES and financial sectors. But these sectors' influence on the overall labour markets is marginal given that they employ only 6 million workers out of a labour force of more than 400 million. More important in terms of employment generation are sectors such as trade, hotels and restaurants, construction, and community services. Evidence suggests, however, that the bulk of jobs created in these sectors are of low productivity and also informal. Thus, as in manufacturing, workers are clustered at two ends of the wage spectrum, mostly at the low end.

### Addressing Regional, Gender, and Social Disparities

The differences in earnings across individuals, regions, gender, and caste groups indicate some specific challenges that need to be overcome to improve labour market outcomes. Increasing wage disparity, a conspicuous development in the 1990s and in this past decade, appears to arise from two sources. First, as mentioned earlier, the dualism in labour markets segments workers—placing most workers in relatively low-paying, low-productivity jobs in small- or micro-size firms and a few in better-paying high-productivity jobs in very large-sized firms. This leads to differences in wages between the two groups, above what can be explained by observed skill differences. Second, as India's economy becomes more integrated with the world economy, the premium on skills is increasing the divide between educated and uneducated workers. The number of persons returning to school to complete secondary education is particularly high. At the same time, less than 10 per cent of workers in India have completed secondary or post-secondary education. Real wage growth among persons of managerial and executive rank—at about 10 per cent per annum—was highest in the South Asian region for three consecutive years, indicating the scarcity of these skills. Wage growth among the less-skilled, middle 40 per cent group of workers, on the other hand, was a more modest 3 per cent per annum in the 1990s.

The large differences in labour market outcomes across India's 28 states and seven Union Territories need to be addressed by focusing on lagging regions and facilitating migration.<sup>15</sup> The differences can be dramatic. For instance, employment rates for males can vary from 65 per cent to 83 per cent, and for females from 10 per cent in Delhi or Tripura to 50 per cent in Andhra Pradesh.<sup>16</sup> Real weekly earnings from rural work in one region

were less than one-tenth the weekly earnings in another in 1999–2000. These differences are also persistent: employment outcomes were consistently poor in the north-east, the northern states of Bihar and Uttar Pradesh, the coastal regions of Orissa and Kerala, and the former French and Portuguese colonies of Puducherry and Goa respectively. One important exception to these persistent differences is real wages which show a tendency to converge across regions and between rural and urban areas.<sup>17</sup> This may help explain why migration and urbanization rates across Indian states are low. This also suggests important barriers to improving labour market outcomes—for instance, low labour mobility, both across regions and from rural to urban areas, which has led to unusually low urbanization in India. In this respect, the contrast with China is dramatic: whereas the urban population in China grew by about 180 million between 1989 and 2003, in India it grew by a much smaller number of 80 million.<sup>18</sup>

Two proximate factors stand out as the main drivers of regional differences in labour market outcomes: first, economic activity levels as measured by the gross state domestic product (GSDP) and, second, female participation rates. First, over the long run, regions with higher GSDP and higher economic growth rates show higher employment rates and earnings and lower unemployment rates. This challenges the widespread perception of ‘jobless’ growth. Interestingly, GSDP levels and economic growth appear to have a more significant effect on female employment than on male employment. A 1 per cent increase in GSDP leads to a 0.7 per cent increase in female employment levels, a 1 per cent increase in urban employment, and a 0.4 per cent increase in rural employment levels.<sup>19</sup> Economic activity also affects the quality of jobs, as measured by earnings in rural areas. It

is worth stressing though that the link between GSDP and employment opportunities is more long-term than short-term. Over short periods, increasing labour productivity—which has driven most of India’s economic growth—can dampen employment growth in both urban and rural areas. In the medium term, however, regional analysis suggests, increasing productivity does not dampen employment growth. The second proximate factor driving regional differences, the difference in female participation rates, has a complex relationship with income. On one hand, increases in household expenditures (which proxy increases in household incomes) or spouses’ earnings lower female participation rates. On the other hand, regions that provide greater economic opportunities for earnings by females have markedly higher female participation rates.

A key task, in the foregoing context, will be to draw more women into the ‘paid’ labour force. The labour force participation rates for females are unusually low in India. While they declined further in the 1990s, and then recovered after 2000, overall participant rates remained stuck at low levels. While female participation rates in East Asia and Latin America are around 60 per cent, in India they are only around 30 per cent. Contrary to international experience, the rising rate of education among females and lower fertility rates were accompanied by declining female participation in the workforce in India (about 3 per cent between 1993–4 and 1999–2000). Two factors help explain India’s low and falling female participation rates. First, there is a positive income effect: with increased household incomes or earnings by spouses, females working in subsidiary jobs in rural areas quit the labour force in favour of household work, leisure, or childcare.<sup>20</sup> The second factor is the absence of employment opportunities which has hurt rural female participation.<sup>21</sup> Also, the high

gender gap in wages, about 28 per cent, cannot be explained by age, experience, or education—it discourages female participation. Thus, increasing good economic opportunities will be important for increasing female participation, especially in rural areas.

Addressing the exclusion of Scheduled Castes (SCs) and Scheduled Tribes (STs) from good quality jobs is an important challenge. Government policies to reserve jobs and use affirmative action have been effective in providing SC/ST groups some advantage in getting rationed salaried public sector jobs. But SC and ST workers still have a much higher probability of being employed in relatively poor quality jobs (often as agricultural labourers) and significantly lower probability of entering self-employed occupations (Das 2006). Improving outcomes for this group will require that special attention be paid to improving the skills and educational attainments of SC and ST workers, on the one hand, and promoting policies to enhance micro-credit, self-help groups, and small businesses among these groups, on the other.

## **HOW CAN POLICY AND INSTITUTIONAL REFORMS HELP MEET THE EMPLOYMENT CHALLENGE?**

### **Regulatory Reforms to Sustain Growth and Create Jobs**

India enjoyed a robust rate of economic growth in the 1990s but its pattern of growth was atypical of the experience of most developing countries. Since the mid-1990s, growth was led by the services sector, with the share of manufacturing value-added and other jobs remaining largely stagnant. Even within manufacturing, job growth took place mostly in the informal sector. While there has been an upsurge in formal manufacturing growth and exports since 2004, it is marked by the use of relatively skill-intensive labour; unskilled labour is used less intensively. This raises the issue: can India leapfrog the labour-intensive manufacturing stage and follow

the growth path of an upper middle-income, or even rich, industrialized, developed economy which is based on skill-intensive services and manufacturing? It is unclear whether India's human capital and infrastructure are adequately developed to sustain such a pattern of growth. Already, virtually all sectors of the economy are experiencing shortage of talent. According to a McKinsey survey, the biggest concerns of 81 per cent of Indian managers are the availability of talent and high wages.<sup>22</sup> A second issue is that such a growth pattern will only have a muted impact on poverty because the country will be unable to provide good jobs to the 90 per cent of workers who have not completed secondary education. This could exacerbate inequality among the 'two Indias' and among India's regions by concentrating growth in relatively better developed areas that already have a more skilled labour force and better infrastructure.

Adjusting India's pattern of growth to make it more employment intensive, without lowering productivity, would require addressing some overall policy reform issues. First, reforms are needed to improve the investment climate in the country and do away with factors that currently dampen investment, productivity, growth, and job creation. The following positive measures would help considerably: better provision of law and order, protection of property rights, corruption control, improvements in policy and tax administration, investment in infrastructure in a sustained manner, and increased access to finance.<sup>23</sup> The cost of most infrastructure services is estimated to be 50–100 per cent higher in India than in China and is a particularly binding constraint. Second, in agriculture, pricing and subsidy policies that bias incentives against labour-intensive crops and cropping practices (for example, horticulture and irrigated farm-based cereals) will need to be addressed. Third, manufacturing and tertiary sector regulations,

such as the small and medium enterprises (SMEs) reservation policies, constrain factor mobility (of capital, land, and labour) by raising barriers against entry, exit, and trade, and dampen investment and competition. However, analysis suggests that even after accounting for the dampening effect of all these elements, reforming specific labour market regulations and policies which currently have an anti-labour bias, and making active labour market policies more effective, will generate growth and job creation.

As in all countries, labour market regulations are necessary to address important market failures and to protect workers. However, India's labour regulations are unusually complex. There are currently 47 central laws and 157 state regulations that directly affect labour markets. These are often inconsistent and, at times, overlapping. It is impossible for both firms and workers to be aware of their rights and obligations when rules and regulations are spread over numerous national and state-level Acts. There are also other issues. One of the major pieces of legislation, the IDA, creates incentives for adjudication rather than reconciliation, and has caused an overloading of the disputes resolution system. To illustrate, in 2001, about 533,000 labour disputes were pending; over 28,000 had been pending for more than 10 years. Other clauses in the IDA make retrenchment and layoffs (necessary at times because of changing market conditions) costly, and hinder the closure of firms with more than 100 workers. This makes firms more reluctant to hire in the first place. It also prevents firms from redeploying resources from less efficient activities and firms to more efficient activities and firms. Finally, there is ambiguity and uncertainty surrounding the Contract Labour (Regulation and Abolition) Act. Contract labour has become increasingly important in recent years because it provides firms some flexibility to hire and fire.

The cost of these labour regulations is significant in terms of formal sector jobs lost. The research for this study, which tried to measure both de jure and de facto applications of the IDA, showed that manufacturing value-added, employment, and the number of factories were all adversely affected in states with more restrictive labour laws. Our conservative estimates, based on studying both de jure and de facto differences in labour regulations across states, suggest that India failed to create about 2.8 million formal manufacturing jobs because of just two clauses in the IDA per se. Stated differently, the cost of these two clauses alone is about 45 per cent of all current formal manufacturing jobs. Although the cost (in terms of number of jobs lost) can be distributed almost equally between the 'disputes' clause and the 'retrenchment barriers' clause of the IDA, the two clauses affect different sectors in different ways. While dispute-related regulations cost more jobs in capital-intensive industries, retrenchment-related regulations affect labour-intensive industries adversely. The retrenchment clause is also related to job losses in more states.

Two overall goals can help make the reform of labour market regulations in India more effective: One, simplifying regulations, with special emphasis on improving industrial relations, smoothening dispute resolutions, and removing ambiguity and uncertainty. Two, reducing the rigidities in labour markets. Specifically, four main types of reforms are called for: (i) consolidating and simplifying labour laws from the current 47 central laws to about four—these should cover the main themes of dispute resolution, conditions of work and welfare, wages and benefits, and social security; (ii) modernizing the IDA to reduce the bias towards adjudication in disputes and increasing the flexibility for employers to hire and fire in a way that also protects workers' rights; (iii) resolving ambiguities concerning the Contract Labour (Regulation and Abolition) Act

to introduce greater flexibility; and (iv) improving the labour law enforcement and inspection system. The study provides detailed recommendations towards this end. There will also be benefits from simplifying India's complex maze of minimum wage laws wherein states have to administer 40 or so types of minimum wages. However, minimum wages, even in their present form, can be beneficial: while a large share of workers still gets wages lower than the minimum wages, the minimum wage laws can create a 'lighthouse effect' by clustering workers' wages around the states' minimum wages. As the affected workers are generally poor, and since minimum wages do not appear to affect unemployment rates, the minimum wages may actually be increasing the earnings and welfare of poor households.

### **Active Labour Market Policies to Help Workers**

Regulatory reforms will be more effective if they are complemented with programmes that help workers obtain more marketable skills and some protection against unemployment. At present, the vast majority of workers who are in the informal sector receive neither. Major government interventions, in the form of employment generation through public works programmes and social insurance, are limited in coverage and mostly ineffective. These programmes are burdened by problems of poor accountability, uneven implementation, and high costs. However, some promising initiatives for the protection and security of the poor and vulnerable in the labour market are under way. These include: expanding special employment programmes for poor and less-skilled workers, widening social security and insurance programmes to include informal sector workers, seeking private sector participation in employment exchanges to make them more effective in matching employers and workers, and strengthening programmes that increase workers' skills and competencies.

The first initiative, the National Rural Employment Guarantee (NREG) Act, will potentially provide more protection to workers. The Act guarantees every rural household up to 100 days' employment per year at the agricultural minimum wage set by each state, financed mostly by the Central government. Coverage is initially to be confined to 200 backward districts, with nationwide coverage of all rural areas within five years. Analysis of the NREG Act to date suggests a mixed picture of costs and benefits. First, there is significant potential for a lean season Employment Guarantee Scheme (EGS). Simulations of a nationwide 100-day employment guarantee programme suggest that the lean season rural poverty rate can be reduced from 37 per cent to around 23 per cent, or around 30 per cent on a year-round basis (Murgai and Ravallion 2005). The fiscal cost would be around 1.7 per cent of GDP annually, if implemented nationally. The gains would be progressive, with the poorest (richest) quintiles accounting for 29 (10) per cent of participants, and gains from EGS coming to 51 (7) per cent of pre-EGS consumption levels. The bulk of expected participants would be casual labourers.

The design and implementation of the NREG Act need to be further refined to ensure that it is effective and equitable. An area of concern is the use of state agricultural minimum wage rates as the scheme wage rates, as the former are above market rates. This typically results in rationing (fewer jobs made available), lowering the employment generation impact, which the experience from the Maharashtra EGS confirms also applies to 'guarantees'. The direct transfer impact of the NREG is significantly less than an untargeted transfer due to the opportunity costs of participation. An untargeted transfer, using the wage portion of the NREG only, would reduce poverty to around 15 per cent—as against 23 per cent from NREG. While the comparison

is imperfect—as it measures only the transfer impact of NREG and not other economic impacts—non-transfer gains from EGS would need to be substantial to be larger than those from untargeted transfers. This point highlights the importance of achieving significant economic returns to EGS assets and the poor to capture a reasonable share of the gains.

A shortcoming of previous public works programmes in India (and internationally) has been the absence of evaluation of the economic impact of assets. While the NREG scheme benefits from a stronger monitoring and evaluation (M&E) system than previous works schemes, in order to expand the system of concurrent evaluation to include robust impact evaluation it will be critical to collect good baseline data prior to the commencement of the scheme. Another significant improvement in NREG over previous works schemes is the strengthened role of local governments or panchayats in design, implementation, and monitoring. However, it will be important to develop accountability mechanisms which avoid the bundling of functions to specific agencies (in particular the District Rural Development Agency), which has contributed to implementation problems in previous schemes. It also remains to be seen if the incentive and accountability structures ensure that gram panchayats (governing councils in villages) are at the heart of NREG. A key component of such a programme will be social insurance. Currently, the spending on this is low and the implementation concentrated. Another issue is that the Act offers limited guidance on funds-flow mechanisms. If panchayats are to be empowered, it is important for them to have direct control over a portion of scheme funds. The initial findings about the experience of the NREG in the first two years highlighting its highly uneven implementation across different states,

has only served to emphasize the importance of strengthening the monitoring and accountability systems discussed here.

The second initiative is to move from employment programme-type safety nets towards a more comprehensive system of social protection. Past attempts at the national level to increase coverage in the unorganized sector, where most of the workforce is concentrated, failed to achieve any significant penetration. While expanding social security in the unorganized sector is important, experimenting with different schemes is not without cost either. Future efforts should thus be based on a critical evaluation of existing initiatives, some of which show promise. Two types of insurance that stand out as somewhat more easy to expand are life insurance (for which demand in the commercial market already appears high among unorganized sector workers) and disability insurance (which acts in one sense as the most extreme form of curative health insurance). Past experience suggests a cautious and gradual approach to the expansion of social insurance coverage. Although such a strategy may not be consistent with the political desire for broad-based schemes which have high announcement value, the financial costs of a poorly-designed and rapidly expanded programme can be high, as can the cost of raising expectations and failing to meet them.

The third initiative, enhancing the performance of India's largely ineffective government-run employment exchanges (EEs), has started in some states. As of end-2004, there were 947 regular EEs in India, concentrated in urban areas—with some 5.3 million registered job seekers, 300,000 listed vacancies, and only about 160,000 workers placed through the exchanges.<sup>24</sup> Apart from their placement function, exchanges are tasked with providing job counselling, training, labour

market information collection and dissemination, aptitude testing of job seekers, and promotion of self-employment through special cells. The limited assessments that are available suggest that in the large majority of exchanges these functions are performed poorly, often by staff who do not have skills and knowledge of local labour markets to allow for effective service. This performance was reflected in the sharp decline in both registered vacancies and placements between 1991 and 2001. The placement rate at the all-India level, never more than 5 per cent, declined to almost 3 per cent in the 1990s. While the overall picture is not encouraging, other states can draw from emerging good practices in two Indian states: Gujarat and Tamil Nadu. Both have expanded the role of IT in increasing outreach to jobseekers and employers. In particular, they are able to offer detailed information on jobseekers which employers can sort according to their needs.

There is a fundamental need to reorient the National Employment Service (NES) if it is to regain relevance in the current labour market. As some government committees have noted,<sup>25</sup> there is a need to focus on functions that address the most important market failures. These include: (i) the labour market information function which has been generally neglected. Timely information on trends in local labour markets can provide value to both employers and jobseekers; (ii) developing a service orientation by engaging more intensively with employers and groups such as trade unions and worker associations, to assess their needs which cannot be met by private sector providers (these methods are already pursued by private employment agencies through interaction with the human resource [HR] divisions of firms); (iii) considering whether some functions of the exchanges should be discontinued altogether. For example, some exchanges operate small credit schemes for jobseekers who want to pursue self-employment—the results to date have been poor

(for example, in West Bengal); and (iv) developing effective rural outreach strategies for the NES at the national and state levels. This may not involve a physical network of more exchanges but perhaps a combination of IT-based information services and collaboration with arms of state governments that already have rural networks in place. Some state employment services, such as the ones in Gujarat and Tamil Nadu, already provide good models for increasing effectiveness by expanding the role of IT in outreach, offering detailed information on jobseekers, arranging job fairs where jobseekers and employers engage directly, and strengthening job counselling functions which in most exchanges are desultory. A particularly interesting initiative in Gujarat is the *Rojgar Sahay Kendra* which links a group of non-governmental organizations (NGOs) that have knowledge of local job markets with the EE jobseeker database, and intermediates between employers and jobseekers.

The fourth initiative is enhancing the skills and education of workers by reorienting the vocational education and training (VET) system which is currently not serving the economy's needs. This is especially important in a country like India where a large part of the workforce is stuck in agriculture, without the skills to transit to more productive employment in other sectors. It is also important, given that 8 million children drop out from secondary schools (between grades VI and XII) every year. At present, the 6,800 VET schools, almost all in the public sector, enrol less than 3 per cent of students at the upper secondary level. Also, while these schools offer a total of over 100 courses in various areas—agriculture, business and commerce, humanities, engineering and technology, home science, and health and para-medical skills—only 40 per cent of the available seats are utilized. Programmes operated by the Industrial Training Institutes (ITIs) and Industrial Training Centres (ITCs) to provide certificate-

level crafts training also meet with only limited success. A study by the Operational Research Group reported that only 28 per cent of graduates of vocational education were gainfully employed. A 2003 International Labour Organization (ILO) study found that none of the states covered by the study had more than 50 per cent of the ITI/ITC graduates find wage employment, or become self-employed, or even work in family businesses.<sup>26</sup> At the same time, employers in these states reported experiencing problems finding employees with the right skills, implying that the graduates did not meet employers' needs (Dar 2006). A survey by the Federation of Indian Chambers of Commerce and Industry (FICCI) in late 2001 (FICCI 2002) also reported that 87 per cent of industry respondents felt that VET institutions should have greater exposure to industrial practices.

Most significant, however, is the fact that current VET programmes do not meet the training needs of the large workforce in the informal sector, arguably the group which should be its main target. Because of its entry requirements and geographical mapping, the formal training system of VETs is not designed to offer skills to people with little or no education, and particularly not to those in the rural non-farm sectors.<sup>27</sup> There are no other providers who fill this gap either. Most workers continue to learn trades on the job, through informal apprenticeships at their place of work, from other low-skilled crafts people. International experience suggests that employers look for young workers who possess the basic skills taught in primary and general secondary education, and not workers trained in narrow vocational skills. This highlights the importance of enhancing secondary education, an area where India is still lagging.

Two principles should guide reforms intended to improve the employability of VET graduates and the secondary-age cohort in general. First,

international experience suggests that there are few successful models of vocational education at the secondary school level. It is, therefore, more advisable to focus attention on strengthening the secondary education programme rather than expanding the vocational education programme. Second, as far as technical education is concerned, VET management, curricula, and instruction will need to be restructured by introducing public-private partnerships. Reforms would also require a clear demarcation between the functions of Central and state governments and the development of effective coordination mechanisms between them. Significant involvement by employers in the decision-making processes of VETs is also critical to ensure that the system is responsive to market demands. Another way to increase incentives would be to give the institutions greater autonomy in terms of deciding on training programmes, hiring and firing of teachers, and generating revenues by selling goods and services. Finding the right role for the public sector in training is critical. State-sponsored training may be used to address equity issues or market failures (for example, providing training for informal sector workers or addressing the externalities or spillover affects created due to training by firms) but may be less needed when private capacity exists.

The main emphasis on improving workers' skills will have to be in the form of expanding secondary education. Worldwide, in response to globalization and the emergence of the knowledge economy, the importance of secondary education is being recognized for preparing young people for lifelong learning. A variety of research suggests that in India also, returns to education jump at the secondary and post-secondary levels. Yet, while government policies have helped raise the enrolment rate for elementary schooling to 94 per cent, no such increase has taken place at the secondary level. While secondary school enrolment currently stands at 54 per cent, less

than 10 per cent of the working-age population aged 25 and above has completed secondary and post-secondary education. This number is low, relative to what international experience suggests should be at India's income level. A variety of supply- and demand-side interventions are needed to expand access to secondary education.<sup>28</sup> Improving the skills of future workers requires expanding access to secondary education and also improving its quality. More directly relevant for employment are curricula reforms to imbue students with more problem-solving and entrepreneurial skills of the kind that employers seek. At the same time, it must be kept in mind that education also raises workers' expectations; efforts to raise the educational level of the labour force must be matched with efforts to increase the availability of the kind of jobs these workers will demand.

## NOTES

1. The 1990s refer to the period 1993–2000, that is, the period between the 50th Round National Sample Survey (NSS) and the 55th Round NSS. The 1980s refer to the period 1983–93 which corresponds to two other NSS Rounds. See Box 1.2 in Chapter 1 for more details on data sources.
2. The data used throughout this report refers to the Usual Principal and Subsidiary Status (UPSS) definition of employment measures (see Box 1.1 in Chapter 1 for details), unless specifically noted otherwise.
3. See Table 1.1 in Chapter 1.
4. The 2.8 per cent unemployment rate, sometimes referred to as the 'open unemployment rate', is long-term in nature because it refers to persons who have been searching for or have been available for jobs for most of the year prior to the survey. But in keeping with the international definition of 'open unemployment rate'—persons who while searching for a job did not even work one hour a week—the actual unemployment rate is close to 5 per cent.
5. The Planning Commission Report on Employment (2002) estimates that 10 million jobs need to be generated annually in the economy; the estimated economic growth required to generate these is 8 per cent to above 10 per cent.
6. This re-estimate is based on applying NSS-based worker-to-population ratios to census-based age distribution of the population. Sundaram and Tendulkar (2006a) present these estimates in a background essay done for this report.
7. The number of working poor is the number of workers in households below the poverty line.
8. In that the share of regular workers remained stagnant or slightly declined, as did the share of self-employed workers in rural areas, while the share of casual workers increased from about 30 per cent to 33.4 per cent.
9. It is worth stressing though that this number only reflects paid child labour or child labour used to produce goods meant to be sold; it does not include the use of child labour for unpaid domestic work which may also be hazardous for child health.
10. See Box 1.2 in Chapter 1 for a discussion on data issues.
11. Estimates of the formal sector labour force vary from official estimates of 7 per cent, to other estimates of 11 per cent (Unni 2006). Some researchers (for example, Sundaram and Tendulkar [2006b], and also in this study) include all regular or salaried workers, who make up 16 per cent of the labour force, in the formal sector.
12. Informal sector firms have less access to formal credit.
13. The last major NSS survey in 2000 suggested agriculture's share was 59 per cent. The most recent NSS survey (2004–5) suggests a significant drop in agriculture's share to 53 per cent.
14. The revenue loss from accelerated depreciation allowance is estimated to be close to 0.8 per cent of GDP.
15. This refers to the 78 regions in the NSS which correspond loosely to agro-ecological areas.
16. Employment rate refers to the share of the population in the 15–59 age group that is employed.

- Participation rate refers to the share of the 15–59 working-age population that is working or unemployed, that is, looking for jobs.
17. While wages may converge, earnings—which depend on both wages and employment opportunities—may not, due to differences in employment opportunities.
  18. World Development Indicators.
  19. These estimates try to take into account the two-way relationship between employment and economic activity—that is, the two determine each other.
  20. The effect of household expenditures (which proxies household incomes) and spouses' earnings on female participation were separately estimated and found to be significant.
  21. 'Expected earnings' is defined as weekly earnings times the probability of finding a job.
  22. 'The Job Boom', *India Today*, 27 February 2006.
  23. These were key constraints identified by firms in the last investment climate survey conducted in India by the World Bank in 2003 (World Bank 2004a).
  24. Consolidated information on private placement agencies is not available but the Director General of Employment and Training (DGE&T) estimates that at least 800 existed as of the early 2000s (for example, there are estimated to be more than 100 in Gurgaon, Haryana, alone). India is not a signatory to the ILO Convention 1996 on private employment agencies. Like the EEs, these are primarily concentrated in urban areas and in the formal sector, often with specific sectoral focus.
  25. The 1978 Matthew Committee and, subsequently, the Working Group on Employment of the Planning Commission, 2001.
  26. However, there were significant inter-state differences: in Andhra Pradesh, unemployment ranged from 33 per cent for ITI graduates to more than 70 per cent for ITC graduates, while in Maharashtra it was around 23 per cent and 27 per cent respectively.
  27. While one of the mandates of the ITIs is to train workers for the informal sector, evidence shows this is rarely the case (Dar 2006).
  28. See, for instance, Wu (2005).

# 1

## Overview and Labour Market Trends

Indian policymakers have stated as their goal the provision of 'gainful and high-quality employment to at least the additions to the labour force'. In a country where the working age population is expected to grow by about 12 million persons, or close to 2 per cent, annually, till the year 2016, this constitutes a major challenge. Further, the deceleration in job growth in the 1990s, at a time when the economy grew at 6 per cent per annum, raised concerns about India witnessing 'jobless growth'. This chapter argues that although labour market developments in the 1990s were not as poor as is generally perceived and employment growth picked up subsequently, India still faces formidable employment challenges. Labour supply continues to exceed labour demand and unemployment has grown by most measures. While a significant part of the labour force continues to shift out of low productivity jobs in the agricultural sector to better paying jobs, mainly in the tertiary sector, the bulk of it is still employed in casual jobs. Encouragingly, labour productivity and wages have risen and the number of working poor has declined. But, at the same time, the inequality in earnings is more marked because wage growth has been more rapid among high wage earners. The challenge facing India now is to provide employment to a growing, more educated, and young labour force, improve job quality in the informal sector, expand the formal sector, and address regional disparities in labour market outcomes.

### INTRODUCTION

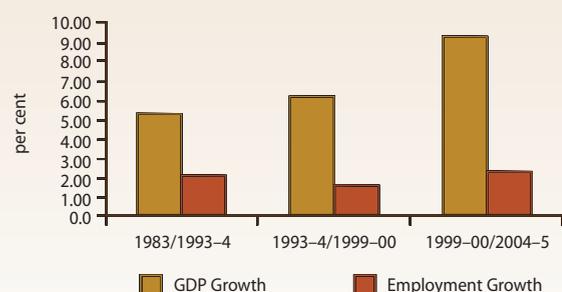
Indian policymakers have stated as their goal the provision of gainful and high-quality employment to at least the additions to the labour force. This is already a major task in a country where the working age population will increase by more than 12 million persons each year over the next decade. Approximately 8 million people will enter the labour force annually. This number will be even higher if India's low female employment participation rate increases.<sup>1</sup> In the 1990s,<sup>2</sup> against similar employment needs, the economy produced only about 5.3 million jobs on average each year. This number, based on the National Sample Survey (NSS) 55th Round Employment–Unemployment Survey (July 1999 to June

2000), reflected the substantial slowdown in workforce growth during the 1990s (relative to the 1980s) and caused much concern. Estimates by India's Planning Commission (2001a) show that employment growth halved from 2 per cent per annum in the 1983/93–4 period to about 0.98 per cent per annum in the 1993–4/1999–2000 period. This happened despite robust economic growth, implying a declining employment elasticity of growth (Figure 1.1). More recent

data for 2004–5 suggests that while the overall employment growth rate in recent years has been almost double of what it was in the 1990s, it is still only just managing to keep pace with labour supply (Table 1.1). Tellingly, the unemployment rate increased from 7.2 per cent in 1999–2000 to 8.3 per cent in 2004–5.<sup>3</sup>

India faces an employment opportunity as well as an employment challenge. The opportunity comes from the fact that the working age population is largely young and will continue to grow at the rate of 2 per cent per annum over the next decade, even as the dependency ratio (the ratio of dependents to workers in a household) drops significantly.<sup>4</sup> The challenge will be to train and educate these workers and provide them with productive jobs. This will require a significant acceleration in job creation, compared to the 1990s, over the next decade. In turn, this will require not just robust economic growth but a change in the pattern of growth which will need to become more labour intensive. At the same time, growth in productivity cannot be sacrificed

**Figure 1.1 GDP and Employment Growth in India**



Source: CSO, NSS.

Notes: Employment is measured using the UPSS concept. See Box 1.1 for explanation of UPSS and other labour market terms used in this report.

Estimates from NSS surveys adjusted by population census.

**Table 1.1 Population and Labour Force (in millions, UPSS)**

	1983	1993–4	1999–2000	2004–5
Total population	719.6	894.2	1,005.3	1,093
Population, age group 15–59	387	517.5	580.2	623.0
Male	196.4	264.9	295.9	322.8
Female	190.5	252.5	284.4	300.2
Labour Force (UPSS)*, 15–59	270.6	335.8	370	412.9
Male	181.8	228.8	257.1	280.4
Female	88.8	107	112.9	132.5
Workforce (UPSS)*, 15–59	265	328.5	360.9	402.1
Male	177.4	223.4	250.1	273.5
Female	87.7	105	110.7	128.6
Unemployment Rate per cent (CDS)*	8.4	6.0	7.3	8.3
Unemployment Rate per cent (CWS)*				
- Rural Male	3.7	3	3.9	3.8
- Rural Female	4.3	3	3.7	4.2
- Urban Male	6.7	5.2	5.6	5.2
- Urban Female	7.5	8.4	7.3	9

Sources: Sundaram and Tendulkar (2006a); Bank staff estimates for 2004–5 using NSS.

Note: \*See Box 1.1 for definitions of UPSS, CWS, and CDS. The definition of 'workers' corresponds to UPSS, unless otherwise specified.

either. Achieving annual economic growth rates of between 8 and 10 per cent to bridge the employment gap, as is being currently discussed, will require that labour productivity also grow by 6 to 8 per cent per annum.<sup>5</sup>

However, simply creating more jobs will not be enough; concerns about the quality of jobs have to be addressed. In the 1990s, relatively few jobs were created in the better paying, more productive 'organized sector',<sup>6</sup> which is the sector of choice for Indian workers, especially for the educated. Employment in this sector grew by only 0.5 per cent annually from 1994 to 2000. Most jobs were created in the unorganized sector where employment grew by 1.1 per cent annually but where productivity is several times lower than in the organized sector. Data on labour market trends between 2000 and 2004–5 shows that this pattern has continued; the share of regular salaried jobs in overall jobs has remained virtually unchanged. Another issue is that within the unorganized sector, the share of casual wage employment is above 30 per cent. Casual workers are at the bottom of the employment scale—they get lower wages, have uncertain employment prospects with few benefits or pension arrangements, and are beyond the reach of most laws designed to protect labour.

The pace of transformation of India's economy has picked up in recent years. Economic development in India, from the 1950s to the present, is broadly consistent with the experience of other countries in that the share of agriculture in the gross domestic product (GDP) declined from around 60 per cent in 1950–1 to less than 25 per cent now. However, in some other respects, India's pattern of structural change varied from that of most other developing countries. First, most of the increase in economic activity took place in services, which now account for more than 50 per cent of GDP. While the share of industry increased from 13 per

cent to around a quarter of GDP, manufacturing's share increased minimally and now accounts for less than 15 per cent of GDP, much lower than in other developing countries. Second, most of the increase in services and industrial value added took place in relatively skill-intensive and capital-intensive sectors, and less in labour-intensive industries. The pace of transformation accelerated since the 1990s when India's largely closed and regulated economy started liberalizing to become more open and competitive. While it took 40 years for the share of agriculture to decline 25 percentage points to 35 per cent in 1990–1, it fell a further 11 percentage points between 1990–1 and 2003–4. Similarly, the share of services in GDP increased by 12 percentage points between 1950–1 and 1990–1, and a further 11 per cent in just the next 13 years. Surprisingly, the share of industry and manufacturing remained largely unchanged through the 1990s.<sup>7</sup>

India's employment pattern changed less rapidly, leading to large differences in labour productivity across sectors, as shown in the following. Along with the changing structure of the economy, there was a shift of workers employed in agriculture to more productive jobs, primarily in the services sector. However, this shift in labour, in relation to the decline in GDP share, was slower in India than in other Asian countries. Also, while in most Asian countries the share of services in GDP and employment grew at a more or less similar rate, in India the share of services in employment grew at a much slower rate than the share of services in GDP. For example, in China, Thailand, Indonesia, Philippines, Korea, and Malaysia, the share of the services sector in employment increased at a faster rate than its share in GDP. But in India the share of services in GDP went up by 22 per cent between 1960 and 2002, while its share in employment increased by only 7 per cent during the same period (Papola 2005). Consequently, most of the growth came from increases in labour

productivity rather than increases in employment. Growth, in both value added and wages, was especially rapid in state-of-the-art information technology (IT) and information technology enabled services (ITES), the financial sector, and in capital- and skill-intensive manufacturing sectors such as chemicals.

This chapter examines important labour market trends and developments in India since the early 1980s. It discusses trends in labour supply and employment, wage and productivity growth, and employment and underemployment (Table 1.1). It shows that labour market outcomes in the 1990s were not as poor as is commonly perceived.

Although employment growth declined in the 1990s, the slowdown was more moderate than what was indicated by official estimates. In large part, the slowdown was the result of a decline in ‘subsidiary’ employment, especially among women.<sup>8</sup> The decline in female labour force participation may have been partly voluntary and partly due to rising incomes of spouses and/or other household members. At the same time, large numbers of the workforce shifted out of low productivity jobs and entered higher productivity sectors. There was robust growth in labour productivity and also, even though unequally, in wages and earnings. This enabled many more workers to move out of poverty.

#### **Box 1.1 Definition of Key Labour Market Terms Used in India and in this Report**

*Labour Force:* This includes all people who spent the year preceding the employment survey either engaged in work or seeking/being available for employment. Given that the large majority of Indian workers are engaged in casual or self-employed jobs, the NSS uses various definitions to classify the labour force, workers, and the unemployed. These include:

*Principal Status Workers:* A worker’s principal status is determined by the activity the worker spent most of his time doing in the reference period (the last 365 days). Usual Principal Status (UPS) workers are those who spent most of their time employed in their principal activity or looking for jobs.

*Subsidiary Status Workers:* Any activity other than the principal status constitutes a worker’s subsidiary status. Subsidiary status labourers/workers are those who did not have a principal activity in the preceding 365 days but spent at least some of their time employed in a subsidiary activity.

*Employed Workers in Usual Principal and Subsidiary Status (UPSS):* Workers are classified as being employed in the principal status (UPS) if they spent a majority of their time in the preceding year engaged in gainful economic activity. Sometimes, subsidiary workers are included in this category to determine total employment on principal and subsidiary status, that is, Usual Principal and Subsidiary Status (UPSS). This category includes salaried workers, workers in household enterprises (including unpaid workers), and casual workers. Since household enterprises often employ family members who are unable to find gainful employment elsewhere, employment figures can hide substantial amounts of underemployment. Unless mentioned otherwise, most of the analyses in this report are based on the UPSS definition of labourers and workers.

*Workers in Current Weekly Activity Status (CWS):* The current weekly activity status of a person is the activity status obtained for a person during the reference period of seven days preceding the date of survey. A person is considered working (or employed) if he/she, while pursuing any economic activity, has worked for at least one hour on at least one day during the seven days preceding the date of survey.

*Workers in Current Daily Activity Status (CDS):* The current daily activity status for a person is determined on the basis of his/her activity status on each day of the reference week preceding the survey. A person

## Box 1.1 (continued)

is considered to be employed if he/she has been employed for four hours on any one day of the week preceding the survey.

*Unemployed Workers:* The unemployed category includes people who sought work but did not find it during: the major part of the previous year (UPS), or major or minor part of the year (UPSS), or in the week preceding the survey (CWS). Unemployment can also be defined in man-days, that is, the number of days (measured in half days) a person was not employed in the week preceding the survey.

*Regular Workers, Casual Workers, and Self-employed Workers:* These are defined based on the responses by surveyed workers to the relevant NSS questions.

*Prime-Age Workers:* Workers in the 15–59 age group.

*Labour Force:* Prime-age employed and unemployed workers. This group is the unit of analysis for this report unless mentioned otherwise.

*Employment Rate:* The ratio of workers to the population in the same age group. For the most part, employment rate refers to the employment rate of the prime-age group as defined by UPSS.

*Unemployment Rate:* The ratio of prime-age unemployed workers to the labour force (that is, prime-age employed and unemployed workers).

Source: NSS manuals; Bank staff.

Despite increases in wages and productivity, India faces significant employment challenges ahead. The most important challenge is to accelerate job growth. Employment has barely kept pace with increases in the labour force and unemployment is growing. There is some evidence, presented later, that the absence of employment opportunities led to potential workers opting out of the labour force. Thus, starting with a backlog of some 30 million unemployed or discouraged workers, added to a rapidly growing labour force which has rising expectations as well as skill levels, the demand for good jobs has grown and continues to accelerate.

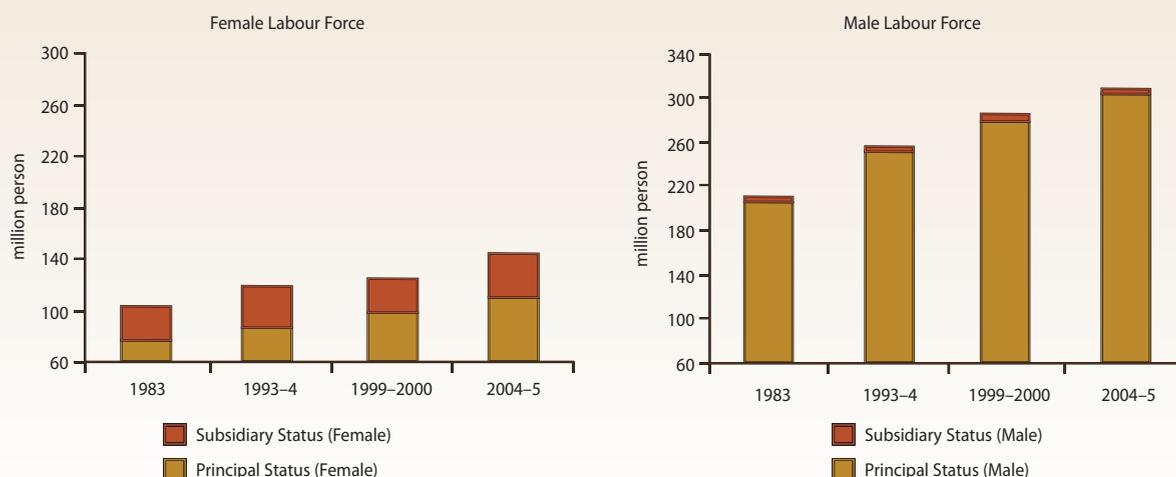
### TRENDS IN LABOUR SUPPLY

In 2004, the prime-age labour force (15 to 59 years) stood at about 413 million.<sup>9</sup> About 75 per cent of the labour force lived in rural areas. Female workers constituted about 32 per cent of the total labour force. The main sources of labour market data and the issues concerning this data are presented in Box 1.2.

While India's male employment participation rates are roughly comparable to those in other countries, female employment participation rates are low and display wide regional variations. This may reflect, in part, a preferred division of labour within the family, with women responsible for activities inside the household and men responsible for outside work.<sup>10</sup> For females, participation in economic activity is often a subsidiary or occasional activity, while for males it is usually the principal activity (Figure 1.2). Not only is the labour force participation of Indian women low, it has been virtually stagnant since the 1980s.

Labour force growth decelerated in the 1990s but less so than official estimates suggest. The Planning Commission (2001b) estimated (based on the UPSS definition) that labour force growth declined sharply from 2.05 per cent per annum between 1983 and 1993–4, to 1.03 per cent per annum between 1993–4 and 1999–2000. However, other research suggests that this appearance of a

**Figure 1.2 Indian Labour Force (in millions)**



Source: Sundaram and Tendulkar (2006a); Staff estimates using NSS.

sharp slowdown may be the result of survey-based age distribution in the national sample; more reliable distribution emerges from the population census. Correcting for the difference moderates the slowdown—from about 1.8 per cent per annum to 1.4 per cent (Sundaram and Tendulkar 2006a). A substantial amount of the slowdown in labour force growth can be attributed to the withdrawal by subsidiary workers from the labour force (Figure 1.2). Supporting evidence for this comes from Mazumdar and Sarkar (2006a) who point out that the decline in employment participation rates in the 1990s was smaller for principal status workers and larger for subsidiary status workers—defined as underemployed workers or workers who were not employed for most of the past year. The subsequent period, till 2004–5, witnessed a reversal of this trend with the labour force growing by about 2.2 per cent per annum between 1999–2000 and 2004–5. Much of this growth was driven again by the growth in subsidiary workers. Thus, much of the volatility in labour force supply appears to be driven by this category.

The observed slowdown in employment participation in the 1990s was largely confined

to rural areas in general, and rural females engaged in subsidiary employment in particular. It is estimated that between 1983 and 1993, subsidiary workers accounted for less than 10 per cent of the total decline in employment participation. But this number increased to 30 per cent for males and 85 per cent for females between 1993 and 2000. However, if only those workers are included in the labour force for whom engaging (or trying to engage) in economic activity was a principal activity, the numbers show an entirely opposite trend: a slight acceleration of growth from 1.8 per cent to 1.9 per cent for the same periods.

There has been a steady and welcome decline in the number of children (less than 14 years of age) in the labour force. The number halved from a little over 22 million in 1983 to under 11 million in 1999–2000, and declined further to about 9 million in 2004–5. This decline in absolute numbers is all the more remarkable since it happened despite the rapid growth in child population. Rural India accounted for 93 per cent of the decline. This reduction in labour force participation rates for both rural males and rural females in the 10–14 age group is the welcome obverse side of a significant and beneficial rise in school participation rates

**Box 1.2 Labour Market Data in India**

The most comprehensive data source for national labour market data is the 'Household Employment–Unemployment Situation Survey' carried out by the National Sample Survey Organisation (NSSO). The NSSO first carried out this survey on an all-India basis in 1983. However, it did not repeat the exercise again till 1987–8. From then onwards, surveys have been carried out in one of two forms: a 'Thick' Round every five years and a 'Thin' Annual Round. The Thick Rounds are full-fledged surveys containing information on demographic particulars, activity status, and time disposition of all household members, along with other employment-related information. The Thin Rounds are canvassed as part of the 'demographic and other statistics' block in the Consumer Expenditure Survey schedule and contain information only on demographic attributes and employment status. Until the most recent Round, wage information was not collected.

An additional issue is that the annual Rounds are often not comparable to each other or to the quinquennial Round due to differences in the sampling frame. This is a result of the main focus of the annual survey not being the employment characteristics of households. Consequently, the level of non-sampling errors in the Thin Rounds is expected to be high. The Annual Rounds also canvass much smaller numbers of households. As a result, while sampling errors are not very large at the national level, at the individual state levels they are significantly larger. Consequently, reliable and comprehensive labour market information is available only once every five years.

Information on employment is also available from the population census which is carried out once every decade on an all-India basis. The census divides people into two main categories: workers and non-workers. Workers are further classified as main and marginal workers. A 'non-worker' is someone who has not worked at all in the year preceding the survey. A 'main worker' is someone who has worked for the major part of the reference period (that is, at least 183 days in the preceding year). A 'marginal worker' is one who worked for some time but for less than six months in the preceding year. Main and marginal workers together add up to form the workforce. In theory, there should be close coincidence between the workforce estimates as calculated from the census and by the NSS surveys. In practice, however, the differences are often significant. The advantage of using the census calculations is that the estimates are likely to be more reliable and are available at a much more disaggregated level than through the NSSO. The disadvantage is the infrequency of the exercise and the difficulty in comparing (especially in measuring unemployment) with the more frequent NSSO data.

This report draws on some recent work that combines census-based population weights with NSSO-collected participation and employment rates, to revise estimates of job and labour force growth trends. However, all other analyses are based on standard NSSO Thick Round data or Annual Survey of Industries (ASI) data (see the following).

The Annual Survey of Industries (ASI) is an indispensable source of employment information on the organized manufacturing sector. The ASI is the principal source of industrial statistics in India. This survey is conducted annually under the statutory provisions of the Collection of Statistics Act, 1953. It covers all factories employing 10 or more workers that use electricity, and those employing 20 or more workers that do not use electricity. Note, however, that this survey does not cover the informal sector and, therefore, excludes the major part of the workforce. Also, the primary unit of enumeration in the survey is an enterprise. Because of this reason, and because of the relatively limited universe for which information is collected, this data is again not directly comparable with NSSO figures.

The data from the office of the DGE&T provides sector-wise data on sub-categories within the 'organized' sector. This data is widely considered to be an underestimate (by up to 20 per cent) of formal private sector employment, including by the DGE&T itself, although the DGE&T considers the general trend of its data to be accurate. This report refers to DGE&T data but does not use it for analyses.

In brief, Indian labour data may need improvement along the following lines: (i) producing more reliable and frequent labour statistics at a geographically disaggregated level; (ii) increasing the frequency of collection of labour data to annual and, for a few key data, to a quarterly basis; (iii) improving collection of data on formal sector employment; (iv) collecting longitudinal data to support research; (v) improving comparability across datasets; and (vi) standardizing definitions of variables.

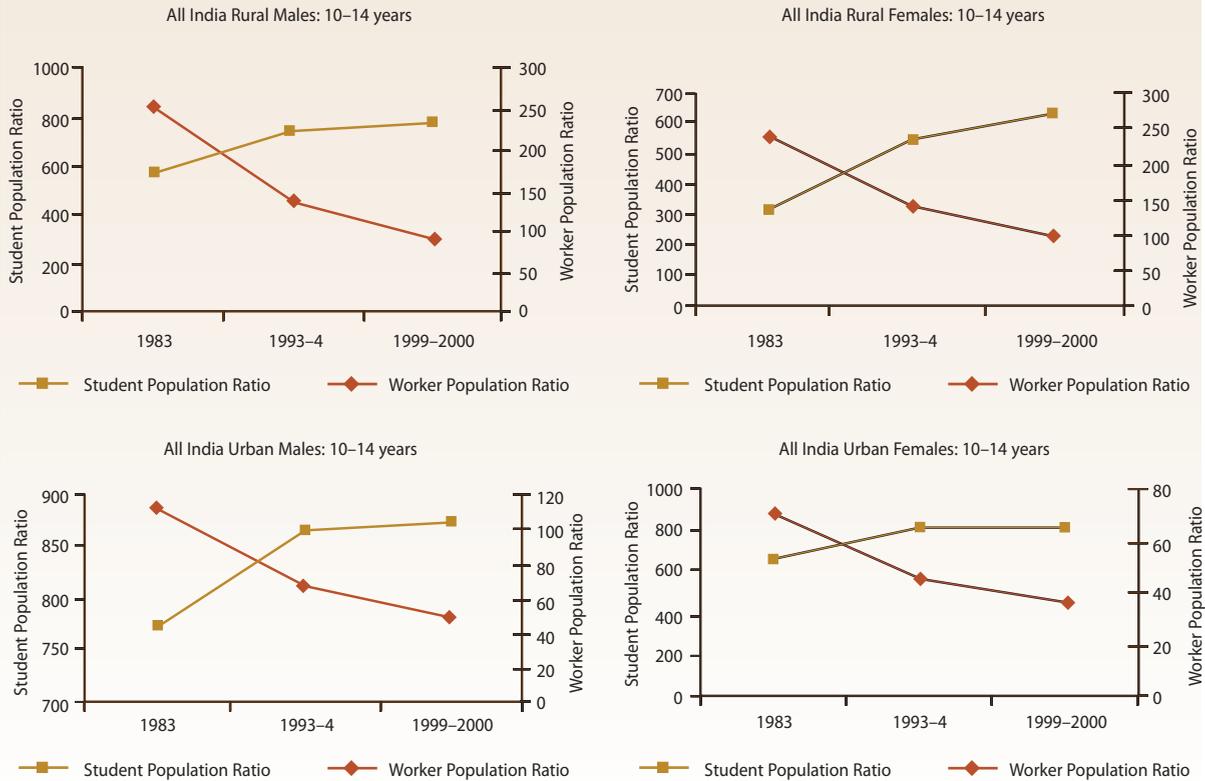
Sources: Ghose (2004); Sundaram and Tendulkar (2006a); Bank staff.

by children in the same age group: by 34 points for rural males and by a sizeable 89 points (per 1,000) for rural females (Figure 1.3). It is worth stressing though that this data only records paid child labour, or child labour for producing goods meant to be sold, and not the use of child labour for unpaid domestic work which can also be hazardous to children's health.

A major development in the 1990s was the withdrawal by workers, particularly females in rural areas, from the labour force. What caused this? Two explanations are usually advanced. The *first* is that there was a shift in activity status towards education, especially in the case of youth. The 1980s and 1990s saw a rapid increase in the student-to-worker population ratio in the 15–29 age group in both rural and urban areas (Figure 1.3). This may partly account for the lower employment participation. Interestingly, earlier studies among older age groups have noted that educated men are more likely to participate in the labour force. But for women, there is a significant decline in employment participation with higher levels of education. Also, rural women tend to face more of an 'education penalty' (that is, they are less likely to participate in the labour force if educated) than urban women (Das and Desai 2003). The *second* explanation is that rising income levels have an adverse impact on participation,

especially for women (Das and Desai 2003; Ahsan and Pagés 2006). The poor often have no alternative but to work to support their families. But rising income levels can potentially lead to a preference for either more leisure or home activity, particularly for women, which can lower employment participation rates. The experience of the United States during the post-World War II period also shows that labour force participation of married women rose when an increase in women's own wages trumped the negative effect of husbands' wages on labour force participation (Mincer [1962], cited in Blau [1998]). Analysis suggests that both these factors were important in India, though the impact of education was more significant in the 1980s than in the 1990s.<sup>11</sup>

Analysis suggests that another factor which lowered participation rates for principal status workers was 'discouragement' caused by lack of employment opportunities. Increase in unemployment rates lowered the probability of employment participation by both males and females. Evidence from national surveys suggests that for females, especially in rural areas, declines in participation on the principal status were closely related to worsening unemployment rates (Figure 1.4). Rising educational levels that led to unmet expectations of finding good jobs also played a role in discouraging workers, though

**Figure 1.3 All-India Worker Population Ratios and Student Population Ratios (Age Group 10–14 Years)**

Source: Sundaram and Tendulkar (2006b).

this effect was much smaller in magnitude. In India, the preferred occupation of the educated is non-manual regular jobs in the organized sector (Planning Commission 2001a). This is true even for workers who have received only middle-level education. When these aspirations cannot be met, some young workers may become discouraged and withdraw from the labour force. While these effects became less important in urban areas by the mid-1990s, they continued to be significant in rural areas. However, they were countered to some extent by rising per capita household expenditure levels. While this had little effect on male participation, it encouraged female participation on the principal status, except at the top end of the income scale.<sup>12</sup>

Evidence suggests that discouragement effects are strongest on the most vulnerable segments of the

population: female workers and youth. This is consistent with the experience of other countries which also suggests that high and persistent unemployment is accompanied by declines in labour force participation rates, as workers become discouraged by the lack of job opportunities and give up searching for jobs (World Bank 2005c). In India, women are especially vulnerable because social norms and inflexible working conditions restrict the range of jobs considered acceptable for them. This constrains their choices in the marketplace and makes them particularly vulnerable to tough employment conditions.<sup>13</sup> Women who do not enter the labour force work predominantly within the home.<sup>14</sup> Over 92 per cent of women doing domestic work say they do so from compulsion, and almost one-third of this number would like to be employed—primarily in part-time jobs. There is little variation in

these characteristics by educational level. Thus, a combination of norms that determine a woman's place as being in the home and lack of appropriate employment opportunities relegates a significant number of women out of the labour force.

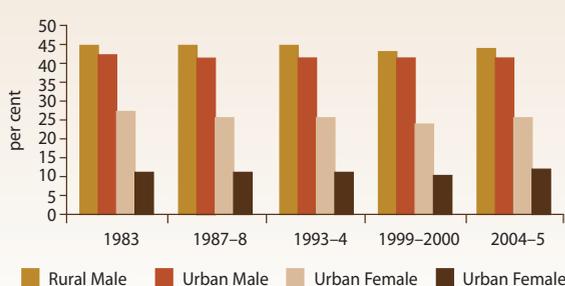
## EMPLOYMENT

Slow employment growth is a major concern for Indian policymakers. In the 1990s, despite fast economic growth, employment growth declined. Based on national surveys, the Planning Commission of India (2001a) estimated that employment growth in India declined sharply from about 2 per cent per annum between 1983 and 1993–4, to less than 1 per cent per year after that till 1999–2000. However, as noted in the previous section, these estimates were based on an underestimate of the actual size of the labour force. After correcting for this, the decline is more moderate—from 2.1 per cent per annum between 1983 and 1993–4 to about 1.6 per cent per annum between 1993–4 and 1999–2000. Even so, the slowdown, coming as it did at a time when GDP growth was sustained, became an issue of concern. However, recent estimates emerging from the latest NSS survey (2004–5) suggest that this dip was a temporary phenomenon; when considered over the longer term period of 1993–4 to 2004–5, employment growth was roughly the same as in the earlier period between 1983 and 1993–4. Still, the general slow growth in employment remains an area of concern. Employment growth has barely kept pace with the growth in labour supply and unemployment rates have risen. In fact, a part of the employment growth may even be supply driven. This is suggested by the observation that most of the employment growth has come from subsidiary and self-employed workers, while growth in principal workers has slowed down. Wage growth has also decelerated post-2000.

Low employment growth and participation rates are mirrored in a low employment rate,

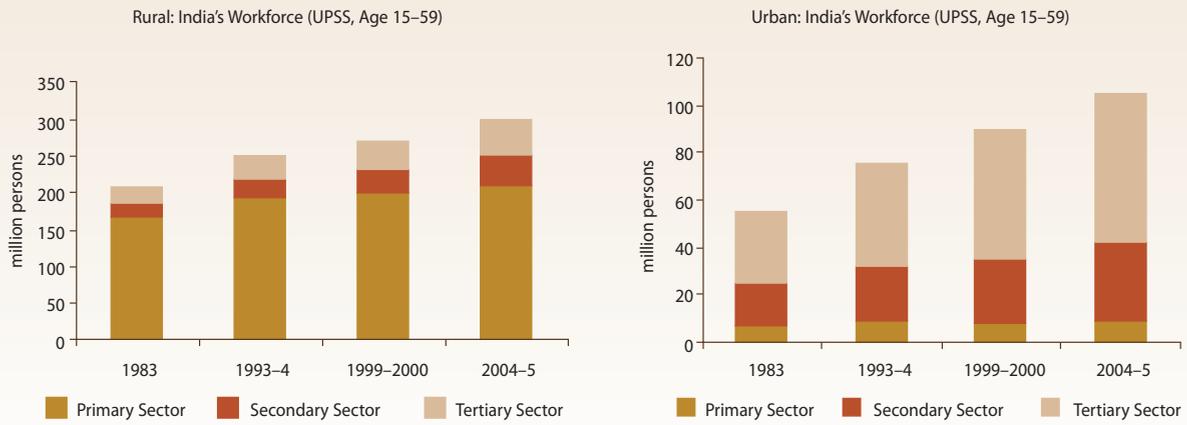
that is, the workers to working age population ratio. The decline in employment rates, even among the prime-age labour force, indicates the inability of the country to utilize its labour resources to support growth. Unless this trend is reversed, India will be unable to take advantage of its declining dependency ratio. A particularly important issue is the employment rate of females. Not only is the female employment rate, at less than 30 per cent, unusually low compared to other developing countries, it has also stagnated since 1987–8 (Figure 1.4).

**Figure 1.4 Worker to Population Ratios (UPSS)**



Sources: Sundaram and Tendulkar (2006a) and Staff estimates using NSS (2004–5).

Agriculture is still the largest employer, although it has declined in importance. In 2004–5, agriculture employed about 55 per cent of the total Indian workforce, or more than 207 million workers (Figure 1.5). In line with the changing structure of the economy, however, the share of the workforce employed in this sector fell during the 1990s. The decline in agriculture's employment share is evident from the share of agricultural and allied activities in incremental workforce absorption during the 1990s. This share declined from 44 per cent in the 1980s to about 30 per cent between 1999–2000 and 2004–5. On the whole, however, the shift away from agriculture was small in comparison to that experienced by other countries. The slower pace of shift away from the primary sector in rural areas indicates low levels of skills of

**Figure 1.5 Distribution of India's Workforce**

Sources: Sundaram and Tendulkar (2006b); Bank staff using NSS (2004-5).

Notes: Primary sector: agriculture and allied activities, and mining. Secondary sectors: industries and construction.

rural workers, resulting in their inability to obtain better jobs in the non-agricultural sectors (Chadha and Sahu 2002).<sup>15</sup> Consistent with this view, the shift from agriculture in rural areas is mainly into construction and manufacturing which usually employ workers who are illiterate or literate only at the primary level.

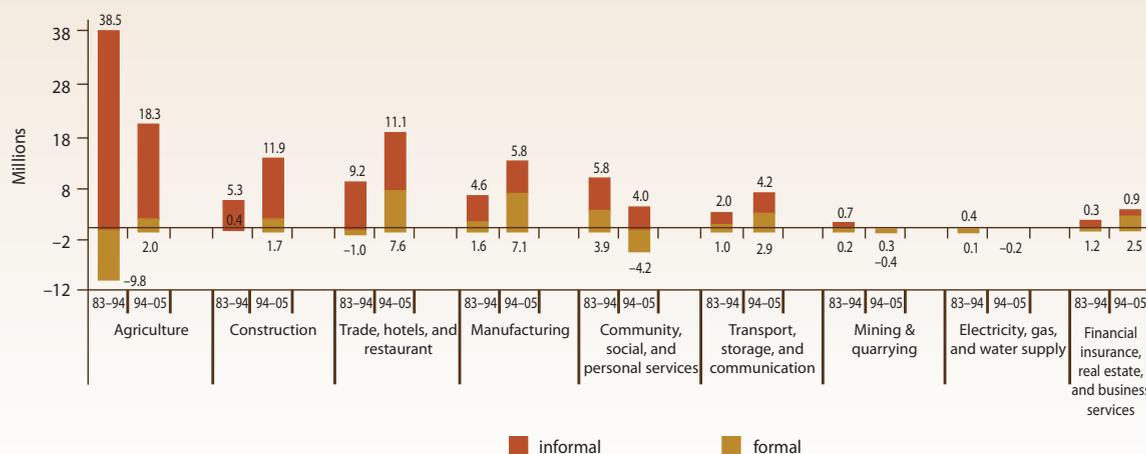
The decline in the share of agriculture in employment was offset mostly by gains in the services sector and, lately, in the secondary sector. In the 1980s, the 'personal, community, and business services', 'trade, hotels, and restaurants', and construction sectors made up for nearly 84 per cent of the decline in agricultural employment. In the 1990s, increase in the employment share of the last two sectors (hotels and restaurants, and construction) together balanced out three-fourths of the total decline in agricultural share. The biggest change in the new century, however, came from the growing importance of the secondary sector. Between 1999-2000 and 2004-5, manufacturing and construction together accounted for 40 per cent of all incremental employment.

The share of manufacturing in employment changed little over the past two decades. The

share of manufacturing in the total workforce stagnated at around 11 per cent in the 1990s, increasing only slightly to 12.5 per cent in 2004-5. This happened despite a rise in the average growth rate of the sector from 5.4 per cent per annum in the 1980s to 6.5 per cent per annum in the 1990s, and even faster since then (Appendix 1.5). Further, as discussed in more detail in the next chapter, most of the increase in manufacturing employment took place in very small-scale informal enterprises. The Indian experience was in marked contrast to the experience of other developing countries, especially those in East Asia, where manufacturing was the major source of employment for workers moving out of agriculture.

Compared to the 1980s, the 1990s saw more new jobs being created in middle productivity sectors (construction, trade, etc.). Figure 1.6 compares the deployment of annual increments to the workforce between the two periods, 1983 to 1993-4 and 1993-4 to 2004-5. Industry divisions are placed according to their gross value added (GVA) per worker. In terms of new employment generated in the 1990s, relative to the 1980s, there was a notably beneficial shift away from

**Figure 1.6 Sector-wise Deployment of Incremental Workforce (in millions)**



Source: Bank staff using NSS.

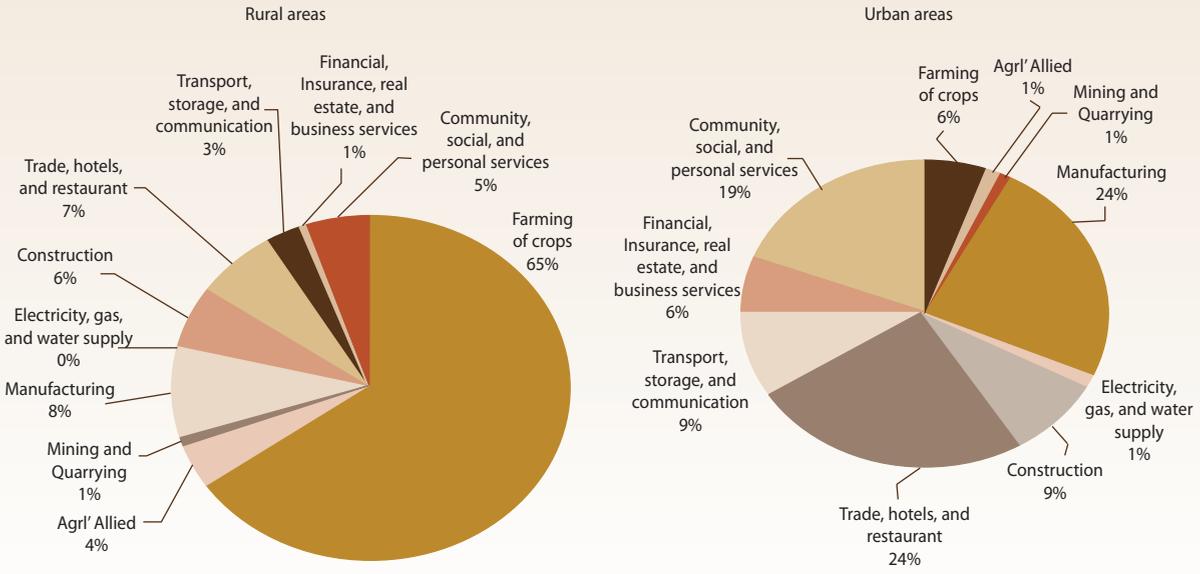
low productivity sectors towards the middle productivity sectors such as manufacturing, construction, trade, hotels and restaurants—where labour productivity was 2.5 to 3.5 times higher than in agriculture. At the very top end, employment declined in high productivity sectors like mining and quarrying, and the electricity, gas, and water supply sectors. These are dominated by the public sector and were believed to be overmanned (Planning Commission 2001a). However, the financial and other business services category, the highest productivity sector in the economy, did better in terms of generating new jobs relative to the 1980s.

Since 1999–2000, the evidence shows, productivity growth has decelerated. If the 1993–4 to 2004–5 period is disaggregated into two periods—the period before 1999–2000 and the period since—it is possible to see that overall productivity growth slowed down markedly in almost all sectors in the latter period. Productivity growth in the tertiary sector especially declined from 10 per cent per annum to less than 4 per cent per annum between the two periods. While there was a surge in employment in the high productivity IT and ITES sectors, in terms of overall impact

their effect is likely to be small, given that these sectors employ only about 5 million workers, or about 1.5 per cent of India’s labour force (see Figure 1.7 for distribution of labour force by sectors). This slowdown in productivity growth after 2000 has important implications for wages, as discussed later.

Further, employment within the manufacturing and tertiary sectors still shows signs of dualism, with most jobs clustered at the low productivity end and some growth taking place in high productivity and high skill-level jobs. This dualism, which continues to persist even a decade after liberalization, reflects the continuing barriers and disincentives to entry in the formal sector, especially in manufacturing. An important challenge will be to stimulate growth in manufacturing, especially in the ‘missing middle’ group of plants/firms (see Chapter 3). Though not as marked as in manufacturing, evidence indicates that job growth in the tertiary sector also reflects dualism. At one end is the formal sector where the main source of growth has come from the proliferating ITES sector. But its pull on the overall labour market can only be marginal given that it employs only 1 million workers out of a labour force of more

Figure 1.7 Share of Workers (UPS) by Sector in 2004–5



Source: Derived from NSS estimates.

than 400 million. More important in terms of generating employment are trade, hotels and restaurants, construction, and community services. But, as evidence suggests, the bulk of jobs created in these sectors are informal and of low productivity (see Figure 1.7). Thus, as in manufacturing, workers in the tertiary sector too are clustered at two ends of the wage spectrum.

Job growth since 1993–4 is higher in urban areas though the bulk of the workforce lives in rural areas. There are other important differences also among urban and rural locations. In the urban areas, the fastest growing sector in terms of employment is the tertiary sector. Job growth is particularly good in trade (especially retail trade) and the hotels and restaurants sub-categories. There is, however, virtually no change in the share of the secondary sector, except in the share of construction. The experience of rural areas is different from that of urban areas in that the shares of both construction and manufacturing have risen as fast as those of sub-sectors like

trade, hotels and restaurants, transport, storage, and communications.

The share of organized sector employment fell in the 1990s, largely on account of declining public sector employment, but also due to sluggish growth in private sector jobs. In India, the debate on quality of jobs has often focused on a visible indicator: 'formal' or 'organized' sector employment. An important Planning Commission report (2001b) noted that growth in organized sector employment slowed down from 1.2 per cent per annum between 1983 and 1994 to 0.53 per cent between 1993–4 and 1999–2000 (Table 1.2). More recently, private sector employment growth was also stagnant between 2000 and 2003. While these trends raise serious concerns, the numbers need to be interpreted with some caution. The estimates are based on information collected by the DGE&T and are widely believed to be underestimates, especially when it comes to the private sector.<sup>16</sup> Also, a significant part of the deceleration was

**Table 1.2 Distribution of Prime-Age Workers by Status, 1983 to 2004–5 (UPS)**

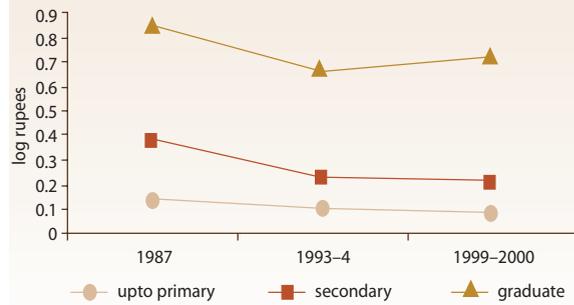
	1983	1993–4	1999–2000	2004–5
Self-employed (per cent)	52.3	50.0	48.3	52.4
Regular Workers (per cent)	16.1	15.7	16.2	16.5
Casual Workers (per cent)	31.6	34.3	35.5	31.1
Total (in millions)	232.7	300.6	332.3	378.9

Source: Calculations from NSS.

on account of the public sector which lost an estimated 30,000 jobs over the period. This was a consequence of the severe fiscal constraints the government faced at that time and the over-manning in the sector which became hard to sustain in a more competitive economy.

The share of regular wage employment has remained unchanged. Sundaram and Tendulkar (2006b) argue that the supply of organized sector jobs, which are of superior quality compared to informal sector jobs, can be approximated from the number of workers reporting themselves to be earning regular wages/salaries in the national sample surveys.<sup>17</sup> Support for this proposition also comes from Glinskaya and Jalan (2006) who show that regular wage jobs are clearly better than casual wage jobs, and at least as good as self-employment. Since the 1990s, growth in regular wage employment has been the fastest among all employment categories. But it is still slower than it was in the 1980s (Appendix 1.6). The share of regular wage employment has gone up marginally in recent years—an indicator of improved quality. However, even at the start of the new century, regular wage jobs accounted for only about 16 per cent of total employment. The 1990s also saw an increase in the number of casual workers in the rural, but not the urban, workforce (in terms of

**Figure 1.8 Wage Premiums by Educational Attainment**



Source: Narain (2006).

share in incremental workforce), but this trend subsequently reversed itself (see Table 1.2).

The labour force became more educated in the 1990s. The average number of years of schooling of a prime-age worker went up from 3.2 years in 1987–8 to 4.5 years in 1999–2000. This increase was, in part, thanks to the concerted efforts by the government to increase the reach of primary education and eradicate adult illiteracy. The number of workers with less than five years of education came down steeply from 80 per cent of the total labour force in 1983 to 67 per cent in 2004–5. The total number of graduates in the workforce also increased from 7.4 million to 23.4 million over the same period (Appendix 1.7). Most new entrants to the workforce since the 1990s have completed primary school (Sundaram and Tendulkar 2006b). Overall, the increase in educational levels has also possibly contributed to an increase in the prospects and earnings of Indian labour migrating abroad (Box 1.3).

The tertiary sector is the largest employer of graduates. In both rural and urban areas, ‘community, social, and personal services’ employed by far the largest number of graduates, some 8.8 million in 1999–2000. However, because these services are heavily dominated by the public sector, the

### Box 1.3 International Migration from India

International migration is one of the most important factors affecting economic relations between countries in the twenty-first century. In the late 1990s, migration from India was estimated to be about 0.12 per cent of the country's total population. Migrants ranged from low-skill workers to highly skilled ones, with a large part of the semi-skilled and unskilled population concentrated in the Gulf countries. Many of these people migrated during the oil boom of the 1970s and 1980s. In the 1990s, migration of highly skilled workers, particularly IT workers who went on temporary work permits to Australia, Canada, and the United States, increased significantly.

The remittances sent home by migrant workers showed a spectacular increase in recent years (see Figure B1.3.1). In 2003, according to official estimates, the remittances amounted to about \$22 billion or approximately 3 per cent of India's GDP. In addition, there may have been further remittances, through unofficial channels, of as high as 65 per cent of this amount. This makes remittances from Indians living abroad one of the largest sources of financial flow into the country, much higher even than foreign direct investment. It is possible that the sudden increase in these remittances in the late 1990s may have been the result of better incentives becoming available to send and invest money in India's growing economy, the easing of exchange regulations and controls, and measures taken by the Indian government to attract foreign deposits.

At the household level, literature suggests, remittance incomes help meet a variety of family needs. These might be in the form of increased consumption of food, housing, and durable items, or increased investment in education and business. In this manner, remittances support a wide variety of development purposes—improving family welfare, reducing economic vulnerability, and boosting the local economy. When they lead to increased investment in local businesses or the education of young children, they can also contribute to output growth and have multiplier effects on the rest of the economy. A recent World Bank study estimated that in South Asia, a 10 per cent increase in total remittances (official and unofficial) from abroad led to a 0.9 per cent decline in poverty levels.

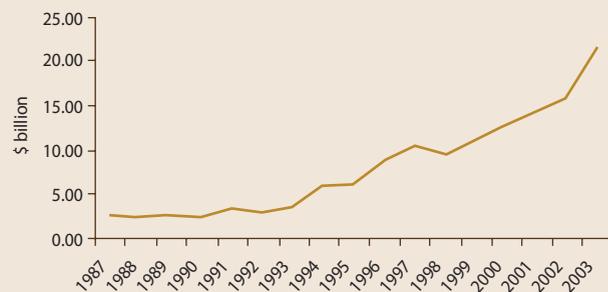
Two factors are important in determining the developmental impact of migration: the educational level of migrants and the presence of investment opportunities at home.

Given the benefits, India may have a lot to gain from migration. Private sector firms in the country have played a significant role in promoting migration. At the state level, some governments have set up 'manpower corporations' to promote labour export from their states. The Central government, however, has assumed no such role, though it provides support to expatriate workers through its diplomatic posts.

However, one issue that remains is the poor quality of remittance services available to migrants. Though India has a good network for channelling remittances to domestic recipients, the transaction costs of dealing with the formal system are relatively high. Informal transfer systems are, therefore, prevalent because of their speed and low cost, but remain vulnerable to abuse. India also has a stake in pre-empting potential protectionism and locking in the current open international trade regime in services through World Trade Organization (WTO) negotiations, especially on Mode 4.

Sources: World Bank (2005d).

Figure B1.3.1 Remittances Flows to India



government's fiscal difficulties in the 1990s led to a decline in their share of graduate employment—from 48 per cent to 41.1 per cent of graduates by 1999–2000. Manufacturing, trade, and the hotels and restaurants sectors raised their share of graduate employment. Manufacturing was the second largest absorber in 1983 with 0.87 million graduates but was displaced from this position by the 'trade, hotels, and restaurants' category which employed 3.1 million graduate workers as of 1999–2000. The expansion was predominantly urban. More than 5 million graduates were also absorbed in 1999–2000 by three more industries: agriculture and allied industries (2.5 million); financial, insurance, real estate, and business services (2.4 million); and transport, storage, and communications (1.1 million).

Overall, however, the Indian labour force is mostly unskilled compared to workers in other emerging economies. Almost 43 per cent of the Indian labour force is illiterate. The average number of years of education for the population group aged 25 and above is 3.6 (Barro and Lee 2000). Only 17 per cent of this adult population has had some secondary education, much lower than its income level would predict. This number is only half that of China. Education outcomes are even worse for females (Barro and Lee 2000). A similar picture emerges when India's educational performance is benchmarked using Knowledge Assessment Methodology (KAM). India comes out ahead of other South Asian countries (except Sri Lanka) and the Africa region, but lags behind countries such as China, Mexico, South Africa, and Russia.

These indicators point to the need for India to catch up, especially at a time when the demand for skills is increasing with liberalization and globalization. Given that there are currently 200 million children in the elementary school-age group of six to 14, and 87 million 15–18-year-olds

in secondary schools, there is an opportunity to expand secondary education in the medium term (Wu 2005).

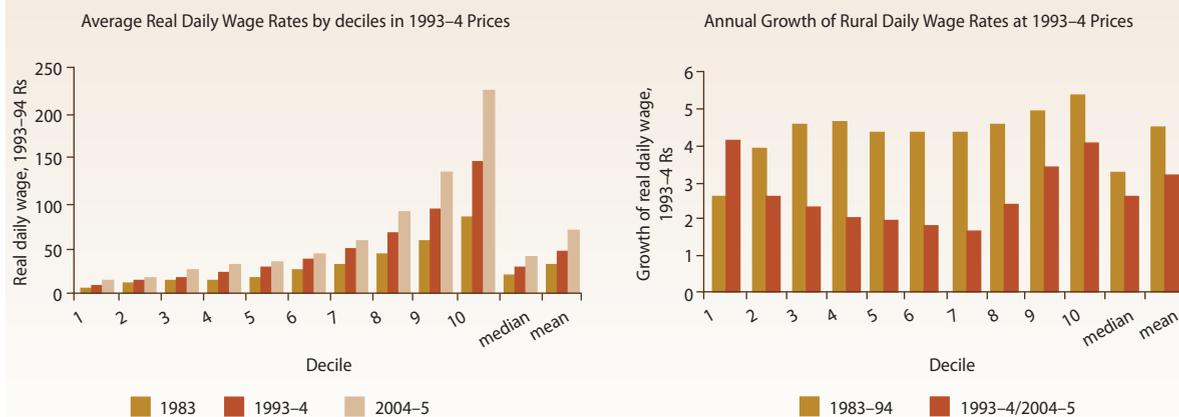
## WAGES AND PRODUCTIVITY

Wages and earnings increased across the board in the 1990s, leading to a marked decline in the numbers of the working poor. In a country like India, simply looking at employment rates can be misleading because most workers, especially males, have no option but to take up any work in order to survive. Employment numbers conceal significant underemployment, particularly in subsistence farming and in low productivity jobs in the informal sector. Hence, it is also important to look at real wages. Between 1993–4 and 2004–5, real wages grew, even if highly unequally, in most occupations. But the growth of wages in this period was slower than that observed between 1983 and 1993–4. Much of this was due to the slowdown in the growth of regular wage employees. Casual real wage growth, however, was equally rapid in both periods under comparison. On the positive side, in the 1990s, there was also a reduction in male–female wage disparities. Urban and rural casual wages also converged in this period, mainly due to rural wage growth (Figure 1.9).

Rising wages led to a decline in the number of working poor in the labour force, from 115 million or 36 per cent of the workforce in 1993–4, to 104.4 million or 23 per cent of the workforce in 2004–5 (Sundaram and Tendulkar 2006b). However, it is important to note that wages were not observed for all segments of the workforce, particularly the self-employed who constitute more than 50 per cent of the workforce.

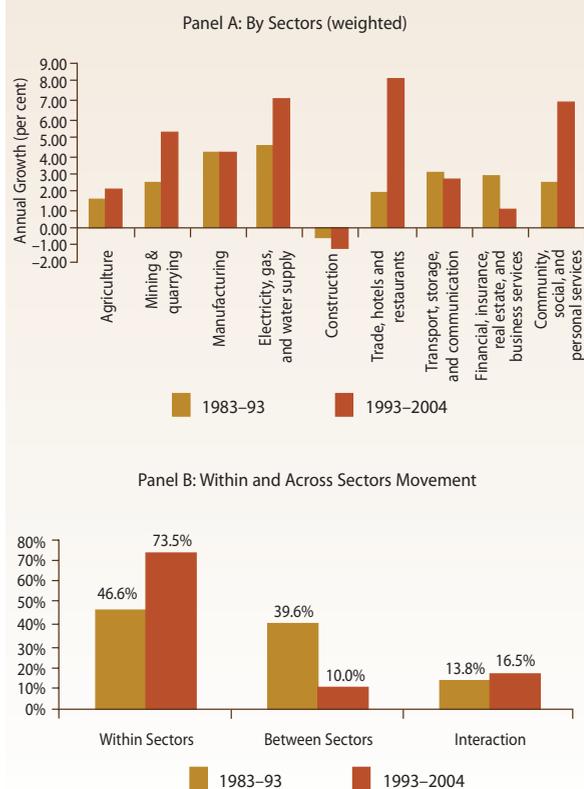
In the 1990s, the acceleration in wage growth tracked the acceleration in labour productivity of about 5.4 per cent per annum (1993–4 to 2004–5). Figure 1.10 shows the productivity growth originating in each sector, weighted by

Figure 1.9 Rural Real Wages and Growth from 1983 to 1999–2000



Source: Staff Estimates using NSS.

Figure 1.10 Sources of Productivity Growth



Source: Staff estimates using NSS.

the share of the labour force. Most of the labour productivity growth in recent decades took place due to growth in trade, hotels and restaurants, electricity, mining and quarrying, and community and personal services. The growth in the last

sector during the 1990s is likely to be a statistical artefact, reflecting as it does the relatively large increase in public sector wages by the Fifth Pay Commission.<sup>18</sup> The small role of productivity growth in the manufacturing sector in driving overall productivity growth is remarkable. This reflects the large share of low productivity small-scale manufacturing in this sector, discussed in more detail in the next chapter.

Between 2000 and 2005, however, both wage growth and productivity growth decelerated, markedly so in some sectors. On average, real wages actually declined in urban areas for both male and female casual workers in this period, while wage growth in rural areas decelerated markedly (Table 1.3). (Notably, wage growth in rural areas had seen significant acceleration over the previous period between 1983 and 1993–4.) The decline in wage growth since 2000 has mirrored the deceleration in productivity growth in most sectors (Table 1.4). As also noticed by other observers, productivity growth has decelerated in all sectors, and even reversed in key sectors such as construction, and less expectedly in finance and real estate.

While real wages grew, on average, in the past two decades, the growth was highly unequal. While

**Table 1.3 Annual Real Wage Growth (CAGR)**

	Rural Casual Non-agricultural Male Worker	Urban Casual Male Worker	Rural Casual Non-agricultural Female Worker	Urban Casual Female Worker
1983 to 1987–8	3.0	2.8	2.0	3.2
1987–8 to 1993–4	1.2	0.7	1.7	1.3
1993–4 to 1999–2000	3.2	3.0	4.6	4.9
1999–2000 to 2004–5	2.8	-0.8	2.5	-0.6
1983 to 1993–4	2.6	2.1	2.2	2.7
1993–4 to 2004–5	3.3	1.3	4.0	2.6

Source: Staff estimates.

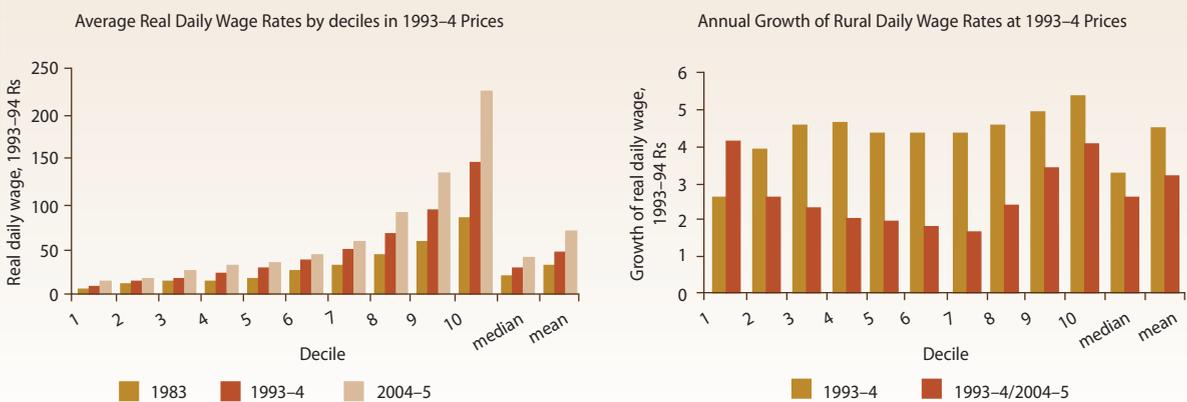
wages of most income deciles increased by about 2 per cent per annum between 1993–4 and 2004–5, wage growth in the top two deciles was higher at 3.4 per cent and 4 per cent. Across almost all wage deciles, wage growth was higher between 1983 and 1993–4 than over the next decade. The only exception was the bottom income decile where wages grew faster in the latter period (Figure 1.11). Some analyses suggest that this robust growth of the lowest decile contributed to the decline of inequality in wages among male casual workers between 1983 and 1999, mostly through a reduction in regional differences (Dutta 2005). Overall, however, the gap between the bottom and top wage earners grew. What caused this? There

**Table 1.4 Productivity Growth (by Sector)**

	1983/1987–8	1987–8/1993–4	1993–4/1999–2000	1999–2000/2004–5	1983/1993–4	1993–4/2004–5
1. Agriculture	-4.3	19.4	13.2	10.2	1.3	2.2
2. Mining & Quarrying	-0.2	27.0	56.4	10.2	2.3	5.6
3. Manufacturing	15.1	29.4	42.0	8.3	3.9	4.4
4. Electricity, Gas, and Water Supply	27.8	20.1	82.5	13.7	4.2	7.6
5. Construction	-31.1	38.6	-1.8	-8.6	-0.4	-1.1
6. Trade, Hotels, and Restaurants	5.2	15.2	31.7	9.2	1.8	3.7
7. Transport, Storage, and Communication	19.8	11.1	22.4	9.7	1.0	3.0
8. Financial, Insurance, Real Estate, and Business Services	21.1	8.4	26.0	-12.5	2.6	1.0
9. Community, Social, and Personal Services	21.5	3.6	54.0	33.7	2.2	7.5
Tertiary Sector (6–9)	17.3	15.7	60.5	20.8	3.0	6.8

Sources: Mazumdar and Sarkar (2008).

**Figure 1.11 Average Real Daily Wages and Wage Growth**



Source: Staff Estimates using NSS.

is some evidence that wage inequality increased mostly among male regular workers and a large part of it is explained by differences in workers' ages and educational levels (Unni 2006).

Despite the increases in earnings during the 1990s, average wages for casual workers in rural India today are close to or even below poverty line wages. In rural areas, both the lowest and average wages for casual labour by males remain below and at the poverty line wage levels, respectively. Average wages for casual female workers in both rural and urban areas are only about 60 per cent of poverty line wages (Table 1.5).

**Table 1.5 Rural Workers' and Female Workers' Wages Below Poverty Line (Wage/Salary Per Day in Rs)**

	Actual Wage		Estimated
	Average	Lowest	Poverty-Line
<i>Rural male</i>			
Regular employees	127.3	44.5	32.6
Casual labourers	45.5	39.3	46.6
<i>Rural female</i>			
Regular employees	113.9	28.2	32.6
Casual labourers	29.4	28.2	48.7
<i>Urban male</i>			
Regular employees	169.5	60.2	43.9
Casual labourers	63.3	49.7	62.7
<i>Urban female</i>			
Regular employees	140.2	33.9	43.9
Casual labourers	38.2	29	65.5

Source: Ghose (2004).

Notes: (1) All workers are in the age group 15–59.

(2) In rural areas, the lowest wages are in the occupation of cultivation; in urban areas, lowest wages are for household service.

(3) The assumptions used to estimate poverty-line wages are as follows:

- Poverty-line expenditure per capita in 1999–2000 was Rs 335.46 in rural areas and Rs 451.19 in urban areas.
- The average number of dependents was 1.5 for regular employees and 1.8 for casual labourers.
- Each worker got paid only for the days actually worked.
- A male casual labourer found work for 4.7 days per week while a female casual labourer found work for 4.3 days per week. Regular employees, male or female, worked 6 days per week.

Male–female wage differentials have declined but remain significant. Evidence of this decline, in the case of rural casual labour, comes from Sundaram and Tendulkar (2006b). Yet, in most occupations, especially manual ones, women's wages are about one-half those of men. What explains this difference? Evidence suggests that even after accounting for regional, individual, occupational, and industry characteristics, male workers in 1999–2000 earned 64 per cent higher wages than female workers (Narain 2006). A separate exercise that decomposed the weekly wages of men and women in casual labour for the 55th Round (1999–2000) into differences attributable to individual characteristics and other factors, found that only 27.5 per cent of the difference in casual wages between male and female workers could be explained by human capital and location attributes (Das 2006). Such a discriminatory labour market may induce women to stay out of the labour force, especially if other family members are earning.

## FEMALE LABOUR FORCE PARTICIPATION

Women's participation in the labour force in India has been flat or even declining. Women's labour force participation in South Asia is low compared to developing country standards and India is no exception. Participation rates for women in the region range from about 16 per cent in Pakistan, 23 per cent in Bangladesh, to over 78 per cent in Nepal. In India, they remain stubbornly close to 25 per cent. Multivariate analyses at the household level, using NSS data from 1983 to 2000, show that for both urban and rural women, demographic variables such as age, childcare responsibilities, and marital status have significant negative effects on participation. Interestingly, for women, there is a significant decline in employment participation with higher levels of education. Rural women tend to face a greater 'education penalty' than urban women; that is, the more educated they

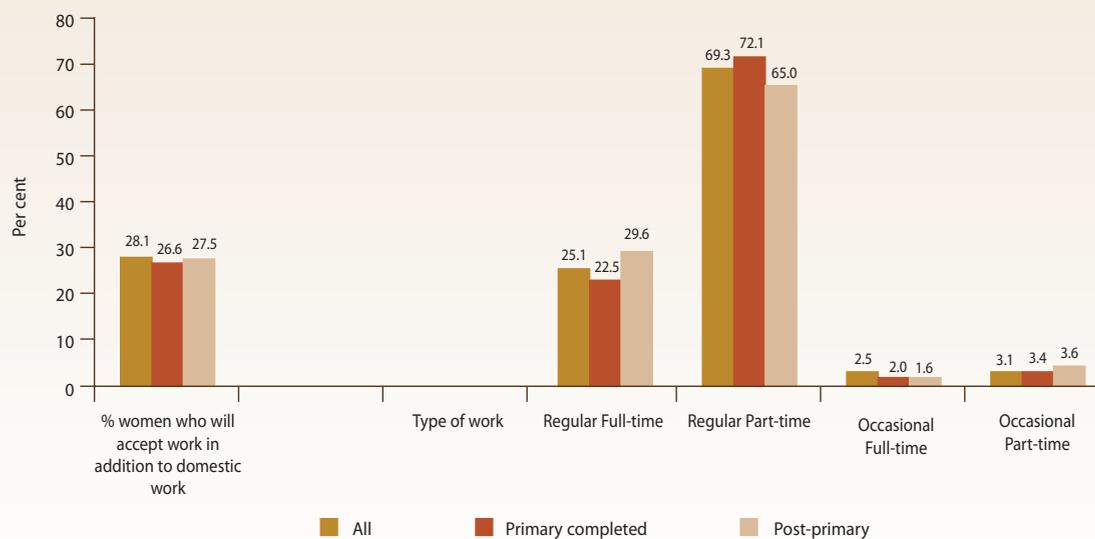
are, the less likely they are to work outside the home. There are also large regional variations, with the southern and western regions associated with much higher participation by women in the labour market.

Both demand side and supply side explanations have been articulated for the low labour force participation by Indian women. The demand side argument rests on cultural mores and the values of status and seclusion in the region, which may be preventing higher status households from allowing women to go out and work. For instance, family honour in most parts of India rests on restricting women to the home, thus affecting their ability to work outside the house (Chen 1995). Basu (2005) argues that a woman's choice also has an in-built 'reinforcement property' in that the household tends to prefer whatever she does. Thus, cultural attitudes may tend to reinforce themselves. The supply side argument postulates that the supply of well-paying, secure

jobs for educated women is low. Hence, educated women, who mostly belong to the higher socio-economic strata, prefer to opt out of the labour force rather than accept low-status jobs. There also seems to be an income effect at play here: our analysis finds that the higher a husband's income, the lower the probability of his wife participating in the workforce (see Chapter 4 for further discussion).

What are the employment preferences of women? Women who do not enter the labour force predominantly work within the home. Descriptive statistics from various rounds of the NSS show that over 92 per cent of women doing domestic work say they do so from compulsion. Of these, over 65 per cent say they do domestic work because there are no other members in their households who will take on their duties. The responses do not vary by educational status. However, almost one-third of the women who do only domestic work would prefer to be employed—primarily in

**Figure 1.12 Aspirations of Women (Aged 26–66) Currently Doing Domestic Work by Educational Status (1983–2000)**



Source: Das (2006).

part-time jobs (Figure 1.12). Again, there is little variation by educational levels (Das 2006). Thus, a combination of norms that determine a woman's place in the home and of a lack of appropriate employment opportunities seems to relegate many women out of the labour force.

### SCHEDULED CASTES AND SCHEDULED TRIBES

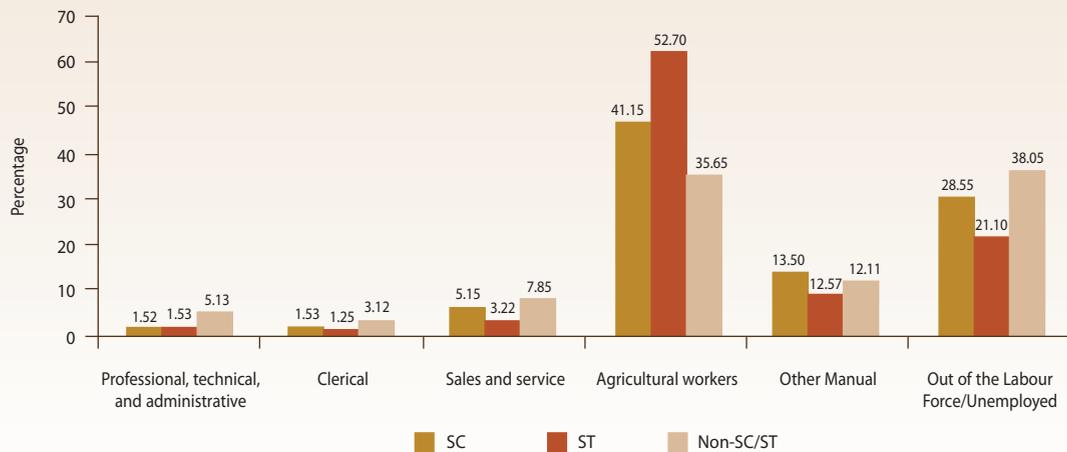
Caste has historically been the key axis of stratification in India. Caste is believed to be responsible for major inequalities in India, particularly in terms of restricting access to areas as diverse as education, health, technology, and jobs. Caste is especially important for labour markets because it has, at once, both a ritual and an occupational logic. Due to historically strict rules that have governed the division of labour and the relations between castes in India, certain castes or sub-castes undertake or perform only specific occupations.

Caste has a significant impact on employment participation rates, occupational choice, and mobility. Labour force participation rates for both Scheduled Castes (SCs) and Scheduled Tribes (STs) are higher than for their non-SC/ST counterparts, even after controlling for other

characteristics. The SCs are typically landless labourers while the STs have historically been forest dwellers whose mainstay is subsistence agriculture. An analysis of occupational groups indicates that the SCs remain restricted to caste-based occupations; this trend also plays out within the public sector. Thus, the SCs dominate the manual occupations of sweeping and cleaning which were historically assigned to them in the caste hierarchy. Other occupations, notably non-agricultural semi-skilled jobs, also tend to be influenced by caste. The STs are less beset by this demarcation since they were traditionally assigned a role outside the pale of the caste system. Since the STs, for the most part, own some land for subsistence agriculture, they have a high likelihood of being agriculturists (Das 2006). Recent evidence also points to caste having a significant effect on the low occupational mobility in the Indian labour market (Munshi and Rosenzweig 2005).

Controlling for other characteristics, the SCs and STs are more likely to work as casual labourers and less likely to be self-employed, other than as farmers (Figure 1.13). Job opportunities in rural areas are limited for all workers and so

Figure 1.13 Occupational Distribution by Caste



Source: Das (2006).

the effect of being an SC or ST on the type of employment undertaken is muted. However, in villages, land-ownership patterns are important since even lucrative non-farm jobs have a basis in agriculture. For the SCs and STs who do not own land, the only employment option is casual labour. In urban areas, however, the SCs/STs have an advantage in obtaining regular salaried jobs which are still predominantly in the public sector where the government's reservation policies favour them.

Real upward mobility for the SCs/STs seems to occur once they migrate to urban areas. Regression results suggest that the SCs/STs have an advantage in getting better quality employment in urban areas. At the same time, these results need to be interpreted with caution. The fact that formal jobs need more than just education is well-accepted. In addition, workers need access to information, social networks, knowledge about rules and procedures, etc. Contacts and networks are important for successful entry into the formal salaried market since the flow of information herein often lacks transparency. Thus, the educated SCs/STs, who migrate to towns and have social networks, possibly enjoy a selection bias.

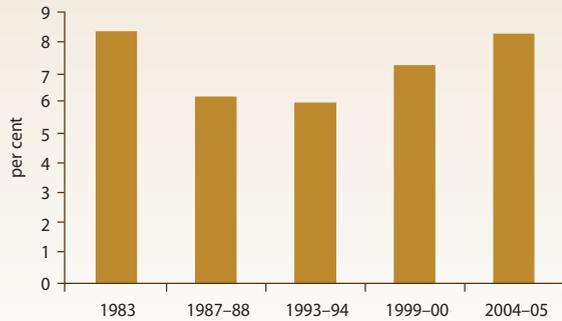
One of the most significant affirmative action policies in India is caste-based reservations in the public sector. These reservations exist for regular salaried work in the public sector and in publicly funded education. Preferential treatment for the SCs/STs (and more recently for Other Backward Classes or OBCs) in other ways and in areas such as relaxation of the age bar, waiver of applications fees, special coaching, and quotas in public employment and poverty alleviation programmes also has a bearing on educational attainment and labour markets. However, the impact of reservations is a controversial issue; it is also not easy to measure.

Rising educational levels and the government's affirmative action policies have had a positive impact on the STs and on rural SC women. While the SCs/STs continue to lag behind in educational attainment, this and other disadvantages have diminished over time, particularly since the 1990s (Desai and Kulkarni 2005). These rising educational attainments, combined with the government's reservation policy have had a positive impact on the likelihood of STs obtaining regular salaried jobs, a category for which there is a dearth of candidates relative to the quotas.

However, where supply exceeds reservations, as in the case of SCs, they either crowd into casual labour or, if they can afford to, stay out of the labour force altogether. The supply of educated SC labour outstrips demand, leading to a glut of educated SC men in both urban and rural areas, and of educated SC women in urban areas. In this case, the multiplied effects of education on caste suggest that SC men suffer a disadvantage in obtaining regular salaried jobs if they have post-primary education. This would appear to indicate that the reservation policies have created a system of rationing of jobs for the SCs and, since they cannot penetrate the non-reserved public sector jobs, placed a cap on their access to regular jobs (Das 2006). The situation has implications for the structure of the reservation policies which may, in fact, be penalizing educated SC men and, as anecdotal evidence on the 'creamy layer' of SCs suggests, fostering an elite within them.

## THE UNEMPLOYMENT SITUATION

In India, low open unemployment rates can often be misleading. Going by the UPS definition, the number of unemployed persons in India steadily increased from around 7.8 million in 1983 to 12.3 million in 2004–5. This places the unemployment rate at about 2.8 per cent, a number that has shown little variation since 1983 (Appendix 1.10). The low unemployment rate is, however, misleading

**Figure 1.14 Unemployment Rate in India (CDS)**

Source: Report of the Steering Committee of Labour and Employment, Planning Commission (2001b), Staff Estimates using NSS (2004-05)

on many counts. First, low unemployment rates can reflect workers stuck in low value-added and poorly paid work. Second, according to the UPS definition, only those people are considered unemployed who spent more than six months of the year looking for or being available for work. This definition, therefore, captures only long-term unemployment. Understood this way, far from being low, the number of unemployed at any given time is very high. Two alternative approaches, based on CWS (which corresponds to the international definition of unemployment) and CDS, rely on a shorter reference period and can better capture both underemployment and short-term unemployment. According to the CWS definition, the unemployment rate in India had increased to about 5 per cent in 2004; by the CDS definition, the unemployment rate increased from 7.3 per cent in 1999–2000 (Figure 1.14) to 8.3 per cent in 2004–5.

Underemployment, rather than unemployment, presents a more accurate picture of the employment situation in India. Combining the distinct notions of CWS and CDS, unemployment rates suggest that underemployment can be as high as 13 per cent, on average, for all workers, and 25 per cent for casual labourers (Table 1.6).

**Table 1.6 Unemployment Rates by Status**

	Self-employed	Casual Labourers	Regular Employees	All Employed Persons
Male	5	21.7	0	10
Female	21.7	28.3	0	21.7
Employed Persons	11.7	25	0	13.3

Source: Ghose (2004).

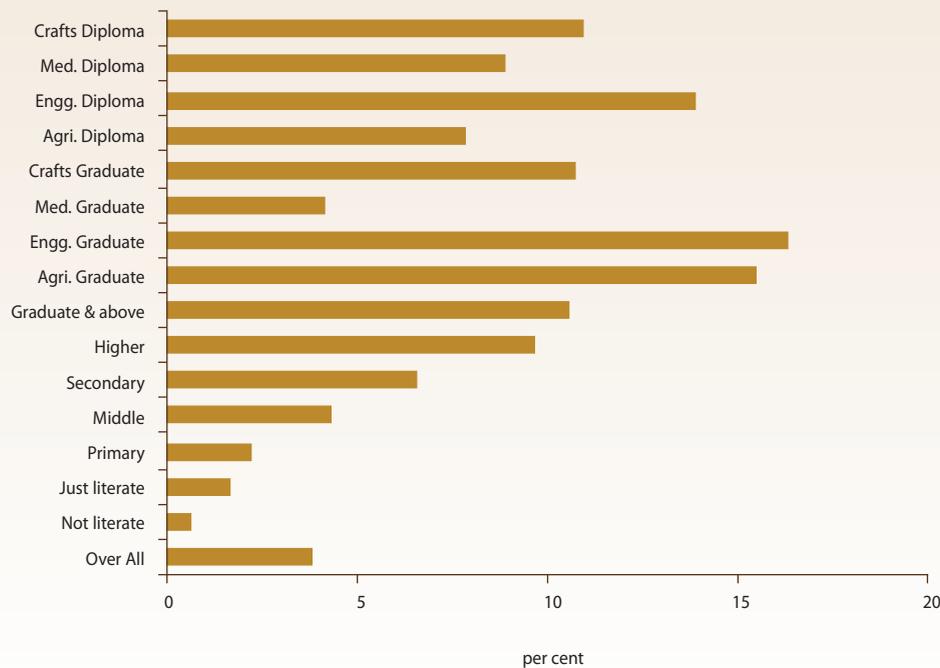
Note: The estimates are based on the assumption that all workers would want to work eight-hour days, six days a week.

Underemployment rates are much higher for females than for males.

Long-term open unemployment rates are particularly high among the youth, the better educated, and in urban areas. Youth in the 15–29 age group account for an overwhelming proportion (over 80 per cent) of unemployed on the UPS status. This may, in part, be related to poverty. Low family incomes force people to enter the labour market at a relatively young age and this can increase youth unemployment. At the same time, prolonged and unsuccessful job searches by young family members may themselves contribute to poverty. Youth unemployment is also a cause for concern because it prevents new entrants to the labour market from gaining experience and developing labour market skills (World Bank 2005c). In India, where formal opportunities for acquiring skills are limited and most training happens on the shop floor, this may be even more of an issue.

Unemployment rates are significantly higher for urban workers than for their rural counterparts. This reflects both the higher capacity of urban workers to sustain unemployment and, possibly, disguised unemployment in rural areas. It may also reflect the fact that job seekers take a longer time job searching, especially if there is a higher

**Figure 1.15 Education-specific Unemployment Rates 1999–2000**



Source: Mathur and Mamgain (2004).

probability of their being rewarded with good jobs after the search process. Interestingly, in rural areas, unemployment rates are usually higher among males than females; the situation is the reverse in urban areas.

Education of workers and unemployment are positively related. Unemployment rates in India are lowest among illiterates; they rise progressively with education. They are now highest for workers with graduate and above degrees (Figure 1.15). This all-India picture also holds at the state level where, without any exception, unemployment rates among secondary and above educated workers are much higher than among workers with middle school and below education. While disguised employment among workers with low education level attainments may explain part of the story, the high rates of unemployment among

the educated indicate that India is underutilizing its human capital. Surprisingly, unemployment is highest among workers holding technical diplomas. These diplomas, by design, are meant to cater to specific, identified labour market needs. The evidence thus strongly suggests a mismatch between labour market requirements and the training provided.

Unemployment is mostly caused by the lack of work opportunities for casual labour (47 per cent), followed at a distant second by lack of work in self-employed firms (Table 1.7). Some 17 per cent of all unemployed, 28 per cent of female unemployed, and 20 per cent of youth unemployed cite lack of work in self-employed firms as the reason for their being unemployed. On the other hand, some 14 per cent of the urban unemployed and 25 per cent of the graduate unemployed cite quitting work as

Table 1.7 Reasons for Unemployment (per cent of total)

	Quit Job	Loss of Job	Layoff	Firm Closed	Lack of Work in Self-employed Firms	Lack of Work as Casual Labourer	Other
All	7	3	1	4	17	47	21
Rural	5	2	1	2	18	52	21
Urban	14	8	1	13	15	25	25
Males	7	3	1	5	13	45	26
Females	5	2	0	1	28	53	11
Illiterate	3	1	0	1	20	57	18
Less than Primary	4	2	0	4	15	54	20
Primary	6	2	1	4	16	53	18
Secondary	11	5	2	8	16	31	27
Graduate	25	12	1	10	14	6	31
Young (15–30)	8	3	1	4	20	43	22
Middle-aged (31–50)	6	3	1	5	12	51	21
Old (50–64)	4	2	1	2	12	63	17

Source: Staff estimates using NSS.

the reason for their unemployment. Only about 13 per cent of urban unemployed and 2 per cent of rural unemployed cite the closure of firms where they were working as the reason for their being unemployed.

### INDIA'S FORMIDABLE EMPLOYMENT CHALLENGES

Although labour market outcomes in the 1990s were not as poor as is generally perceived and employment growth has accelerated in recent years, India still faces formidable challenges in labour markets. The employment-to-population ratio in India was always low to start with. In addition, unemployment, by some indicators, worsened over the 1990s and in recent years. There are also worrying indications that tough labour market conditions may be discouraging vulnerable segments of the population, particularly youth and women, from participating in the labour force. Education levels are rising among the workforce, increasing workers' expectations, but employment opportunities have not kept pace and the country's human capital base is being underutilized. If this more educated workforce

is to be better utilized, employment growth has to pick up in the more productive formal sector, the destination of choice for these workers. An important challenge is to improve the quality of jobs in the informal sector. In recent years, since 2000, while employment growth has markedly accelerated, it has been accompanied by an equally marked deceleration in wage growth. Moreover, the share of formal sector employment has remained unchanged. In short, India needs to simultaneously accelerate the pace of job creation in the economy and improve the quality of jobs generated as well.

### NOTES

1. Participation rate is the share of the population in the 15–59 age group that is working, searching for work, or is willing to work.
2. The 1990s refer to the period from 1993 to 2000, based on the timing of the main National Sample Survey (NSS) on which most labour market analyses are based.
3. This is measured by the Current Daily Status (CDS) definition as per official practice. If the international definition of Current Weekly Status (CWS) is considered, then rural unemployment

- rates for both males and females increased from 3 to 4.5 per cent over the same period (see Box 1.1 for explanation of CDS and CWS). In urban areas, on the other hand, unemployment rates were 5.7 per cent for males and 9 per cent for females in 2005–6 (Economic Survey, Government of India, 2005–6).
4. Planning Commission of India (2001a, 2001b, 2002); estimates based on International Labour Organization (ILO) database.
  5. Planning Commission of India report (2001b) estimates that 10 million jobs need to be generated annually in the economy. The growth required to generate these will need to be 8 per cent to above 10 per cent per annum.
  6. ‘Organized sector’ usually refers to the government or establishments employing more than 10 persons.
  7. World Bank macroeconomic data set.
  8. See Box 1.1 for definitions of key labour market terms used in India and in this report.
  9. Based on UPSS definition (see Box 1.1).
  10. Since household activities are not classified as economic activity, this depresses female employment participation rates.
  11. The role of income and substitution effects, employment opportunities and earnings by workers and their spouses is discussed at greater length in Chapter 4.
  12. The fact that household income affects participation on subsidiary and primary status differently for women suggests that women’s employment participation is driven by factors other than those for men.
  13. Occupational concentration is among the highest for female workers, especially in rural areas. This may be a consequence of their being concentrated primarily in agriculture and allied occupations (Sundaram and Tendulkar 2006b).
  14. Within the home, women undertake a range of activities that contribute to the economic welfare of the household; these are listed in the surveys.
  15. Three-fourths of rural workers are educated only till the primary level or less. The proportion of such workers in urban areas, however, is only 4 per cent.
  16. Reporting is mandatory for all public sector units and large private sector units, and voluntary for units employing less than 24 workers. However, lax enforcement and low responses from private sector units lead to under-reporting.
  17. This is based on the observation that 88 per cent of workers in non-agricultural organized enterprises reported regular wage status in the 55th Round, the only round where worker-reported affiliation by type of enterprise was also reported. Also, at least 50 per cent of workers with regular wage status, in every population segment (male/female and rural/urban), were located in the organized sector.
  18. The public sector accounts for close to one-third of employment in community and public services.

# Employment in the Informal Sector

# 2

**T**he informal sector employs about 90 per cent of the Indian labour force. Further, most of the increase in employment in the 1990s was also absorbed by the informal tertiary and manufacturing sectors. Although this is widely regarded to imply a decline in welfare, this chapter argues that these developments need to be interpreted more cautiously. There is little doubt that the bulk of the increase in informal sector employment in the tertiary sector was involuntary, in the sense that the labour market entrants would have preferred regular, formal jobs. Compared to the formal sector, most of the increases in informal tertiary and manufacturing employment were in low productivity jobs. However, there was also a large shift in employment from the agricultural sector to more productive jobs in the informal tertiary and manufacturing sectors. Within the informal sector, job growth was robust in sub-sectors with rising productivity. These developments were reflected in the growth of casual wages in the 1990s. Finally, the top end of self-employed jobs (also regarded as part of the informal sector) was estimated to be as well-paying as top regular salaried jobs. The last section of this chapter argues that the agriculture sector still has considerable potential in generating a new round of jobs—by expanding high-yield cereal production in the relatively water abundant northeast, through diversifying into more labour-intensive commercial crops. Finally, recommendations are made to improve the quality of jobs in the informal sector, to lower barriers to entry to the formal sector, and to stimulate agricultural sector jobs.

## SIZE OF EMPLOYMENT IN THE INFORMAL SECTOR

The vast majority of India's workforce is employed in what is often called the 'informal' sector. In India, the term 'informal sector' is of recent origin and has been in use only during the last two decades. A careful analysis of this sector is essential to understanding Indian labour markets. Not only does the informal sector provide employment to the vast majority of the country's workforce, it will also continue absorbing most of the additions to the workforce in the medium term. Hence, a careful evaluation of the potential of this sector, the quality of jobs that it can generate,

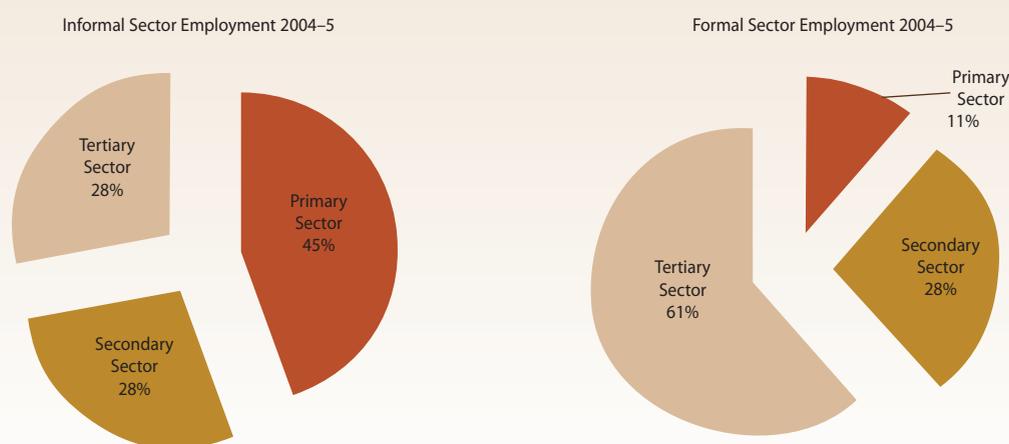
and the constraints to its growth is essential. This chapter focuses on the informal sector, generally known in India as the unorganized sector.<sup>1</sup> After discussing the size of the sector, the chapter presents an assessment of the quality of jobs produced in this informal sector. Subsequently, the chapter turns to trends and prospects for informal sector employment in the manufacturing and tertiary sectors and in agriculture.

In theory, the formal sector can be distinguished from the informal sector by the presence of legal protection and formal recognition by the government. Other criteria include: size of establishments, capability of workers to organize themselves into unions, and the systematic manner in which production processes are organized. In practice, however, because an exact definition is hard to establish, the informal sector is most often defined in terms of what it is not; that is, it is not organized sector employment. According to the Indian definition, employment in the government or in establishments employing more than 10 workers constitutes 'organized' employment. While official estimates suggest that the informal sector could account for as much as 93 per cent of total employment, other definitions based on

the National Sample Survey (NSS) (1999–2000) suggest a figure somewhere between 86 and 89 per cent.<sup>2</sup> Not only is this sector large, it is also the sector targeted by policymakers to absorb most of the additions to the country's workforce (Planning Commission 2002).

The informal sector is large, partly because the bulk of the country's workforce is employed in the primary sector and almost 99 per cent of employment in this sector is informal. Not surprisingly, almost half of informal sector workers are in the primary sector (Figure 2.1). However, even in the other two sectors, informal employment accounts for the majority of employment: about 65 per cent in the secondary sector and about 50 per cent in the tertiary sector. By comparison, the formal sector is small, accounting for just about 11 per cent of total employment in the economy. The public sector accounts for 69 per cent of formal sector employment. The bulk, but not all, of public sector employment is in the tertiary sector. Since most public sector employment is in the tertiary sector, this partly explains the large share (60 per cent) of the tertiary sector in formal employment.

**Figure 2.1** Composition of Formal and Informal Sector Employment (%)



Source: Staff estimates using NSS.

There is a close association between organized sector employment and regular wage employment; this can be used to approximate trends in formal employment. Since information on the types of establishments employing workers was not adequately collected in earlier Rounds (before the 55th Round) of the NSS, a rigorous delineation between formal and informal sectors, using the definition of enterprises under the Factories Act, is ruled out. However, it has been argued that of the three types of workers distinguished in the NSS of successive Rounds—regular wage employees, casual wage workers, and the self-employed—the overlap between formal sector workers and regular wage employees is considerable (Sundaram and Tendulkar 2006b). Trends in this category may thus be a good proxy for examining trends in formal sector employment. To facilitate analysis, self-employment and casual employment, the two kinds of employment that tend to dominate in the informal sector, are used to approximate the informal sector in the rest of this chapter.

Between 1983 and 2004–5, the share of regular wage employment in overall employment remained stagnant at the aggregate level. Underlying this aggregate picture, however, was the fact that for both urban and rural workers, there was a small decline in the share of regular wage employment. The overall share was maintained only because of the increasing share of urban workers in the workforce, for whom regular wage employment was more significant than for rural workers. Thus, in both urban and rural areas, informal employment became more important. Growth in job categories was also different for different age groups. While the proportion of older male workers with salaried jobs increased over time, the number of young and middle-aged salaried workers fell sharply.<sup>3</sup> This is of some concern since regular employment is the preferred choice of workers, especially the educated section of the workforce. Encouragingly, however, young

female workers became more likely to report being regular workers, especially in urban areas.

Within the informal sector also, the share of self-employed and casual workers remained largely stable over the two decades, though in the 1990s there was a decline in the proportion of self-employed workers and a corresponding increase in the proportion of casual workers. The decline was of the order of about 4 percentage points (Glinskaya and Jalan 2006).<sup>4</sup> This led to concerns about the growing ‘casualization’ of the workforce, though recent data again shows a turnaround. At the same time, the situation is worrisome because around a third of workers find employment as casual labour, and casual jobs are often at the bottom of the pile in terms of wages and job security.

The increase in the share of casual workers in the 1990s was driven by trends in a few industries. First, the trend towards casualization has been driven by trends in a few important industries: agriculture, mining, and construction. In these, the shift to casual jobs may have been associated with increased commercialization (in agriculture and mining) and the choice of industrial ‘technology’ (in construction). If so, the welfare implications are not immediately clear. At the same time, there were a number of ‘sunrise’ industries (for example, manufacturing and financial services) which created good quality self-employment jobs for both men and women, in both urban and rural areas. Apart from a few industries, most others also saw an increase in the proportion of workers employed in regular salaried jobs.

The national samples also appear to suggest that there is a life-cycle pattern in employment that could partly account for the shift from casual work to self-employment. Young male workers (15–30 years old) in rural areas are more likely to work as casual labourers and become self-employed once

older. A similar pattern exists among urban males, except that for this group the movement in later life is somewhat more pronounced towards regular salaried employment. This life-cycle movement is much less pronounced for females, in both urban and rural areas. If this hypothesis is correct, the growing share of casual employment may be a reflection of a growing young workforce.

### QUALITY OF JOBS IN THE INFORMAL SECTOR

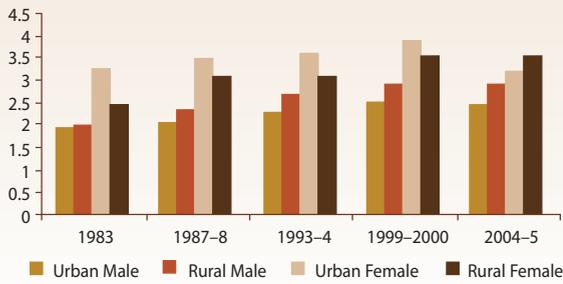
Apart from concern about jobless growth, the other big issue in India is the quality of jobs. In the Indian context, regular salaried employment is the most desirable form of employment for workers from the point of view of earnings, stability of employment, and availability of some social security. It is followed by self-employment which has variable returns but little security. At the bottom of the pile is casual wage work which offers the lowest levels of earnings and has the least stability. National surveys also show that though there is a wide distribution of income levels within each of the major categories of employment, casual workers have jobs that are of 'lower quality' as measured by household per capita consumption. This is true for all industries and in both rural and urban areas. In the case of self-employed workers, earnings are better than those of salaried workers in many industries (Glinskaya and Jalan 2006).

An increase in the share of casual workers does not necessarily imply a deterioration in the quality of jobs. Differences in human capital characteristics largely explain the differences between the welfare of casual workers, on the one hand, and self-employed and salaried workers, on the other. Over time, the human capital stock of all workers has increased. The improved educational composition of the workforce is reflected in the somewhat sharp reduction in the percentage of illiterate workers, slow decline in the numbers of literate and primary-level

educated workers, and the rising share of workers in the remaining three higher-level education groups. This has translated to improved welfare levels for all categories of workers.

One way of assessing changes in the quality of jobs is to examine how the proportion of workers living below the poverty line (BPL) has changed in different segments of the workforce. Let us consider casual employment first. The number of casual BPL households *increased* in the 1980s but, in absolute terms, *declined* in the 1990s. Thus, for this most vulnerable segment, the 1990s registered an improvement over the 1980s. For self-employed workers, average annual increments to BPL households came down in the 1990s; so this segment too fared better compared to the 1980s. These two segments together accounted for 96 per cent of the incremental workforce in the 1980s and 86 per cent of the incremental workforce in the 1990s. The only segment that did worse in the second period (1993–2000) compared to the 1980s was, surprisingly, the regular wage/salaried workers, for whom the decline in increments to BPL households was much sharper in the 1980s. This is not surprising when we consider that the major share of regular wage workers is employed in the relatively high-paying public sector and there was indeed a decline in new employment in this sub-segment in the 1990s.

An important, related question is: how disadvantaged are workers in the informal sector compared to their counterparts in the formal sector? This can be gauged, in part, by focusing on the earnings of *wage earners* only (Figure 2.2); individual earnings are better defined for this group compared to self-employed workers. Using the wage earnings of regular and casual workers as a proxy for the gap between the formal and informal sectors, evidence from the NSS surveys shows that earnings of regular salaried workers were almost 2.5 times higher than those of casual

**Figure 2.2 Ratio of Regular Salaried Wages to Casual Wages**

Source: Staff estimates using NSS.

workers in 2004–5, and this gap has grown since the 1980s. The relative wage gap varies across the industry groups in urban areas. It is higher in the service sectors, being greatest in business and financial services, compared to manufacturing.

However, average wage comparisons are also affected by differences in individual characteristics like sex, age, level of education, and other social and economic barriers to entry into the formal and informal sectors. Unni (2006) fitted earnings functions separately for regular and casual workers to arrive at predicted wages for these workers. Her results show that after controlling for individual, household, and other characteristics that may affect the wages of the workers, the absolute differences between the predicted and actual wages of regular and casual workers were quite large for both men and women. But, over time, these differences declined for men and increased only for women in urban areas. This difference in the trends of the predicted and actual wage gaps between regular and casual workers can be explained in terms of the changing structure of labour demand. The evolution of the gap between predicted and actual wages suggests that the demand for women in regular jobs increased while the demand for males in casual jobs increased faster than the demand for them in regular jobs (Table 2.1).

**Table 2.1 Ratio of Predicted Wage for Regular Salaried Workers to Predicted Wages for Casual Labour, All India**

Sector	Rural Male		Rural Female	
	1993–4	1999–2000	1993–4	1999–2000
Agriculture	2.40	2.48	1.77	0.50
Non-agriculture	4.81	2.47	8.71	3.66
All	5.11	3.09	4.05	4.94

Sector	Urban Male		Urban Female	
	1993–4	1999–2000	1993–4	1999–2000
Agriculture	3.28	2.54	2.81	8.49
Non-agriculture	1.92	1.89	2.01	3.57
All	2.16	2.15	2.08	4.73

Source: Computed from Unni (2006).

Another factor which may have contributed to rising differentials is the rising premium for skills during the 1990s. The ratio of skilled to unskilled worker wages (defined in terms of levels of education) showed an increase between 1993–4 and 1999–2000, implying a movement towards skilled workers. This was true for all the one-digit industry groups (Unni and Rani 2004). The improvement in the skill premium implied an increase in the earnings gap between skilled and unskilled workers. To the extent regular workers were more likely to be skilled and in the formal sector, the rising skill premium also implied a rise in inequality of earnings between formal and informal sector workers.

### INFORMAL EMPLOYMENT IN THE MANUFACTURING AND TERTIARY SECTORS

In 2000–1 there were 14.8 million enterprises in the manufacturing sector, employing 45.7 million workers. Of these, only 1 per cent of enterprises and 26 per cent of workers were in the organized sector.<sup>5</sup> Two-thirds of the workforce in the unorganized sector worked in own-account enterprises, based on self-employment and, primarily, family labour. Less than 20 per cent of workers were employed in larger unorganized

enterprises with 6–10 workers each. In rural areas, unorganized employment was more strongly dominated by own-account enterprises (79 per cent), while in urban areas the picture was more balanced. Over the 1990s, the structure of unorganized manufacturing remained more or less stable, with only a slight decline in the share of own-account enterprises.

While own-account enterprises had a large share in employment, they produced only 39 per cent of value-added in the unorganized sector. The most productive enterprises were the relatively larger ones employing 6–10 workers each; they produced almost the same share of value-added as own-account enterprises, but with a workforce that was a third of the size of the latter.

In the mid-1990s, unorganized manufacturing did better than its organized counterpart, both in terms of wage growth and employment growth. The average per annum rate of growth of wage earnings in the unorganized sector, 5.1 per cent, was much higher than that of the organized sector earnings, 1.2 per cent (Unni 2006). Similarly, while there was a virtual stagnation in employment in the organized manufacturing sector, employment in informal manufacturing grew by 2.1 per cent per annum.

The mid-1990s period also saw a lot of churning in unorganized manufacturing. In the early part of the decade, a few industries in the sector saw growth in value-added, employment, and labour productivity. Unni (2006) categorizes these as Category A industries (Table 2.2). Most of the sector saw declining value-added. However, by the mid-1990s, the unorganized manufacturing sector found its feet and grew rapidly in terms of both value-added and employment. In this period, a large number of industries shifted categories and grew in terms of value-added and productivity,

while generating quality employment (Category A). These included organic industries (food and paper), chemicals (including pharmaceuticals and cosmetics), metal-based industries, and machinery. Another group of industries (Category B) grew in terms of value-added but faced declining labour productivity. This group included industries such as tobacco, wood products, and wearing apparel. Only a small, third group of industries (Category C) did not grow in terms of value-added at all. The improvement was relatively broad-based, with most industries moving up the ladder. It is also interesting to note that this upswing happened despite the continuing de-reservation of industries which were earlier reserved for the small-scale sector.

The growth in wage earnings and employment across the different manufacturing groups in the informal sector mostly reflected productivity growth, but there were exceptions.<sup>6</sup> In Category A industries, the benefits of growth were transferred to the workers in the form of growth in employment and/or higher wages. In Category B industries, there were different experiences. In some industries (wearing apparel, wood and rubber products), both employment and wages grew despite declining labour productivity; in others (tobacco), employment grew even as wages declined. Overall, it seems clear that in the case of some growing industries (Category A), growth in employment was mainly due to pull factors. In the case of other categories of industries (B and C) push factors were likely more important (Unni 2006).

Despite the faster growth of labour productivity and earnings in the unorganized manufacturing sector, the gap between the organized and the unorganized sectors remained large. This issue is discussed in more detail in Chapter 3. How can these sets of findings be reconciled? Two points seem

Table 2.2 Category-wise Classification of Growth and Non-Growth Industries in the Unorganized Sector

	Specification	1989–90 to 1994–5	1994–5 to 2000–1
Category A	1 Growing value-added, growing employment, and growing labour productivity	Fabricated metals; Office, accounting, and computing machinery	Fabricated metals; Food products; Paper products; Publishing, printing, and reproduction of recorded media; Chemical and chemical products; Basic metals; Other non-metallic mineral products; Machinery and equipment; Electrical machinery; Radio, television, and communications equipment and apparatus; Motor vehicles
	2 Growing value-added, declining employment, and growing labour productivity	Leather products	Leather products; Textiles; Transport equipment; Other manufacturing
Category B	3 Growing value-added, growing employment, and declining labour productivity	Wearing apparel (excluding tailoring); Dressing and dyeing of fur	Wearing apparel; Dressing and dyeing of fur; Tobacco products; Wood products
Category C	5 Declining value-added, growing employment, and declining labour productivity	Food products; Basic metals	–
	6 Declining value-added, declining employment, and growing labour productivity	Tobacco products; Radio, television, and communications equipment and apparatus; Transport equipment	Cotton ginning; Medical, precision, and optical instruments; Watches and clocks
	7 Declining value-added, declining employment, and declining labour productivity	Rubber and plastic products; Other non-metallic mineral products; Paper products; Cotton ginning; Textiles; Wood products; Publishing, printing, and reproduction of recorded media; Chemical and chemical products; Machinery and equipment; Electrical machinery; Medical, precision, and optical instruments; Watches and clocks; Motor vehicles; Other manufacturing	Rubber and plastic products; Office, accounting, and computing machinery; Leather products

Source: Unni (2006).

particularly relevant. First, the productivity and wage gaps between the organized and unorganized sectors were huge to start with. Detailed evidence presented by Little et al. (1987) shows that the wage gap between the classes of enterprise at the extremes of the wage ladder could have been of the

order of 3:1, or even more, after controlling for the human capital attributes of labour. Thus, a short period of higher rate of growth in unorganized sector wages would not have been sufficient to produce a significant dent in the wage gap. Second, the wage gap increased differentially for different

types of unorganized enterprises, though probably the least for the registered small-scale sector (DMEs)<sup>7</sup> (see Table 2.2).

The major player in the absorption of labour outside agriculture since the 1990s is not manufacturing, but the tertiary sector. The importance of the tertiary sector in employment generation has increased in spite of a significant negative trend in the growth of public services. However, an important question is: is labour being absorbed at a reasonable or growing income level in the tertiary sector or is it being pushed into it for lack of alternative opportunities? The next chapter provides detailed analysis on this point. However, evidence suggests that there has been an outward shift in the distribution of earnings in the tertiary sector, so that earnings at all levels have increased. Labour absorption has also been proportionately larger in the first and fifth income quintiles of the distribution, with relatively less absorption in the middle range. This implies an increase in inequality in the bottom half of the distribution—a trend more prominent in the urban economy. Disaggregating the tertiary sector by its 1-digit components, it is seen that these effects are mild in consumer services, but much more striking in business services and the public sector.

The overall evidence, thus, is that there has been a movement of labour from low productivity agriculture to the higher productivity tertiary and manufacturing sectors where earnings are higher and rising. This development can be broadly considered to be welfare improving and, to some extent, voluntary. However, the non-agricultural sectors have seen a relatively higher rate of employment growth in the informal or unorganized sector. The welfare implication of this has to be interpreted carefully. On the one hand, the trend cannot be equated to decline in the returns from working, since casual wages are

higher in these off-farm activities and there is a reduction in the incidence of poverty.<sup>8</sup> But this absolute improvement in living conditions is accompanied by a perceptible trend of increasing inequality—with the increase in differentials favouring the skilled and the more educated, and also the better-off sections of the self-employed.

A particularly important issue is the problem of the ‘missing middle’ firm size. In manufacturing, while there has been some redistribution of employment from the largest to smaller size groups within the organized sector, the structure of employment on the whole displays conspicuous ‘dualism’. There are two prominent modes or concentrations of employment, at the low and high ends of the spectrum, and a large, persistent differential in productivity (and earnings) between these two groups. The scenario underlines the difficulty faced by smaller firms in graduating to become middle-size units. This is explored in more detail in the next chapter. A similar phenomenon of the ‘missing middle’ is suggested by the data on earnings distribution presented for the tertiary sector (see Chapter 3).

The persistence of dualism reduces economic welfare, from both the efficiency and equity points of view. Dualism is a constraint on the healthy, long-run development of the economy. It suggests a need for policies that ease constraints on the growth of small enterprises. Credit, technology, and labour regulation are critical areas which are particularly relevant here (see Box 2.1 for a discussion on successful international experiences in promoting small and medium enterprises, or SMEs). The development of sub-contracting is one way in which the large-scale sector seeks to rectify the problem of dualism. There is some evidence of this happening in recent years in India but there are important concerns about the specific way in which the sub-contracting system

### Box 2.1 Examples of Successful SME Promotion

While large firms in India may be important for setting the pace of economic and technological change, the experience of the 1990s shows that most new employment will continue to be generated by small and medium enterprises (SMEs). What does international experience tell us about how SMEs grow, and what is their relationship with larger firms? What can be learnt from public initiatives to promote SMEs in countries which have done so successfully?

Open, competitive sub-contracting seems to be the dominant pattern of relationship between large firms and SMEs in India currently. Large firms are disinclined to combine the different stages of manufacture in-house, with expensive permanent employees, and hence source some components and services from SMEs. The advantage of this approach is that it allows costs to be driven down to meet domestic and international competition. The disadvantage, however, is that the jobs generated are mostly low-paid and insecure. There are also economic costs to not investing in and upgrading labour.

Conditions in Mexico are similar to India—99 per cent of firms are small- and medium-sized enterprises. The Integral Quality and Modernization Program (CIMO—now renamed as PAC), established in 1988, has been reaching small- and medium-size enterprises and assisting them with upgrading worker skills, improving quality, and raising productivity. All states and the Federal District of Mexico have at least one CIMO unit each. Most units are housed with business associations that contribute office and support infrastructure. The promoters organize workshops to provide training and technical assistance services, identify potential local and regional training suppliers and consulting agents, and actively seek out enterprises to deliver assistance on a cost-sharing basis. CIMO is expanding in two directions—assisting enterprises with specific sectoral needs and providing an integrated package of services that includes information on technology, new production processes, quality control techniques, marketing, and subsidized training.

Alternative examples come from countries like Italy, Germany, Japan, Denmark, and Spain where a significant share of production takes place in SME clusters. These clusters combine the advantage of smallness with economies of scale and scope, which big firms enjoy. They can give small firms the strength to choose between supplying to large firms and competing with them. This can lead to rapid economic growth, good wages, and good jobs. Such flexible specialization, however, requires some degree of trust between entrepreneurs, and between them and their workers.

Some networks of firms, including innovative and successful ones in fast-developing industries, develop based on economic interest and personal friendship. Others develop within business associations of firms in the same industrial sector or because they share the same place, like an industrial estate. However, in most cases, effective networks of cooperation, capable of making SMEs competitive in national and world markets require deliberate policies from national or local governments to encourage this kind of development.

In Italy, Germany, and Denmark, this 'push' came from the government (*a*) providing collectively 'real services' like training, consultancy, and design, which single SMEs could not afford by themselves; and (*b*) encouraging and supporting consortia or other local arrangements, which gave clusters of inter-dependent SMEs access to European and world markets. In Italy, local and regional governments, working with private enterprises and sometimes trade unions, set up institutes to provide technical services, research and development testing, feasibility studies, and advice on management and marketing. The strategy was to develop what already existed in the region and then to find ways of diversifying into new fields and markets. In Germany, the state

government promoted the setting up of a network of technology transfer centres closely linked to local chambers of commerce. These centres are demand-driven and almost self-funded. They usually specialize in particular industries and technologies, and often refer clients to other centres with the necessary expertise. In Spain, the Valencian regional government established a high-profile agency named Impiva. Impiva has two kinds of institutes: technological institutes and local business innovation centres. Some technological institutes are designed to help a distinct industrial sector. Others aim to develop particular technologies, like biomechanics or optics, which are used in diverse industries. Each institute is linked to an association of entrepreneurs who elect a majority of its supervisory board and determine the services the institute will provide for a fee. The institutes are meant to become self-financing.

Sources: Holmstrom (1999); Tan et al. (2004).

develops in an economy. We discuss this in more detail in the next chapter.

### **LABOUR ABSORPTION IN THE AGRICULTURAL AND RURAL SECTORS**

Rural employment, which accounts for a little more than three-fourths of all employment in India, is overwhelmingly informal in nature and dominated by agriculture. In 2004–5, about 56 per cent of rural workers were self-employed, while another 36 per cent were casual workers.<sup>9</sup> Further, while rural employment is diversifying into sectors such as transport, storage and communications (3 per cent of all employment in 2004–5), construction (6 per cent), trade and hotels (7 per cent), and manufacturing (8 per cent), agriculture and allied activities still account for 70 per cent of rural employment. Generating rural, non-farm employment will require improving the investment climate for small and medium industries, as discussed earlier, and addressing regulatory barriers that constrain non-farm activity in rural areas. In the medium term, however, the role of agriculture will remain critical, both because of its large share in employment and because growth in agriculture will create a demand for non-agricultural goods, services, and jobs.

Growth in agricultural employment slumped between 1993 and 2000, before regaining some

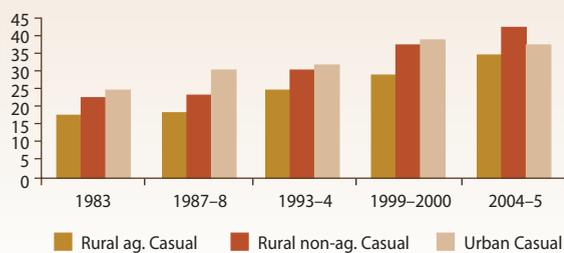
strength. Agriculture accounted for a mere 23 per cent of the *increase* in employment over the 1993–9 to 2000 period, declining massively from its 44 per cent share during the 1983–93 period. There were also important changes in the structure of employment within agriculture. Records reveal a surprising slump in non-cultivation related employment in the 1990s, after rapid growth over the 1983–93 period. This slump, in ‘person’ days of employment generated, affected all activities except forestry. The decline came on the back of a fall in growth of cultivation-related employment (Table 2.3). Whatever employment was generated came mainly from activities such as forestry and plantation. The agricultural and allied sectors regained some strength after 2000, accounting for 30 per cent of new rural employment generation between 1999–2000 and 2004–5, but not to the level witnessed in the 1980s.

The migration of labour from agriculture to non-farm jobs was mostly a result of ‘pull’ factors, not ‘distress driven’. While both agricultural and non-farm rural casual wages grew steadily in real terms, non-farm rural casual wages consistently exceeded farm wages (Figure 2.3). This suggests that more non-farm opportunities were available, pulling labour away and also tightening the labour market in agriculture. Such a shift may also indicate declining underemployment in agriculture.

**Table 2.3 Growth Rate of 'Person' Days, by Operation**

Operation Type	1983 to 1987-8	1987-8 to 1993-4	1983 to 1993-4	1993-4 to 1999-2000	1983 to 1999-2000
Total					
Cultivation	0.9	2.5	1.8	0.5	1.4
Forestry	-5.8	-3.3	-4.4	2.0	-2.1
Plantation	3.0	11.3	7.7	0.4	5.0
Animal husbandry	2.2	2.8	2.5	-0.3	1.5
Fisheries	-3.4	9.1	3.6	-7.9	-0.8
Agriculture other than cultivation	3.5	7.7	5.9	-2.5	2.7
Total agriculture	1.4	3.7	2.7	-0.2	1.7
Non-agriculture	6.8	0.7	3.2	3.2	3.2
Total	2.7	2.9	2.9	0.7	2.0

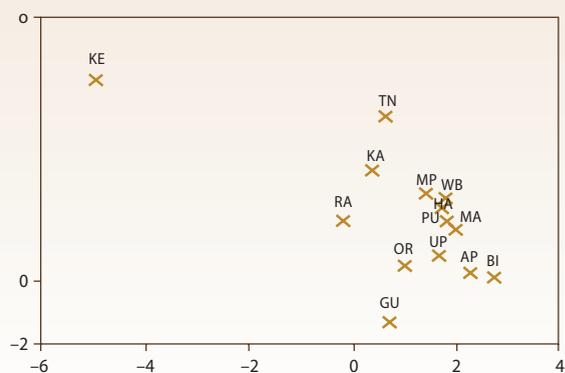
Source: Srivastava (2006).

**Figure 2.3 Daily Real Wages in Non-agricultural Occupations (in Rs)**

Source: Staff estimates using NSS.

Overall, the shift of labour away from agriculture is a part of the structural transformation of a developing economy. Still, as district-level studies show, some of the movement may also represent a distress-induced shift—by self-employed agricultural workers leaving farming to become casual labourers. The slowdown in agricultural growth, falling productivity, uncertainty of crop yields due to low rainfall (especially in rain-fed areas), degradation of lands, and the depletion of water resources worked as factors that pushed marginal farmers away from agriculture.

With agriculture likely to remain the primary employer of India's labour force in the medium term, its employment prospects remain a critical issue. Currently, the sector employs about 52 per cent of the total workforce. Though shifting some part of this workforce out of the sector and into more productive jobs in manufacturing and services will be necessary, the scope for doing so in the medium term is limited. Thus, raising the demand for labour within agriculture, while raising productivity, is important. Here, there has to be a crucial distinction between labour-using and labour-saving ways of increasing productivity of labour. Some types of change (for example, mechanization of specific agricultural operations) may increase labour productivity but will do so at the cost of reducing the demand for labour, as Figure 2.4 shows. Other types of agricultural developments, however, could increase productivity at the same time as they increase the use of labour. These could include: the spread of labour-intensive HYV rice production to the north-eastern regions where water is more available and current productivity is low, more emphasis on sustainable irrigation (like the government's plans under the Bharat Nirman Yojna), and further diversification into high value-added and more

**Figure 2.4 Growth Rate of Labour Productivity and Employment across States**

Source: Srivastava (2006).

labour-intensive products. Srivastava (2006) studied variations in labour use in crop cultivation per net sown hectare across states, in the four years for which NSS data are available. His results suggest that a 1 per cent increase in the growth rate of labour days in cultivation, per hectare of sown area, requires a growth rate of 2.5 per cent in gross irrigated area, or an annual shift of 0.4 per cent in favour of labour-intensive crops, or a 5 per cent growth rate in agriculture productivity (agriculture value-added) per hectare per year.

The analysis suggests that for the country as a whole, increase in agricultural value-added has a large positive impact on labour use, per acre, in crop cultivation. This would imply that agricultural growth has been and is still very labour-intensive. One of the primary features of the agricultural situation in the 1990s was the slowdown in the rate of growth of the sector. Several reasons have been put forward for this. Some of the prominent ones are: slowdown in public investment in agricultural infrastructure, irrigation, agricultural extension research, and so on. Irrigation may even have declined in some areas due to lack of maintenance. This is likely to have manifested itself in a slowing down of growth in both gross cropped area and agricultural productivity.

Another important reason that may have led to a slowdown or even decline in employment growth in agriculture is the increasing use of labour-saving technological changes. These manifest themselves through high rates of mechanization and switchovers to crops and agricultural practices that require less labour. The cost-of-cultivation data, collected by the Ministry of Agriculture, show low and negative employment elasticity for many crops, especially in the north-western states. The impact of these changes would also depend upon the predominant presence of relatively large employers in any region. Thus, the extent to which labour-saving practices are adopted

is likely to depend upon the rate of increase of mechanization, wage levels, growth in wages, tightness in labour markets, extent and growth of non-farm employment, and area under medium-large farms. Also, changing attitudes towards manual agricultural work are quite evident from a number of studies. The growth in education and rural incomes, in conjunction with the disinclination of workers to perform manual agricultural work, may be leading to a general withdrawal of the workforce from agriculture, and the withdrawal of specific segments of the agricultural workforce (women, children) in some areas.

### **Future Prospects**

An important implication of this analysis is that agricultural growth so far has been labour-intensive and the decline in employment, observed in the second half of the 1990s, was partly due to a slowdown in agricultural output. Thus, employment can be expected to accelerate with the recovery of output growth in the sector. Nevertheless, employment prospects would be enhanced with the following:

- Further spread of labour-intensive HYV rice, especially in the north-eastern regions where water is more available but productivity is currently low.
- More emphasis on sustainable irrigation (similar to what the government is currently planning under Bharat Nirman) through public and community investments in the expansion, maintenance, and rehabilitation of irrigation systems.
- Diversification of agriculture: Some products, such as horticulture, have almost twice the labour intensity as cereals (see Box 2.3). While horticultural production growth is already accelerating, policy attention will help to sustain this trend. It will be important to strengthen links to market outlets (for example, through

- investments in roads, markets, electricity, and information systems) so that farmers can produce more crops and livestock products for the market. To help farmers cope with changing markets and production systems, investments must be made in financial systems for managing risk (for example, futures markets, crop insurance schemes, warehouse receipt systems, commodity exchanges, and social safety nets).
- Supporting the growth of agro-processing: Currently, only 2 per cent of fruits and vegetables are processed in India compared with 30 per cent in Thailand, 70 per cent in Brazil, and 80 per cent in Malaysia.
  - Off-farm employment, such as animal husbandry, increases the incomes of rural families and also improves the economic welfare of families that are dependent on agriculture by reducing the pressure on farmland and exclusive agricultural activities. Thus, developments which increase off-farm employment should be encouraged, even if they reduce employment in the crop-producing sector. A good example of a promising initiative to promote off-farm female employment comes from the Self-Employed Women's Association (SEWA) movement in India (see Box 2.2).

### Box 2.2 The Self-Employed Women's Association (SEWA)

The Self-Employed Women's Association (SEWA) was set up in 1972 in Ahmedabad, Gujarat, as a membership organization of poor women working in the informal sector. From its small beginning in 1972, SEWA's membership has grown to over 1.2 million members in seven states in India. Recently, more than 100,000 new members have joined each year. A structure has evolved that gives SEWA great flexibility to grow and respond to its members' needs. Apart from their participation in the union's formal election and governance arrangements, members are engaged in three main ways: (a) through a union, with both urban and rural branches, that helps members demand fair treatment and access to justice, markets, and services; (b) through cooperatives that help members produce and market goods, and build their assets; and (c) through member services, which are financed partly through user charges, partly by donors, and partly by government departments that have been unable to provide the services for which they are responsible by law.

#### Cooperatives

SEWA cooperatives in rural areas help women improve the quality and designs of the handicraft and woven items they produce for sale. In most cases, the women are already highly skilled in embroidery and weaving or other crafts. SEWA's task is mainly to ensure consistent quality and timely delivery. Cooperatives have also promoted new agricultural products and techniques that add value to traditional products. For example, tree nurseries are a new activity in areas where traditional tobacco workers are being displaced. Milk cooperatives improve cattle breeding, as well as milking and milk handling techniques, raising the value of sales. Salt farmers are being shown how to produce higher-value industrial salt rather than lower-value edible salt. Cooperatives also provide their members with information on market prices for traditional and new products. SEWA has also become directly involved in marketing what its members produce.

By far, the largest cooperative is SEWA Bank. At the end of fiscal 2003–4, deposits totalled \$14.4 million in 257,000 accounts, and there were 53,000 outstanding loans totalling \$3.9 million (for an average loan size of about \$73). Historically, SEWA Bank's loan recovery rate has been about 96 per cent. In 2003 and 2004, the Bank started innovative mobile 'doorstep banking' arrangements so that members would not have to interrupt their daily livelihood activities to go to the bank. It also offers training courses in financial planning. SEWA Bank has introduced the habit of regular saving to tens of thousands of poor women. Members pay

significant interest rates to SEWA Bank (currently over 20 per cent a year, while the rate of inflation is around 5 per cent), but no longer feel powerless and exploited by moneylenders.

### **Member Services**

SEWA concentrates its member services in four areas: health care, childcare, insurance, and housing. In SEWA's experience, the security of a poor woman's livelihood is not complete without access to these four basic goods. If a government-provided service functions well, then SEWA disseminates information on how to use it; if a service needs improvement or reorientation, SEWA tries to influence decision-makers accordingly. If all else fails, it provides the service on a sustainable basis.

SEWA has pioneered the provision of insurance for poor women, drawing on both the SEWA Bank and government insurance companies. Typically, a woman saves Rs 1,000 (about \$22) and puts the money in a fixed deposit. The annual interest pays the premium and ensures uninterrupted coverage, which includes maternity benefits, as well as payments in the event of illness, death, and loss of property. In 2003, more than 110,000 members were covered: over 6,000 claims were paid for a total of close to \$180,000 (with the average payment being about \$30). SEWA is now planning an insurance cooperative, drawing on the example of the SEWA Bank.

### **Key Factors behind the Success**

SEWA's impressive record in scaling up its membership and activities over the past three decades offers useful lessons. First, member-based organizations promote ownership and help ensure that activities are based on members' demands and needs. Such organizations can harness hitherto untapped energy and generate it anew once members attain self-confidence and learn new skills. Second, an organization based on values must emphasize them constantly. If it does so, it can maintain consistency of purpose and function very flexibly. Values generate strong loyalty among staff and members, as well as support from the wider public, and underpin the patience and perseverance required to change difficult policy environments. Third, a flexible style of working encourages learning and innovation and, therefore, facilitates adaptation to changing circumstances, including the ability to see crises as opportunities. At the same time, flexibility motivates high performance and low turnover among staff, and makes it possible to take advantage of partnerships with external actors. Finally, leadership skills are crucial, not only to define and uphold the vision of an organization, but also in establishing management and behavioural practices that minimize social distance between the management cadre and the organization's members (or clients). Moreover, with proper attention to training and practical research, an organization can find and develop new leaders among its members or clients, despite their poverty and lack of formal education, and in this way ensure its continuity and growth.

*Source: Blaxall (2007).*

## **POLICIES AND REGULATIONS TO SUPPORT INFORMAL SECTOR EARNINGS AND PROMOTE FORMALIZATION**

Completing the agenda of market reforms by changing policies and regulations that currently constrain trade, marketing, and large-scale production will be crucial for raising employment and earnings in the informal sector, including in agriculture. Regulations affect two important

rural activities in particular: marketing of agricultural produce is restricted under the Essential Commodities Act and the gathering of forest products is restricted by the Indian Forest Act (Saxena 2003). At present, farmers in Punjab, Haryana, Andhra Pradesh, and Karnataka can be prevented from selling their produce outside their states. Storage of produce is restricted in states such as Gujarat (for pulses), Maharashtra, Kerala,

Andhra Pradesh, and West Bengal. Storage rent is regulated by the states' cold storage regulations in West Bengal, Uttar Pradesh, and Bihar. All these restrictions serve to depress demand for farm produce, as well as farmers' earnings. In the case of forestry, some 100 million forest dwellers whose livelihoods depend on forestry products are prevented from harvesting non-timber forest products like fruits, nuts, flowers, and twigs—activities that can be pursued in a sustainable manner. The harvesting of prosopis, its conversion into charcoal, and its transportation for sale—activities that can potentially provide significant off-farm employment—face numerous restrictions in states such as Gujarat and Tamil Nadu.

Regulatory reforms that address these barriers will increase employment and the earnings of the poor in the informal sector. This includes amending Acts such as the Essential Commodities Act, phasing out levies and monopoly controls, de-reserving agro-based and food-processing industries, de-controlling sugar and removing sugar from the list of commodities distributed through the public distribution system (PDS), and removing restrictions on the export of agro-products. Subsidies for food distribution and inputs (such as fertilizers), and procurement schemes such as the minimum support price (MSP) policies,

currently accounting for more than 5 per cent of national gross domestic product (GDP), can be more narrowly targeted to promote high value, labour-intensive crops. A good example of the success of regulatory reforms is the licensing requirements for milk processing in Uttar Pradesh—the easing of these requirements led to a doubling in milk processing capacity in four years. Another example of a more comprehensive government intervention is the Maharashtra horticulture promotion programme (Box 2.3).

Over the long term, however, informality can impose considerable costs on the economy; policies will be needed to encourage the informal sector to become formal. Informality is encouraged in an economy when firms seek to avoid the transaction costs of complying with regulations concerning registration, licensing, tax administration and tax policies, and laws that reduce flexibility. Firms can also have an incentive to stay informal to be more competitive vis-à-vis formal sector firms that have to comply with regulations. In the long run, however, the costs of informality can be high for firms and for the economy. Firms may avoid official taxes but may end up incurring higher costs from making payments to corrupt officials or private extortionists due to their lack of legal status and bargaining power. Informal

### Box 2.3 Horticulture Development in Maharashtra

The Maharashtra Horticulture Development Programme, which is linked with the state's Employment Guarantee Scheme (EGS), aims to accelerate the expansion of horticultural production and generate additional employment in rural areas. While food crops can provide employment of approximately 100 to 115 'person' days per hectare per year, horticulture production requires up to 275 'person' days per hectare per year. The programme, applied to 25 fruit crops, spices intercropped in coconut plantations, and medicinal and aromatic plants, was open to all farmers, with a minimum required area per project. The scheme provided 100 per cent subsidies on wages and material inputs (planting materials, fertilizers, and agrochemicals) to small and marginal farmers, Scheduled Castes (SCs), Scheduled Tribes (STs), and other ethnic minorities, on a declining scale—the subsidies were phased out by the third year. All other farmers received subsidies of 100 per cent on wages and 75 per cent on material inputs, on a declining scale, over

three years. Wages were given in cash while the material inputs were supplied in kind. The 'grant' or subsidy averaged Rs 7,709 (\$161) per farmer beneficiary.

To support the scheme, the government of Maharashtra implemented complementary initiatives that ensured the supply of key inputs and services. During the first seven years of the project, 140 government nurseries and 24 nurseries in four agricultural universities were established to supply high-quality planting materials. Planting material supply was further expanded by the entry of approximately 1,670 private nurseries. Pesticide residue testing laboratories of international standards were established in Pune and Nagpur. A website ([agri.mah.nic.in](http://agri.mah.nic.in)) on agriculture-horticulture was launched by the Department of Agriculture to disseminate information about the programme. A Central government-sponsored scheme for sprinkler and drip irrigation facilitated the expansion of horticulture and floriculture production. In view of water scarcity conditions in many areas, the scheme aimed to increase efficiency in water use. The drip/sprinkler scheme provided subsidies equivalent to 75 per cent of cost of equipment for all farmers and 90 per cent of costs for SCs/STs, up to a limit of Rs 32,000 per individual, the cost of which was shared between the Central and state governments with a ratio of 75:25.

Public and private investments further supported the growth of the sector. The Maharashtra government's investments in infrastructure, such as building the Pune–Mumbai expressway and other roads, and upgrading airport and port facilities, reduced transportation costs and helped to increase the competitiveness of Maharashtra's products domestically and in the export market.

Private sector initiatives and investments also contributed. Large farmers and corporate investors in horticulture and floriculture—who invested in supporting marketing infrastructure such as pre-cooling facilities, cold storage, refrigerated transport, and agro-processing—promoted production and organized supply from other (smaller) farmers to meet the bulk requirements for export and local demand, and provided technical advice to meet export-quality requirements. Increased private participation in input supply (fertilizers, agrochemicals, and improved seeds) increased the accessibility of key farm inputs to farmers. Commodity marketing organizations, including Mahagrapes, Mahamangoes, and the Western India Floriculture Association, were instrumental in promoting exports of local products.

The programme has been a success from both the horticulture and employment perspectives. Of the 1 million hectare increase in area planted with fruits in the state between 1989–90 and 2000–1, 96 per cent was supported through the horticulture-linked EGS scheme. It directly created an estimated 213 million 'person' days of work, or approximately 807,000 'person' years (assuming 220 days of work per year) over the past decade. Since the fruit orchards, once initiated, would normally require continuous employment to meet day-to-day labour needs, the scheme also opened opportunities for permanent full-time employment for agricultural labourers. In addition, the increased fruit production generated positive multiplier effects in terms of increased labour demand arising from increased demand for inputs and marketing services (transport, storage, packaging, processing, and trading). In the future, in view of the rapid uptake of the technologies, the challenge will be to more exclusively target assistance to poor, small, and marginal farmers who are more capital constrained.

Source: World Bank (2005d).

sector firms have less access to and face high costs of capital, unreliable access to electricity, and business services. By becoming formal, firms can enjoy the benefits of property rights and contract enforcement, and access to finance, infrastructure, and tax concessions offered by governments. These conditions, in turn, translate to lower investments and productivity growth in the economy as a whole.

International evidence suggests that governments need to take two approaches to encourage firms to become formal (World Bank 2005f). First, recognizing that formalization will take time, the Government of India can provide a supporting environment for the growth of productivity and improvement in working conditions in the informal sector. The key step here will be to remove disincentives to growth—such as reserving sectors for small-scale firms, regulations that raise transactions costs and costs when firms grow beyond a certain size, and other regulatory barriers discussed earlier. The other prominent example of a regulation that taxes firm growth in India is Clause VB of the Industrial Disputes Act which severely restricts the rights of firms employing more than 100 workers to retrench labour. The costs of this Act are discussed in detail in Chapter 5 of this study. In general, procedures can be simplified (Chen 2006). Governments can directly and indirectly (for example, through private sector associations) provide business services and access to capital for informal sector firms to grow. Second, the Indian government can gradually improve enforcement by raising incentives for firms to join the formal sector and impose penalties for non-compliance with formal sector regulations. A whole range of tax and regulatory reforms that reduce concessions to informal sector firms, and lower taxes, social security contributions, and regulatory burdens on formal sector firms, can be employed for this purpose. In implementing the second step to increase the penalties for non-

compliance, however, the government will need to be careful. Eliminating informality can lead to high costs in the short term by throwing firms and workers out of jobs. Rather, the spirit should be to encourage growth and increase the incentives for firms to become formal, because this will enable them to gain access to services and benefits and grow faster.

## NOTES

1. Henceforth, the terms 'unorganized' and 'informal' are used interchangeably.
2. The NSS 55th round provided information on the affiliation of workers with different types of establishments, public and private, and the class of employment size to which they belonged. Information on UPSS workers was broken down into 'formal' and 'informal' categories on the basis of the following criteria: (i) all employees in public sector undertakings were considered to be in the formal sector; (ii) private sector wage workers working in units that had electricity and employed 10 or more workers, or units with no electricity but employing 20 or more workers, were considered to be in the formal sector; and (iii) self-employed workers with higher secondary or more education were considered to be in the formal sector.
3. This is not surprising given that over two-thirds of the salaried sector is public enterprises; the public sector had very high rates of hiring in the 1980s which slowed down in the mid-1990s.
4. This category includes own account (that is, self-employed) workers and unpaid family workers.
5. The data on the organized sector is obtained from the Annual Survey of Industries (ASI). The ASI collects two separate sets of data called the Census Sector (referring to a census of enterprises employing more than 100 workers each) and the Factory Sector (referring to a sample survey of enterprises employing 10–100 workers each). We have used both sets to show the structure of the industry, but in a later limited analysis of organized sector data, only used the Census Sector data.

6. Unni (2006) distinguishes three categories of industries, designated as follows: Category A consists of growth industries with improving quality of employment. There are two groups of industries within it—both have growing value-added and labour productivity, but one has growing employment (A.1) and the other has declining employment (A.2). Category B comprises growth industries that have declining labour productivity, but show growing value-added. Category C has the non-growth industries (declining value-added), with declining labour productivity and declining employment.
7. DME stands for Directory Manufacturing Enterprises, meaning enterprises registered in directories and employing six to nine workers each.
8. See Maloney (2004) for evidence from Latin America on how the informal sector can be viewed as an unregulated micro-entrepreneurial sector with voluntary participation by workers, and not as a residual from the segmented formal sector.
9. World Bank staff estimates.

# 3

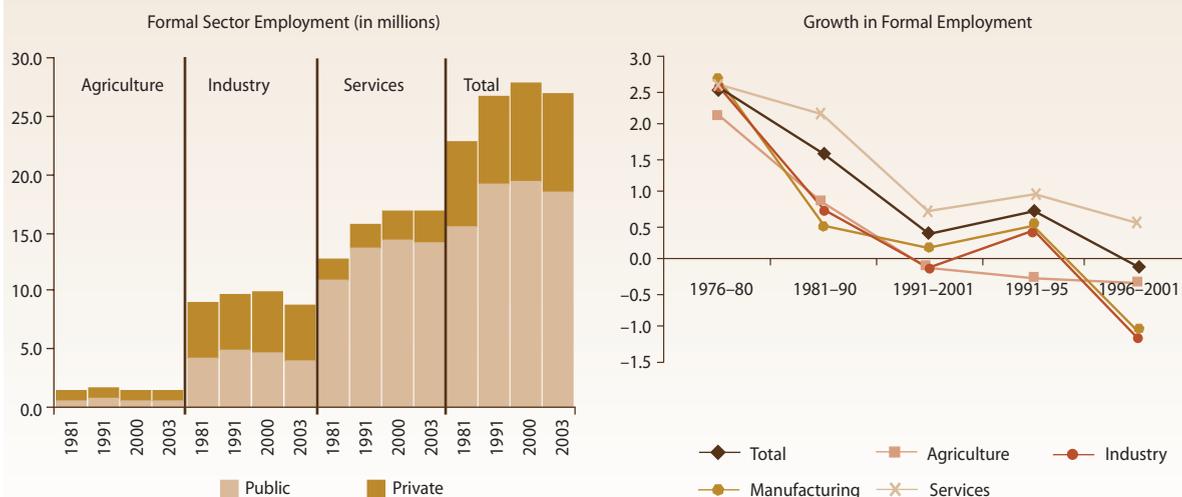
## Employment in the Formal Sector

This chapter examines the trends in formal sector employment in the secondary and tertiary sectors in India over the last two decades. In formal manufacturing, an analysis of the elasticity of employment to gross domestic product (GDP) shows that three factors were responsible for low employment growth in the 1990s: (i) an adverse movement of the terms of trade against producers; (ii) the adjustment of the economy to trade liberalization in the early 1990s—while export-intensive sub-sectors witnessed increased employment growth, import-competing sectors saw a slowdown in employment, and; (iii) the choice made by formal sector firms to raise wages and productivity of existing workers rather than increase employment. The tertiary sector accounts for most of the growth in formal sector employment in recent years in India. But, like manufacturing, employment in this sector too displays a dualistic pattern. At one end are the main sources of growth in the formal services sector—the rapidly evolving information technology enabled services (ITES) and financial sectors. But the pull of these sectors on overall labour markets is muted, given that they employ only 7 million workers out of a labour force of more than 400 million. Instead, most jobs are being created in the trade, hotels and restaurants, construction, and community services sectors where the bulk of the jobs are informal and of low productivity. Thus, as in manufacturing, workers in the tertiary sector are clustered at two ends of the wage distribution scale.

### EMPLOYMENT IN ORGANIZED SECTORS<sup>1</sup>

Employment growth in the formal ('organized') sectors in India has been disappointing in spite of a fairly healthy rate of growth of output. Although likely an underestimate, according to official figures, employment in the organized sector grew minimally from 26.7 million in 1991 to 28 million in 2001, and then declined to 26.4 million in 2004. Manufacturing employment fell from 6.3 million in 1991 to 5.7 million in 2004.<sup>2</sup> The bulk of manufacturing jobs today remain in the informal sector.<sup>3</sup> As with manufacturing, employment in the formal services sector (according to official estimates) grew minimally from 15.7 million in 1991

**Figure 3.1 Total Formal Sector Employment Levels (in Millions) and Growth**



Source: DGE&T estimates. These are considered to be underestimates, including by the DGE&T itself.

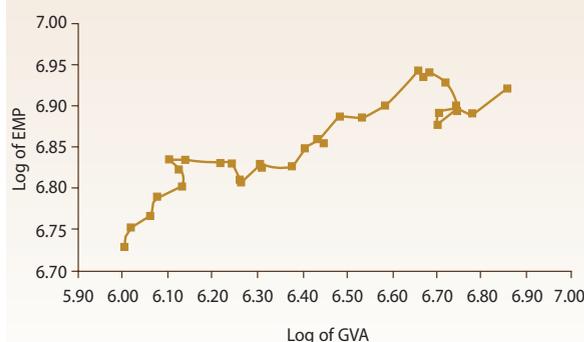
to 16.8 million in 2000; the most recent estimates put it at 16.7 million (Figure 3.1) out of a total prime-age workforce of 412 million.

Low elasticity of employment and persistent dualism are the key reasons for low employment growth in the formal manufacturing sector.<sup>4</sup> Overall, the share of all manufacturing jobs in total employment has remained largely unchanged. Even during the period of relatively rapid growth between 2002 and 2005, employment elasticity of output was less than 0.3. This chapter attempts to answer four main questions: (i) Why has employment elasticity been so low in manufacturing? (ii) How has international trade impacted employment growth and elasticity? (iii) Is dualism still persisting in manufacturing and, if so, why? (iv) What role is sub-contracting playing in mitigating dualism? The last section of this chapter addresses issues related to employment growth in the services sector.

### WHY HAS EMPLOYMENT ELASTICITY IN FORMAL MANUFACTURING BEEN LOW?

In fact, not only has employment elasticity been low with respect to output, it has been fluctuating over time (Figure 3.2).

**Figure 3.2 Employment and Real Gross Value Added in Formal Manufacturing (1974-5 to 2004-5)**



Source: Mazumdar and Sarkar (2006c).  
Note: GVA = Gross Value Added.

Between 1974 and the present time, it is possible to distinguish between five periods, or distinct breaks, in the value of employment elasticity: (i) 1974-80, when employment elasticity had a high positive value of 0.99; (ii) the 1980-6 period of 'jobless growth' when employment elasticity actually turned negative (with an average value of -0.16); (iii) the reform period of 1986-96 which saw a recovery of employment elasticity to positive values (increasing to 0.33), although it was significantly lower than the value attained in the first period; (iv) the post-reform period,

**Table 3.1 Growth Rate of Value Added and Employment Elasticity**

Period	Value Added Growth (% p.a.)	Employment Elasticity
I 1974–80	3.99	0.99
II 1980–6	6.21	–0.16
III 1986–96	10.65	0.33
IV 1996–2002	1.75	–1.42
V 2002–5	12.54	0.28

Source: Mazumdar and Sarkar (2006c).

1996–2002, when elasticity turned substantially negative at a time when output growth also slowed down; and ( $\nu$ ) the last period, since 2001, when elasticity has again turned positive, albeit to a modest 0.28 (Table 3.1).

Employment growth in manufacturing was obviously influenced by the rate of growth of output or value-added. But, given this, what determined employment elasticity? The analysis in this chapter suggests two main factors: (i) manufacturing producers faced adverse terms of trade for most of this period because the prices of consumer goods used by workers increased faster than the prices of manufactured products received by producers, and; (ii) the producers chose to use more capital-intensive techniques of production, leading to wage growth substituting for employment growth (this trend has reversed since 2002). By using a model to decompose elasticity of employment (see Box 3.1 and Appendix 3.1), three important elements that determine the value of the employment elasticity can be identified:

- (i) the *trend in the share of wages in value-added*, as determined by the rate of growth of the wage bill relative to value-added, in current prices facing the producer ( $\alpha$  in Box 3.1);
- (ii) the *relative rates of increase in the producer and consumer price indices* ( $P_p/P_c$ —sometimes

called the Domestic Real Exchange Rate [DRER]). These translate the value of the wage bill, measured in producer prices, into consumer prices, the value relevant to workers; and

- (iii) the *trade-off between employment increase and real wage increase*. Given the growth of the real wage bill, as determined by the variables  $\alpha$  and DRER, the parties in the wage bargaining process (employers and employees) have the option of realizing their objective either in the form of employment increase or wage increase—or in various combinations of the two.

The three variables affecting elasticity are influenced by different sets of factors. The movement of the DRER is affected by the product market conditions which set the price trend of the final manufactured goods ( $P_p$ ), and by the factors which affect the price of consumer goods ( $P_c$ ). The behaviour of the other two variables—the wage bill growth and the employment–wage trade-off within the wage bill—depends largely on labour market conditions. Typically, firms have the incentive to choose more capital-intensive techniques if these can increase their profit rates through faster productivity growth. This would result in a higher share of profits or a lower share of wages, both of which lower employment elasticity, other things remaining the same. As Table 3.2 shows, the choice made by Indian manufacturers to opt for higher wage growth rather than higher employment growth was an important factor in keeping employment elasticity low. What determines whether the benefits of growth will flow down to workers in the form of employment growth or wage growth? If strong trade unions are biased towards the welfare of those already employed, wage growth would be preferred to employment growth. A similar outcome is likely if employers are wary

### Box 3.1 Determinants of Employment Elasticity

The equation below quantifies how the different elements affecting the growth rate of employment or employment elasticity are related:

$$L/v = \alpha + (\alpha P_p' - P_c')/v - w/v \quad (1)$$

where  $L$  stands for growth of labour,  $v$  for growth of manufacturing value-added,  $P_p'$  for growth of producer prices,  $P_c'$  for growth of consumer prices, and  $w$  for growth of wages.

The left side of the equation shows the ratio between employment growth and value-added growth, that is, employment elasticity.

The first term on the right side of the equation  $\alpha$  defines the rate of growth of the wage bill relative to the growth rate of output, and hence determines the trend of the share of wages over the time period considered.

The second term on the right side of the equation, the relative movement of the producer and the consumer price indices (that is, the DRER), translates the wage bill growth into real terms (from the point of view of the workers).

The negative relationship between  $w$  and  $L$  clearly shows the wage–employment trade-off, that is, the way the growing wage bill cake is divided between wage increase and employment increase.

Source: Mazumdar (2003).

of expanding their complement of permanent labour. The practical importance of these different elements, based on the decomposition model of Box 3.1, is presented in Table 3.2.

Because the trend in domestic real exchange is an important factor in determining elasticity of employment (Table 3.2), macroeconomic management becomes additionally important. Table 3.2 shows that the adverse movements of producer prices, relative to consumer prices, contributed significantly to making manufacturing employment elasticity negative in two periods: 1980–6 and 1996–2002. This relative movement of prices, however, depends not only on labour market conditions but also on overall macroeconomic factors. For instance, if real effective exchange rates appreciate, or do not depreciate enough to maintain manufacturing competitiveness, the domestic

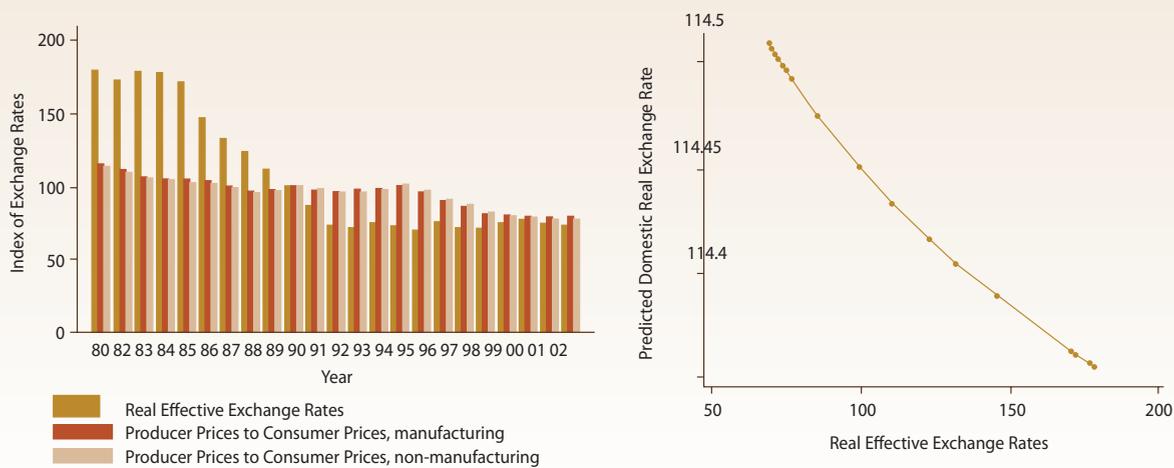
Table 3.2 Relative Importance of the Wage–Employment Trade-off and the DRER Effect

Period	$L - w$	$P_p - P_c$	Employment Elasticity
I 1974–80	1.32	2.38	0.99
II 1980–6	-4.84	-2.59	-0.16
III 1986–96	1.71	-0.46	0.33
IV 1996–2002	-3.62	-3.85	-1.42
V 2002–5	2.69	2.61	0.28

Source: Mazumdar and Sarkar (2009a).

terms of trade can be adversely affected. As Figure 3.3 (left panel) shows, this indeed happened in the mid-1990s: real effective exchange rates stabilized and have even appreciated slightly since then. This was associated with an adverse movement of producer prices, relative to consumer prices. Econometric estimates show that after controlling for time trends, there is a robust relationship

**Figure 3.3 Changes in Real Effective Exchange Rates and Domestic Real Exchange Rates (Producer Prices to Consumer Prices)**



Source: Estimated from Mazumdar and Sarkar (2006c) data and Reserve Bank of India (RBI) data on real exchange rates.

between real exchange rate appreciation and adverse movements in the DNER (Figure 3.3, right panel), which in turn lowers employment elasticity. Thus, one policy implication will be to keep real exchange rates competitive by guarding against inflation, especially in prices of consumer goods. This in turn has implications for fiscal policy. Higher deficits, government borrowing, and inflation tend to appreciate real exchange rates. If the government's expenditure is directed disproportionately towards consumption, as was the trend in India during the 1990s, this too would turn the DNER against producers and discourage the growth of jobs. If government policy raises food prices in an artificial manner, that will also lower manufacturing elasticity.

The other policy implication is that the wage–employment trade-off needs to be managed, so as to not create a bias against employment. There is a cyclical pattern in the wage–employment trade-off (as measured by the *difference* between the growth rates of employment and wages), which has an important bearing on the oscillating values of employment elasticity (Table 3.2). Such a pattern suggests that firms treat their labour force as a ‘quasi-fixed’ factor—a firm operates

with at least a core body of tenured workers whose size is slow to respond to changes in the current demand for labour. Like the stock of fixed investment, the firm's stock of ‘permanent’ workers is built up based on its perception of *expected* demand. If current demand deviates from the expected demand, the firm adjusts the labour input for the period in question by varying the number of hours worked or by using temporary workers, rather than adjusting the stock of labour. When manufacturing growth accelerates in a sustained manner, as it did from 1986 to 1996 and between 2002 and 2005, it increases expected demand and leads to employment growth overtaking wage growth.

An important implication here is that job security legislation (as buttressed by the state-supported legal system) that increases the ‘fixed’ cost of hiring permanent labour, tilts the wage–employment trade-off against employment. If the fixed cost is high, firms become cautious about changing the complement of workers in the permanent roster and the role of expectations about future demand becomes stronger. In this case, employment elasticity is likely to have cyclical swings with changes in business expectations, as it happened

in the case of India. As noted, the reform period (period III in Table 3.2) and the post-2002 period witnessed higher expectations about future growth, leading to an increase in output and investment growth. But while the share of wages showed a downward trend with the increase in the investment rate, employment elasticity, while positive, was not very high at 0.33. The employers' perception of labour as a 'quasi-fixed' factor is likely to have slowed the tilt towards employment increase. Conversely, the substantial slowdown in industrial growth in the post-reform years (period IV in Table 3.2), drastically reduced expectations of future growth and led to negative employment elasticity as employers started to shed labour. A distinct reduction in the power of labour unions in enforcing job security might also have contributed to the large fall in employment, even as the persistent fear of the fixed cost of labour and uncertainty about future labour policies encouraged labour-shedding. Thus one policy implication is the importance of continued labour reforms for employment expansion in manufacturing.

Employment reduction over 1996–2002 (period IV in Table 3.2) was related to stagnation in the value-added in manufacturing. It is obvious that while the growth rate of manufacturing output slowed down in real terms, a more important factor was the DREER turning against manufacturing. It is also apparent that this was partly due to the slackening of producer prices, particularly in the domestic market. But the other major development was the increase in consumer prices as the 'minimum support prices' of key agricultural commodities were increased in the post-reform years. A turning of the terms of trade towards agriculture could be expected to strengthen the domestic market for industrial goods. But this effect, if any, seems to have been swamped by the direct effect of the increase in the price of wage goods, leading to higher

product wages. This leads to another important policy conclusion: the government needs to take a broader and more comprehensive outlook on the consequences of policies. While increase of farmers' prices might be desirable from some angles, its adverse effect on manufacturing, and particularly employment in this sector, has to be recognized. Finally, the impact of another major development, the growth of international trade, on employment needs to be considered as well.

### HOW HAS TRADE AFFECTED EMPLOYMENT GROWTH IN MANUFACTURING?

India underwent significant trade liberalization in the 1990s. Mean tariffs for manufacturing declined from 71 per cent in the early 1990s to 29 per cent in 2001, to about 15 per cent in recent years. The share of trade in gross domestic product (GDP) increased from 16 per cent to over 30 per cent in the same period, and export growth has accelerated sharply in recent years (Figure 3.4). Thus, a key issue is the impact that trade liberalization had on employment growth in manufacturing and on employment elasticity. Analysis reveals that export-oriented industries likely experienced higher employment growth and employment elasticity. However, overall employment growth has remained low and export patterns have not been as labour-intensive as expected, but rather skill-intensive and capital-intensive. We draw on two recent studies to first show how trade impacted employment growth and elasticity, and

Figure 3.4 Growth of Manufacturing Exports



Source: Ramaswamy (2006).

then analyse the route through which elasticity was impacted.

We examine the impact of trade on employment growth and elasticity by first classifying industries according to their trade orientation, as presented in Table 3.3 (Ramaswamy 2006). Industries are classified as export-oriented, import-competing, and 'others' based on the following criteria: first, all the 4-digit International Standard Industry Classification (ISIC) industries are ranked in terms of net exports, and each industry's export share in total manufactured exports is estimated. Second, net exports, net exports to output, and export to output ratios for each industry are calculated. Two industry groups are specially identified—automobile (including the tyres and tubes industry) and food (including food, beverages, and tobacco)—for their importance in India. The automobile sector in India has recently emerged as a global outsourcing hub for many leading automobile manufacturers in the world and thus deserves to be looked at separately. The food sector needs to be considered separately because food is an agro-product-based industry.

**Table 3.3 Industries Classified by Trade Orientation**

Category	Key Industries
Export-oriented	Textile Fabrics, Apparel, Footwear,
Import-competing	Drugs & Pharmaceuticals Paper, Iron & Steel, Electrical & Non-electrical Machinery, Office & Computing Machinery, TV & Communications, Watches and Plastic Products
Food, Beverages, and Tobacco	Grain Mills, Wine, Soft Drinks, Cigarettes
Petroleum Refining and Coal Products	Petroleum Refining Products (Naphtha, Gasoline, Diesel, etc.), Coal & Coke Products
Auto & Tyre	Four-wheelers, Two-wheelers, Bicycles, Tyre & Tubes, Auto Components
Others	Wood Containers, Cane, Paper, Rubber Products, Cement, Glass, Soap, and Cosmetics

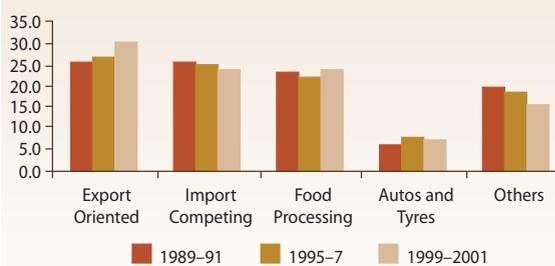
Source: Ramaswamy (2006).

An industry is classified as export-oriented if its net exports to output ratio is significantly positive and it figured on the list of leading net export earners in the manufacturing sector in 1999. An industry is classified as import-competing if the net exports to output ratio is significantly negative.<sup>5</sup> Import-competing industries must satisfy an additional criterion: their import share in total manufacturing output needs to be more than 1 per cent. The remaining industries are grouped under the heading 'others'.

The results presented in Figure 3.5 are revealing. Looking at the averages of employment growth in three periods—the pre-trade reform period (1989–91), the post-reform period (1995–7), and the most recent period for which data is available (1999–2001)—two points are evident. First, the export-oriented industry group is the only group where employment share has increased. But the increase in its share, from 25 per cent of manufacturing employment to 30 per cent over one decade, is not remarkable. Second, while employment share in import-competing industries has decreased, the decrease is marginal. Finally, quite remarkably, the automobile parts and tyres industry, which has shown rapid expansion in recent years, shows a loss in employment share, indicating the high capital-intensity of the techniques used there.

What are the effects of international trade on elasticity of manufacturing employment? Here,

**Figure 3.5 Trade and Employment Share (per cent)**



Source: Based on Ramaswamy (2006).

**Table 3.4 Manufacturing Sub-sectors, according to Exposure to International Trade**

Technology Level/ Trade Exposure Ratio	NIC Code	Import Penetration	Export Ratio	Exposed Ratio	Size of Sector (per cent)
High Technology/Exposed	38	25.31	28.37	46.50	5.46
Medium Technology/Exposed	30+35 to 37	29.50	6.05	33.76	31.77
Low Technology/Exposed	23 to26; 28+29	2.73	15.79	18.09	23.35
Medium Technology/Domestic	31 to 34	11.08	3.83	14.48	23.86
Low Technology/Domestic	20, 22, 27	1.35	2.98	4.29	15.55
All		14.30	8.54	21.62	100.00
<i>Definitions</i>					
Import Penetration =	(Value of Import)/(Value of Output – Value of Export)*100				
Exposed Ratio =	(Value of Export)/(Value of Output)*100				
Exposed Ratio =	(Value of Import + Value of Export)/(Value of Output)*100				
<i>Source: Mazumdar and Sarkar (2006c).</i>					

**Table 3.5 Relative Importance of Wage–Employment Trade-off and DRER in Employment Elasticity**

Sub-group	$L - W$ (Wage– Employment Trade-off)	$Pp - Pc$ (DRER)	Employment Elasticity	$L - W$ (Wage– Employment Trade-off)	$Pp - Pc$ (DRER)	Employment Elasticity
	1986–7 to 1995–6			1995–6 to 2001–2		
High Technology/Exposed	3.83	–1.07	0.37	–5.72	–2.36	8.05
Medium Technology/Exposed	6.16	–4.29	0.46	0.42	–4.55	0.13
Low Technology/Exposed	0.51	0.84	0.40	–3.29	–6.34	–1.01
Medium Technology/Domestic	1.38	–0.85	0.27	–3.88	–4.69	–0.98
Low Technology/Domestic	1.30	0.21	0.43	–2.25	–1.28	–0.04
All	1.94	–0.46	0.33	–3.35	–3.85	–1.42
<i>Note: Both output growth and employment growth are negative in this case, producing the positive elasticity.</i>						

again, a five-group classification of manufacturing sub-sectors (see Table 3.4 drawn from Mazumdar and Sarkar [2006c]) is used in decreasing order of their exposure to trade, which in turn depends on export ratio and import penetration and the level of technology employed in the sector. Table 3.5 shows how the two main components, the employment–wage trade-off and the movement of producer prices relative to consumer prices, affected the elasticity of the different groups and how this changed in two periods—1986–7 to 1995–6, and 2001–2 to 2004–5.<sup>6</sup>

The following points follow from this analysis:

- Starting in the mid-1990s, elasticity of employment fell slightly in all categories, except in the case of low technology exposed industries and medium technology domestic industries where the elasticity increased slightly.
- Sectors more exposed to trade experienced higher employment elasticity in both periods (1986–7/1995–6 and 1995–6/2001–2). Notice that this happened even when in some exposed sectors, producer prices fell sharply relative to consumer prices. Moreover, it was only the medium exposed group that maintained a positive elasticity of employment (the high exposed group had a positive elasticity only

because both employment and output fell in the second period).

- Significantly, the tilt in the employment–wage trade-off towards wage growth in the post-reform period seems to have been particularly strong in the ‘exposed’ category. This suggests that the search for competitiveness, in the wake of liberalization, induced firms in this category to opt for smaller bodies of workers with high wages. This type of labour deployment contrasts with the alternative of a more labour-intensive solution. If so, the expectation that liberalization was likely to increase employment by increasing the profitability of labour-intensive products was at least partly thwarted. Firms exposed to more international competition may have found it important to increase product quality by raising labour productivity. It is likely that institutional factors which raise the fixed cost of employing labour also contributed to this outcome.
- Although the adverse changes in producer prices, relative to consumer prices, were fairly widespread, the changes were relatively larger in the two ‘domestic’ sectors. This suggests that the adverse price shift might have been more due to a slackening of the domestic market for manufactured goods produced by these industries. This general negative swing may also have been partly fuelled by the increase in ‘minimum support prices’ for agricultural commodities. The need to have a general equilibrium framework for the consequences of price policies is brought out by these results.
- The updating of this analysis, with recent data covering the period 2002–5, suggests that employment elasticity has increased and become positive in all the groups, except the low technology domestically-oriented group. On the other hand, employment elasticity has recovered most strongly in the low technology trade-oriented group.

In sum, while employment elasticity declined across the board and then increased for all but one of the groups, it appears to have been related to the degree of exposure to trade. In the more exposed industries, the choice of techniques that tilted towards higher wages instead of increased employment (which is consistent with firms adjusting to raise skills and productivity of workers) was the more important factor behind reducing elasticity in the immediate post-adjustment period. The converse was true in the second period when manufacturing exports took off. In the more exposed industry groups, the recent significant increase in the DREER has helped to increase elasticity. In the less exposed domestic industries, the converse was important in reducing elasticity in the 1990s. Overall, however, the elasticity of employment and employment growth were higher in the more exposed industries.

### DUALISM IN THE MANUFACTURING SECTOR

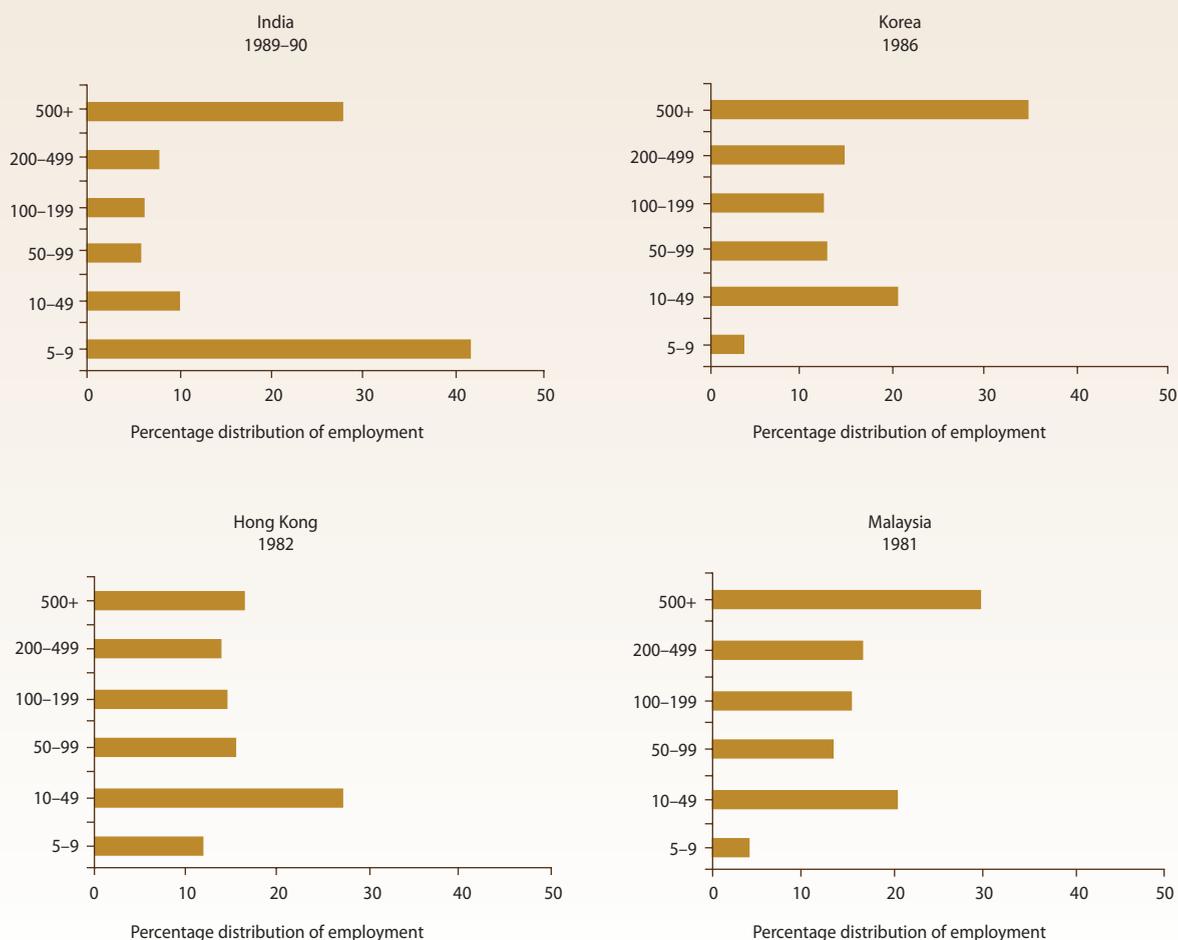
The consequence of limited employment growth in the formal manufacturing sector was that workers were absorbed either in the tertiary sector or in unorganized manufacturing. Since the gap in labour productivity and earnings between the unorganized and the organized sectors is large, this led to the phenomenon of ‘dualism’ in manufacturing. There are two aspects to this ‘dualism’. The first is the productivity gap and distribution of employment between the unorganized sector, on the one hand, and the organized sector, as a whole, on the other. The second is that within the organized sector, the distribution of employment is skewed heavily towards large firms, with relatively small representation by small and medium enterprises. Consequently, taking organized and unorganized manufacturing together, the distribution of employment is strongly bi-polar with two peaks of employment, one at the low end and the other at the high end of the size spectrum, and a wide range of size-groups with relatively smaller numbers of

workers in the middle. This is the phenomenon of the ‘missing middle’ firm size in India.

Underscoring the dualism in the manufacturing sector is the striking ‘missing middle’ firm size in India. A review of the size structure of manufacturing in Asian countries reveals three major types. *One* is where small, medium, and large firms play more or less equally important roles and the productivity differential between the size classes is small. The *second* is the pattern in which the distribution of employment by size-groups is distinctly skewed towards large firms. India belongs to the *third* type—the ‘dualistic’ structure. In this, it shares the experience of the typical Asian pattern which

arises when modern industry is superimposed on a largely agrarian economy with a high man–land ratio, but also having a large presence of traditional industry, albeit at a low level of productivity (historical Japan, the Philippines, and Indonesia). Figure 3.6 shows how Indian manufacturing employment was concentrated in the two extreme modes. While the picture presented in Figure 3.6 refers to the 1980s when countries other than India had developed to a higher level of GDP per capita, earlier data available for a few countries shows that India had a more marked dualistic pattern than what these other Asian economies showed in their early stages of development. The Indian pattern resembled that of Japan where ‘dualism’

**Figure 3.6 The ‘Missing Middle’ Manufacturing Firms (by Size of Employment): India Compared to Other Countries**



Source: Mazumdar and Sarkar (2006c).

had existed for a long time in manufacturing, with a large concentration of employment at the low and top ends.

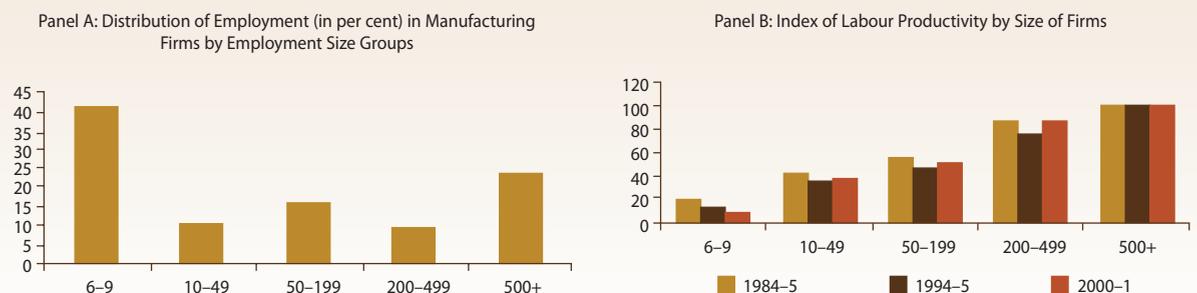
But the peculiarity of the Indian pattern is that it had an exceptionally large productivity differential between the largest and smallest size groups—of the order of 8:1 compared to 3:1 in the case of Japan before its era of post-War growth (Broadbridge 1966: Table 16, p. 56). India also contrasts dramatically with the case of Taiwan which had a much more even distribution of employment by size classes in the course of its manufacturing growth, and a productivity differential between large and small units no more than that of Japan. Even in Korea, where distribution of employment in formal manufacturing was heavily skewed towards large firms during the country's early stage of development, the productivity differential was not larger than that of Japan or Taiwan; it continued to be moderate as state policies worked towards a redistribution of employment in the small-medium sector over the last three decades of the twentieth century.

Recent data shows that dualism has persisted and the concentration of the Indian labour force in the bi-polar mode continues to the present day (Figure 3.6, Panel A). The only change over the period covered seems to have been the significant reduction in the number of workers

employed in very large firms (1,000 and above). The distribution is, however, still strongly bipolar, with the two types of employment size firms concentrated at the two extremes (those employing 5–9 people and those with 500+ employees) and accounting for 40 per cent and close to 25 per cent of employment respectively. Further, over time, the productivity differentials by size-groups seem to have changed even less than employment patterns (Figure 3.6). If anything, the extreme 'dualism' noticed in India, compared to other Asian countries, seems to have worsened since 1984–5, though much of the deterioration occurred in the first half of the 1980s.

From a welfare point of view, the Indian pattern of manufacturing employment distribution is least satisfactory of the several types discussed. For one thing, the 'missing middle' means that the bulk of the labour force is stuck in very small firms (Figure 3.7, Panel A) with low productivity (Figure 3.7, Panel B). Second, the industrial structure offers limited opportunity for small firms to graduate to middle-sized units. This is a serious drag on the formation of dynamic entrepreneurship, particularly of the type oriented to searching for new technology and new markets. Third, from an efficiency aspect, the wide difference in wages, which the dualistic structure implies, points to a loss of output and welfare. Fourth, this pattern produces a significantly higher degree of

**Figure 3.7 India: Distribution of Employment and Productivity by Size Groups**



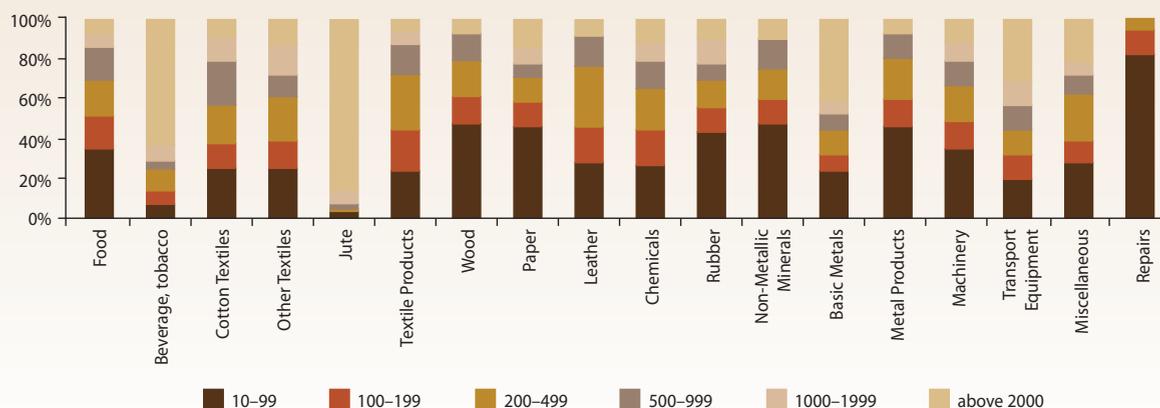
Source: Mazumdar and Sarkar (2006c).

inequality in the distribution of earnings than a more equal size distribution of firms would.

It is worth emphasizing that the persistence of dualism in India appears to cut across most manufacturing sub-sectors. Data disaggregated by sectors show that in 14 of the 18 large (two-

digit) industry groups, the largest share of workers is found in the group of firms employing 10–99 workers (Figure 3.8). When 2000–1 figures are compared with those from 1994–5, it is seen that there was a loss in the share of employment in the 100–199 class for as many as 13 out of 18 industries (Table 3.6).

**Figure 3.8 Distribution of Employment by Firm Size in Manufacturing Sub-sectors**



Source: Annual Survey of Industries, 2000–1, and Central Statistical Organisation (CSO).

**Table 3.6 Change in Employment Share by Factory Size, 1994–2000: Gainers and Losers**

	Employment Size Class of Factories					
	10–99 Workers	100–199	200–499	500–999	1,000–1,999	Above 2,000
Food	3.5	–4.7	–2.0	–5.6	2.3	5.4
Beverage & Tobacco	–48.9	–3.4	–4.7	–11.5	2.4	63.0
Cotton Textiles	5.0	–6.5	–4.3	–3.1	–5.4	–1.0
Other Textiles	0.1	–1.6	7.2	–3.0	–6.7	–1.4
Jute	0.6	–0.1	–0.5	0.9	–4.4	3.3
Textile Products	–11.3	–9.4	18.8	5.8	4.3	4.7
Wood	–12.8	1.9	4.9	1.7	2.3	0.0
Paper	13.0	–3.4	1.5	–5.5	–4.9	–0.2
Leather	–4.1	–11.7	16.7	0.9	5.3	–4.3
Chemicals	–11.8	4.9	5.7	0.1	–2.5	1.5
Rubber	19.0	–8.7	0.2	–4.0	1.6	–5.8
Non-metallic Minerals	3.0	–3.5	0.9	–0.5	3.0	–1.7
Basic Metals	5.3	–4.0	–4.3	–7.2	–0.5	3.0
Metal Products	1.9	0.2	7.4	–1.9	1.3	–6.4
Machinery	4.4	–4.5	6.7	–0.4	1.4	–9.0
Transport Equipment	7.4	1.4	1.3	2.5	0.1	–15.7
Miscellaneous	–5.7	–7.3	7.8	–3.8	–6.2	15.5
Repairs	50.9	–0.2	–1.5	–5.9	–4.7	–27.4

Source: Estimates based on Tables 3.1 and 3.2.

**Table 3.7 Contract Intensity (Per cent of Contract Labour) by Size of Factory in Six Industry Groups: 2000–1**

Employment Size-Class	Export-oriented	Import-competing	Food	Auto & Tyre	Petroleum	Others
0–9	3.0	2.5	5.8	1.2	3.7	4.4
10–99	10.6	11.6	21.2	8.6	10.5	22.7
100–99	18.7	18.9	17.7	16.2	19.4	18.6
200–99	14.6	15.6	21.3	18.1	36.5	14.1
300 and above	7.6	16.1	38.2	6.2	15.3	19.6

Source: Ramaswamy (2006)

The fall in the share of firms employing 100–199 workers in a large number of industries, may have been partly due to the rising practice of using contract labour. A look at disaggregated groups of industries shows that contract intensity in export-oriented or import-competing industries peaked in the 100–199 group (Table 3.7). This happened probably in response to firms searching for more flexible ways to increase output.

As noted in the beginning of this chapter, dualism also exists and has persisted between the organized (also known as ‘registered’) and the unorganized sectors. Unorganized sector firms are those which use power and employ less than 10 workers, the threshold size of registered sector firms. Their employment share is very large—nearly three-fourths of the manufacturing labour force—and the productivity gap between them and organized sector firms is huge (Table 3.8). In the early post-reform years, when organized sector employment share increased marginally, the productivity gap between unorganized and organized sectors widened even more. In the more recent period, between 1994 and 2001, the employment share of the organized sector tended to fall.

### IS OUTSOURCING MITIGATING DUALISM?

Although the outsourcing of production from formal sector firms to informal sector firms can mitigate dualism, this does not appear to be the experience in India. For instance, it is well known that the Japanese system of dualism in the

**Table 3.8 Distribution of Manufacturing Employment (in per cent)**

<i>Organized Sector Share of Employment</i>			
No. of workers in firms	1984–5	1994–5	2000–1
100+ workers	10.0	11.8	10.2
10–100 workers	15.0	18.4	16.3
Total Organized	25.0	30.2	26.5
<i>Unorganized Sector Share of Employment</i>			
DME (6–9 workers)	9.7	12.8	14.1
NDME (1–6 workers)	65.2	9.2	10.4
OAME (family operated)		47.9	49.0
Total Unorganized	74.9	69.8	73.4
Total	100.0	100.0	100.0

Source: Unni (2006); NSS Unorganized Sector Survey Module.  
 Note: OAME: A manufacturing enterprise which is run without any hired worker employed on a fairly regular basis, is termed Own Account Manufacturing Enterprise (OAME).  
 NDME: A manufacturing enterprise which employs at least one hired worker on a fairly regular basis, and less than six workers (household and hired workers taken together), is termed Non-Directory Manufacturing Enterprise (NDME).  
 DME: A manufacturing enterprise which employs at least one hired worker on a fairly regular basis, and between six and nine workers overall (household and hired workers taken together) is termed Directory Manufacturing Enterprise (DME).

manufacturing sector enhanced efficiency, both in the static and dynamic aspects, by the vital system of outsourcing (Little et al. 1987). But while there is some evidence of this happening in Indian manufacturing, a good deal of outsourcing is in the nature of ‘capacity outsourcing’ in response to the perceived limits to grow beyond the threshold size, and not driven by a need to increase efficiency.

In India, most outsourcing takes place by small, unregistered firms. In the case of the food industry,

**Table 3.9 Product Outsourcing Intensity, by Employment Size of Factories: 2000–1 (in per cent)**

Employment Size	Export-oriented	Import-competing	Auto	Food	Others
0–9	22.1	26.2	–	36.2	11.2
10–99	8.8	11.4	27.6	12.5	11.8
100–99	6.1	9.1	7.7	7.4	4.7
200–99	7.7	6.2	–	10.5	5.6
Above 300	6.3	3.4	4.0	8.6	4.2
Total	6.3	4.0	6.0	10.0	5.1

Source: Estimated from Ramaswamy (2006).

Note: Product outsourcing density is defined as the ratio of the value of goods sold in the same condition as purchased to the value of products and by-products in a firm.

small firms procure as much as 36 per cent of their output from other firms (Table 3.9). This suggests that firms have a strong incentive to not expand beyond the size group of 9, to avoid becoming registered firms.

This issue can also be looked at from the viewpoint of the firms in the unorganized sector which do the sub-contracted work. Using the questions canvassed in the ‘Unorganized Manufacturing Sector Survey’ of 2000–1, Unni (2005) reported that 30 per cent of unorganized sector firms undertook sub-contracted work (Table 3.10). The industries in which this percentage was particularly high were: tobacco products (National Industrial Classification, NIC, code 89), textiles (NIC 56), chemical products (NIC 67), and office accounting and computing (NIC 64). Other key points revealed were:

- The distribution of sub-contracted firms by place of work showed that an overwhelming number of them (81.2 per cent) operated from home. Only 15 per cent operated from business premises. In the chemical industry, the percentage of home-based firms was as high as 95, suggesting that modern industry had clearly penetrated the lowest segments of the informal sector.

- Besides sub-contracted production work, unorganized sector firms were also linked through service contracting. The Unorganized Manufacturing Sector Survey captured the ‘receipts from services provided to others, including commission charges’. From this, the subcontracting-in of services undertaken by firms can be estimated. About 67 per cent of firms reported undertaking sub-contracted service activities, with DMEs (firms with 6–9 workers) less likely to undertake this activity compared to the NDME (firms with 1–5 workers) and OAME firms. Such service contracts were not necessarily regular arrangements between two firms and were probably only indicative of market interactions between firms.
- Is the sub-contract undertaken by a firm ‘vertical’ or ‘horizontal’ sub-contracting? In ‘vertical’ sub-contracting, the firm is fully dependent upon the parent firm/middleman/contractor to supply the raw material, design, and equipment. This can be called a form of transfer of technology between firms. In ‘horizontal’ sub-contracting, the firm is independent and sources its raw material, design, and equipment on its own. According to Watanabe (1983), the majority of Indian firms which undertook sub-contracting work were ‘vertical’ sub-contractors and only 1.6 per cent of the 30.7 per cent firms involved in sub-contracting could be called the ‘horizontal’ types.

Vertical sub-contracting can facilitate the transfer of technology because the sub-contracted firm supplies raw material, equipment, and sometimes the design also. But this is not the case in India. According to the 2000–1 unorganized manufacturing survey, while 88 per cent of firms received raw material from contractors, only 7 per cent were supplied equipment. The designs were specified by contractors for 93 per cent of firms.

**Table 3.10 Proportion and Distribution of Firms Subcontracting-in, by Location and Industry Group: 2000–1**

Industry	Proportion of Sub-contracting Firms		Distribution of Sub-contracting Firms by Location		
	Total	At Home	Outside	No Fixed Premises	Total
14. Cotton Gin, Cleaning & Baling	8.3	6.9	93.1	0.0	100
15. Food Products	3.6	71.1	23.5	5.4	100
16. Tobacco Products	89.3	99.1	0.8	0.1	100
17. Textiles	55.5	89.7	10.3	0.1	100
18. Apparels	17.4	70.5	29.4	0.1	100
19. Leather Products	23.7	66.2	33.8	0.0	100
20. Wood (except Furniture)	11.3	58.9	16.3	24.8	100
21. Paper & Paper Products	42.0	80.2	19.8	0.1	100
22. Publishing, Printing	39.6	31.7	68.3	0.0	100
23. Coke, Refined Petroleum	0.3	0.0	100.0	0.0	100
24. Chemical Products	66.8	95.9	4.1	0.0	100
25. Rubber Products	42.6	59.0	40.9	0.0	100
26. Non-metallic Mineral Products	5.6	69.4	29.6	1.0	100
27. Basic Metals	36.5	36.9	63.1	0.0	100
28. Fabricated Metal Products	22.1	39.8	59.7	0.4	100
29. Machinery and Equipment	22.0	25.2	73.9	0.9	100
30. Office Accounting & Computing	63.6	0.0	100.0	0.0	100
31. Electrical Machinery	32.0	57.0	43.0	0.0	100
32. Radio, TV, Communications	46.8	44.8	55.2	0.0	100
33. Medical, Precision, Optical	37.7	33.5	66.5	0.0	100
34. Motor Vehicles	48.1	7.3	92.7	0.0	100
35. Other Transport Equipment	42.7	22.7	77.3	0.0	100
36. Furniture & Other Manufactures	35.4	52.1	37.8	10.1	100
37. Recycling	44.2	61.0	39.0	0.0	100
Total	30.7	82.0	15.3	2.6	100

Sources: Data from Unorganized Manufacturing Sector Survey, 2000–1, New Delhi, CSO; Unni (2006).

These numbers were similar across different sizes of firms for both design specification and equipment supply, but there was a slight variation with regard to the supply of raw material. A significantly higher proportion of OAME firms received raw materials, compared to NDME and DME firms. The vertical linkages of raw materials and design specifications were much higher in modern industries than in traditional industries. Across industry groups, more modern industries were supplied with equipment compared to traditional industries.

Overall, these findings suggest that sub-contractors in Indian manufacturing are yet to graduate from

their 'dependent' status and become independent producers that seek out the mother firms—a development that underlies the success of the Japanese model of sub-contracting.

### WHY HAS DUALISM PERSISTED?

Dualism in manufacturing has persisted even after 15 years of liberalizing reforms. This suggests that the factors that created dualism have not altered significantly, despite significant policy changes. One change in the post-reform period was the virtual elimination of the reservation of specific product lines as the exclusive purview of the small-scale sector. Second, the liberalization of imports of consumer goods also profoundly

altered the monopoly of small-scale producers in these markets. A third change was that efforts were made to reduce the strength of capital market segmentation. Despite these, surprisingly, available survey data show that the size structure of industry has hardly changed in the last 25 years.

The fact that there is little change in the size structure of the manufacturing industry implies, possibly: (i) segmentation of factor markets—in labour and capital—is more important in supporting dualism than product market segmentation which the reservation policy encouraged, and (ii) once the specialization by small and large firms in different segments of the product market has been firmly established, it is difficult for firms to alter their market positions easily, especially in the short to medium term.

There are four important reasons for the emergence and persistence of the Indian pattern of dualistic industrial structure:

- The first is *labour market segmentation* which ensures that wage levels (even after controlling for human capital attributes or skill levels of workers) increase sharply with firm size. Even if there are some economic reasons for the prevalence of this size–wage relationship (for example, efficiency wages could be higher in larger units due to the cost of managing larger groups of workers), there can be no doubt that these are cemented, and indeed augmented, by institutional factors. For example, for a long time in many industries, wage boards were responsible for setting wage levels. Their rulings on wage levels for different classes of firms were based partly on the levels of labour productivity attained. This strengthened the high productivity–high wage nexus found in larger firms. At the same time, labour laws also impact through inducing large firms with more capital assets to invest in labour-

saving techniques, leading to higher labour productivity and wages (see Chapter 5 for more on this). Finally, wages in the public sector, which dominates employment in the formal sector, are set above the market rates for most workers. This is another factor that segments the labour market in all sectors. It can also lead to unemployment as educated workers queue up and wait for public sector jobs (see Box 3.2).

- *Capital market segmentation* and a generous depreciation allowance make the availability and cost of capital significantly more favourable for large firms. This group of factors works in the same direction as labour market segmentation, in inducing firms to adopt more capital-using and labour-saving methods. The net effect is to strengthen forces which increase the small–large differential in labour productivity and wages.
- *Product market segmentation* differentiates between small and large firms by the quality of the products (even in the same general category) in which they specialize. Smaller firms opt for low-quality, labour-intensive sub-categories of products which cater to the needs of low-income groups. The result is a further strengthening of the factors that create the gap in labour productivity (value-added per worker) between large and small firms.

Reservation policies have been largely abandoned in the post-reform years since 1997, both by increasing the size of investment permissible to qualify as a small-scale industry and by ‘de-reserving’ specific sectors. In any event, the impact of this policy lost its bite with the liberalization of imports and increased competition in the market for consumer goods, which were the mainstay of the small-scale sector in manufacturing.

However, there still exist a number of fiscal subsidy programmes and policies that discourage

### Box 3.2 Wage-setting in the Public Sector

Wages of Central government employees are revised on the recommendations of the Pay Commissions, specially appointed at intervals of approximately 10 years by the federal government. For state government employees, State Pay Commissions are appointed by the respective states, which may endorse in full or partially the recommendations of the Central government's Pay Commissions. (In the central public sector undertakings, there are periodic wage settlements between management and workers, four years being the typical duration of a wage agreement.) The recommendations of the Pay Commissions usually revolve around fixing a minimum pay, determining maximum pay, neutralizing the rise in the cost of living (dearness allowance), and establishing vertical and horizontal pay scales. The Fifth Pay Commission was constituted in 1995 and its recommendations were implemented starting 1996.

In fixing the *minimum salary* in the government, the Fifth Pay Commission took the basic pay fixed by the Fourth Pay Commission (1986) and the dearness allowance as on 1 January 1996, and suggested adopting a compensation factor of 30.9 per cent, by which the per capita net national product had grown during the period 1985–95. For the lowest functionaries, it worked out an increase of 3.25 times in nominal pay, much higher than that suggested by consultants.

In fixing the *maximum salary*, the Fifth Pay Commission sought to reverse the consequences of the first four Pay Commissions' concerns about whether the maximum salary in government should be reduced in view of the inordinately high disparity ratio. The practice of offering only partial neutralization for increased cost of living at the higher levels and complete neutralization at the lower levels would explain, partly, this fall in disparity ratio in current prices between the maximum pre-tax remuneration and the minimum pre-tax remuneration going down progressively from 54.5 in 1948 to 8 in 1996. (The post-tax disparity ratio in current prices came down even more drastically from 41 in 1948 to 6.1 in 1996.) The Commission also compared the existing scales with those in the private sector and in public sector undertakings. It noted wide differentials between the salaries of senior functionaries in the government and their counterparts in private and public undertakings. Substantial erosion in the real income of senior-level government officials was noted. The Commission tried to bridge the gap, to some extent, between the top-level government employees and their counterparts in private or public undertakings by trying to retain the pre-tax disparity ratio between the minimum and maximum salary at the Fourth Pay Commission level of 10.7. To achieve this, it advocated a 100 per cent neutralization of cost of living at higher levels. For the higher cadres, it introduced the concept of full neutralization of cost of living and giving allowances and pensions net of income tax; in fact it recommended a uniform neutralization of dearness allowance at the rate of 100 per cent to all employees at all levels, as the erosion in the real value of salary at the highest level was found to be severe by the Fifth Pay Commission.

The new basic pay, both for maximum and minimum salaries, was about 3.25 times higher than the unrevised pay. In addition, the Commission recommended de-linking pay from position in the hierarchy, meaning that a person could enter into a higher pay scale based on experience, without another post being created for him/her in the hierarchy.

firm growth. For instance, there are fiscal and credit market benefits to enterprises below a certain size. Thus there are built-in disincentives for enterprises to go beyond this size limit. In addition, labour laws on wages, benefits, and

job security apply to units *above* the critical size. Enterprises graduating out of the protected small sector thus face extra costs, even as they are denied the benefits of fiscal subsidies and other programmes. This causes a polarization of the

industrial structure even within the same sector—small-scale and large enterprises have increasingly occupied different niches of the market in the same industry.

## THE TERTIARY SECTOR

Absorbing close to 40 per cent of the increase in labour force between 1983 and 2004, the tertiary sector has been the leading sector in India's economic growth, both in terms of output and employment. Employment in the sector doubled over this period, compared to an increase of only 43 per cent in the case of the manufacturing sector. The employment elasticity in the sector as a whole, in the post-reform period (1993–2004), was significantly higher than in all of manufacturing (Table 3.11). However, the tertiary sector is still heavily dominated by the public sector which accounts for 70 per cent of jobs in rural areas and 59 per cent of jobs in urban areas.

Taking the public and private sectors together, tertiary sector employment has grown faster than manufacturing employment since the 1980s. The differential in the growth rates of employment has been much higher with respect to agriculture. But employment growth in the tertiary sector fell in the second half of the 1990s, relative both to the 1987–93 period and the longer 1983–93 decade. This was entirely due to a decline in employment in the public sector in the latter half of the 1990s. Table 3.11 shows that compared to the 1983–93 decade, the decline in employment growth in financial services in the second half of the 1990s was marginal. All other groups increased their rate of growth of employment. Particularly strong were increases in the trade and hospitality sectors.

It is possible to give estimates of employment in the formal and informal sub-sectors in tertiary activities on the basis of some accepted criteria. Estimates for

**Table 3.11 Employment Elasticities for Different Sectors and Periods**

NIC	Industry	Growth Rate of GDP (% p.a.)			Growth Rate of Employment (% p.a.)			Elasticity of Employment		
		1983/93–4	1987–8/1993–4	1993–4/1999–2000	1983/93–4	1987–8/1993–4	1993–4/1999–2000	1983/93–4	1987–8/1993–4	1993–4/1999–2000
1	Agriculture & Allied Activities	2.7	4.8	2.9	1.4	2.2	0.7	0.503	0.459	0.250
2&3	Mining, Quarrying, and Manufacturing	5.8	6.1	5.2	4.2	3.8	–4.2	0.726	0.628	–0.806
4	Electricity, Gas, and Water	5.2	5.2	7.3	2.0	1.4	1.9	0.382	0.262	0.262
5	Construction	7.9	7.9	6.9	3.9	3.9	–2.3	0.488	0.499	–0.331
6	Trade, Hotels, and Restaurants	4.6	5.3	6.4	5.5	0.1	6.4	1.183	0.024	1.007
7	Transport, Storage & Communications	5.3	5.6	9.2	3.9	3.4	6.3	0.741	0.608	0.691
8	Financial, Insurance, Real Estate & Business Services	5.8	5.6	9.4	3.5	3.5	5.4	0.608	0.629	0.570
9	Personal, Business, and Community Services	9.62	10.5	8.4	5.3	4.4	5.6	0.555	0.416	0.666
6+7+										
8+9	Tertiary	5.4	4.9	8.6	3.6	4.4	–1.2	0.663	0.900	–0.137
	All Sectors	6.4	6.5	8.8	3.8	3.9	3.1	0.590	0.597	0.346

Source: National Accounts for GDP and NSS for Employment (based on UPS employment estimates).

1999–2000 show that the formal sector accounted for a quarter of tertiary employment in the rural areas and more than a third of employment in the urban economy. Even after the decline in public sector employment in the post-reform period, this sector still accounted for more than half of *formal* tertiary employment in the urban areas and more than 70 per cent in the rural (see Box 3.3). In the absence of time-series data for the formal and informal sectors in the tertiary sector, trends in low- and high-paid employment in the sector have been analysed by looking at changes in the entire distribution of earnings in this sector over time. The issue has been examined from several angles:

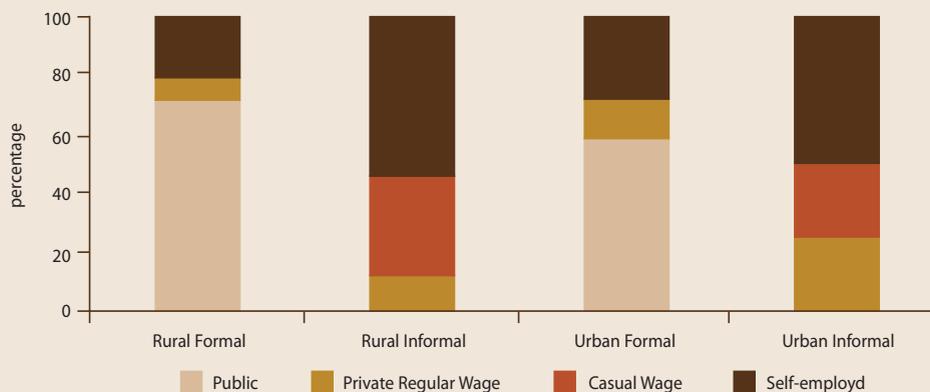
- Productivity differentials between sectors. The average productivity in the tertiary sector as a whole is pulled up by the high value in the financial sub-sector, but seems to be about the level of manufacturing (in 2000) in most sectors, except trade (where it is 20 per cent lower).
- There is indeed some evidence to support the general perception that some sub-groups like consumer services have witnessed a relatively large influx of labour, pushing down their relative productivity to some extent, while others like business services have improved their position due to demand factors.

### Box 3.3 Composition of Employment in the Tertiary Sector

The 55th (1999/2000) Round NSS made it possible to identify workers in the public sector by obtaining information on the establishment types in which workers were employed. In this study, workers in all public and semi-public establishments have been grouped as being in the formal sector. The 55th Round survey also reported, for the first time, the employment sizes of the establishments in which workers were employed. For the purpose of this study, all establishments employing more than 10 workers are considered to be in the formal sector.

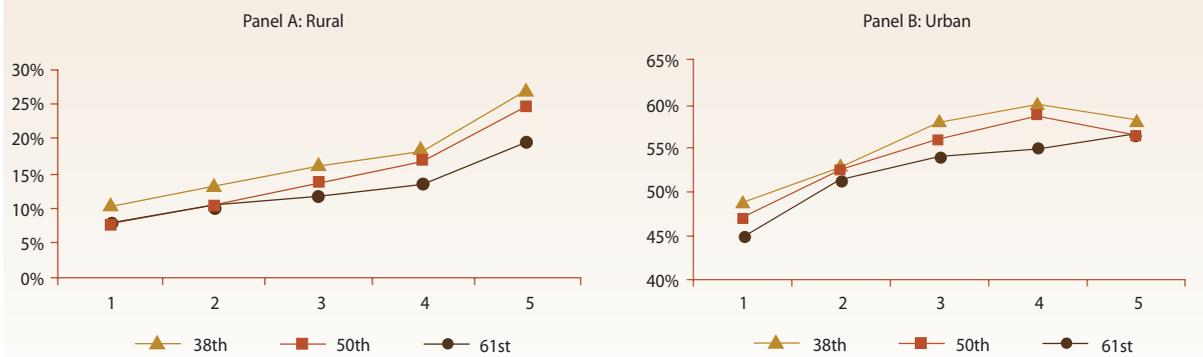
For the large group of the self-employed, the usual classification in terms of the workers' education has been adopted. Those with lower secondary education or less education are considered to be in the informal sector and the more highly educated (which includes professionals) are taken to be in the formal sector. These criteria help give a rough picture of the composition of tertiary sector employment for 1999–2000, as presented below:

Figure B3.3.1 Formal and Informal Employment in the Tertiary Sector, 1999–2000



Source: Mazumdar and Sarkar (2006b).

**Figure 3.9 Employment Share of the Tertiary Sector (%) by Quintile Groups of Per Capita Expenditures, Different Rounds**



Source: Mazumdar and Sarkar (2009b).

Note: Rounds 38, 50, and 61 correspond to NSS in 1983, 1993–4, and 2004–5 respectively.

Is labour being pulled or pushed into the tertiary sector? It is possible to get some idea about this by looking at the share of main family earners in the tertiary sector, in different quintiles of the income distribution curve, for successive NSS rounds. Figure 3.9 (Panels A and B) throws some light on where jobs have been created—at the low end or uniformly across household quintile ranges.

A major change seemed to take place in the post-liberalization period in the nature of jobs created in the tertiary sector, both in rural and urban areas. In the 1980s, jobs were created in the upper quintiles in rural areas. But in the post-reform period (1993–2004), the graph shows distinctly larger movements in the lower two quintiles, indicating that most new employment was created in lower income jobs. In the urban areas, the picture is somewhat similar in that during the pre-reform period, more jobs were created in the upper income quintiles (except for the top-most quintile). In the post-reform period, the job creation was more or less evenly spread out over the income scale.

In the 1980s, across rural and urban locations, more jobs were created in the higher quintiles

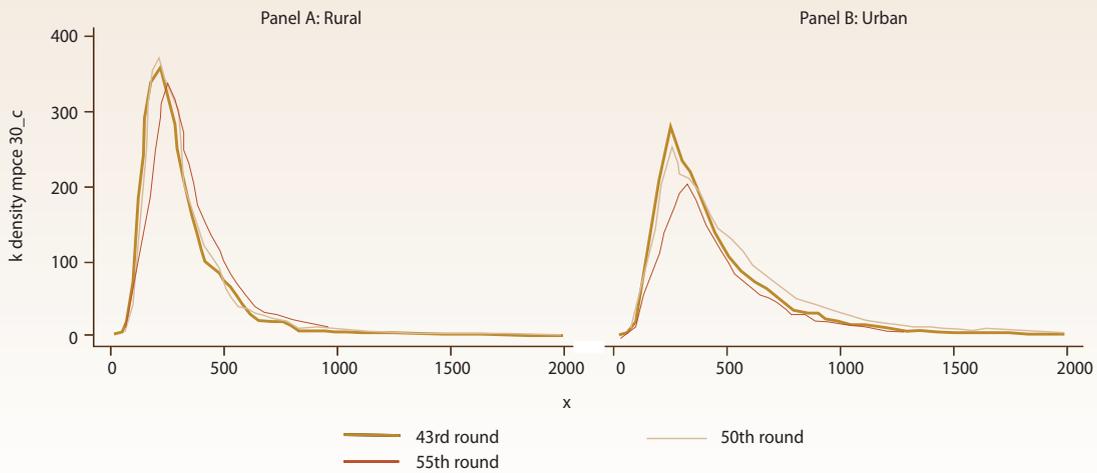
in the tertiary sector (see Figure 3.9). The slopes of the graphs increase between 1983 and 1993 (the 38th and the 50th NSS Rounds)—more prominently in rural areas. But between 1993 and 2004 (the 50th and 61st NSS Rounds), the graph for the rural sector shows a more or less parallel movement outwards, with some suggestion that the movement was largest in the fifth quintile. In the urban sector, the differential movement by quintile groups is quite striking at the two ends of the distribution scale. There was a sharp increase in the share of tertiary earners both at the lower (second) and the highest (fifth) quintiles, at the expense of the middle (third and fourth) quintiles. This suggests that the tertiary sector is absorbing labour disproportionately at the lower and upper ends of the earnings distribution scale. While the category of consumer services is represented at the low end, business services play the dominant role at the high end.

The fact that more tertiary sector employment has been created in the lower quintiles does not mean that there has been immiserizing growth in the tertiary sector, in the sense that earnings in the sector have not become depressed. This is brought out clearly by the graphs of the kernel distribution

functions in Figure 3.10. The movement of the distribution of mean household per capita expenditures for the successive Rounds brings out two important points: (i) there is an outward shift of the distribution in the tertiary sector so that earnings at all levels have increased and (ii) there have been proportionately larger increases in the numbers in the first and fifth quintiles of

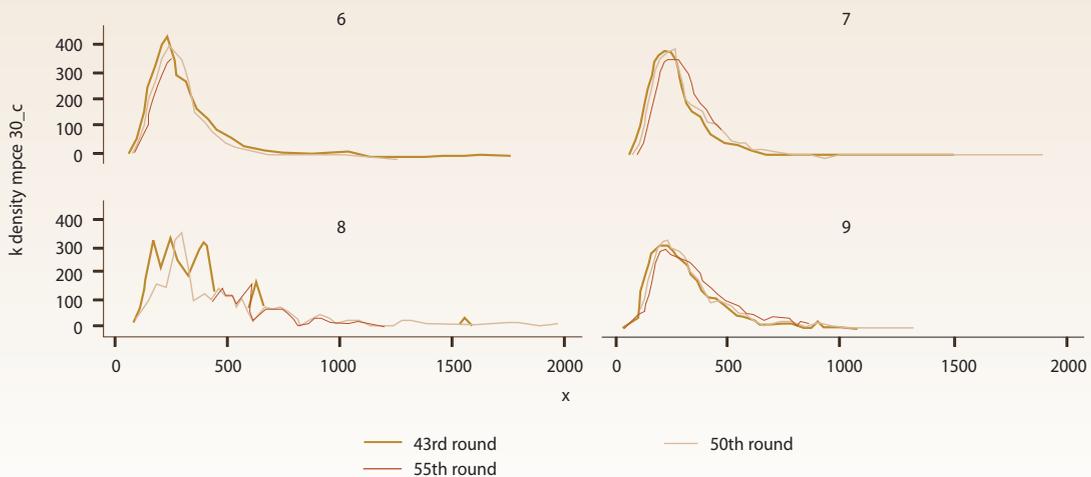
the distribution—with relatively less absorption of labour in the middle range. This implies an increase in inequality in the bottom half of the distribution—a trend more prominent in the urban economy. Disaggregating the tertiary sector further (Figure 3.11), it is seen that these effects are mild in consumer services, but much more striking in business services and in the public sector.

**Figure 3.10 Kernel Density Functions of Expenditure Per Capita in the Tertiary Sector, Different Rounds**



Source: Mazumdar and Sarkar (2009b).

**Figure 3.11 Kernel Density Functions by Major sub-groups of the Tertiary Sector**



Source: Mazumdar and Sarkar (2009b).

Note: NIC 6: Trade, Hotels, and Restaurants; NIC 7: Transport, Storage, and Communication; NIC 8: Finance, Real Estate, and Business Activities; NIC 9: Public, Community, and Personal Services

The finding that labour is being absorbed more in the lower and upper parts of the earnings distribution scale raises the question: is ‘dualism’ greater in the tertiary sector? As noted earlier, ‘dualism’, in terms of the gap between low and high earners, is high in manufacturing in the Indian economy. If the dualism is stronger in the tertiary sector, then the ‘net’ tertiary–manufacturing differential, after controlling for other major determinants of earnings (like human capital attributes), would be expected to increase when moving up the scale in earnings distribution. Quantile regressions on the 55th Round of the NSS were used to estimate the net differential at the five quintiles of the distribution.<sup>7</sup> Dummies for the sectors (with primary as base) were used in the regressions, along with a set of other explanatory variables. The latter included education, age, sex, and urban/rural location. The exercise was done separately for mean per capita expenditures (MPCE) of households (in which the characteristics of the ‘main earner’ were used for the explanatory variables) and for monthly earnings of regular wage earners. There were some differences in the sets of explanatory variables used in each case.

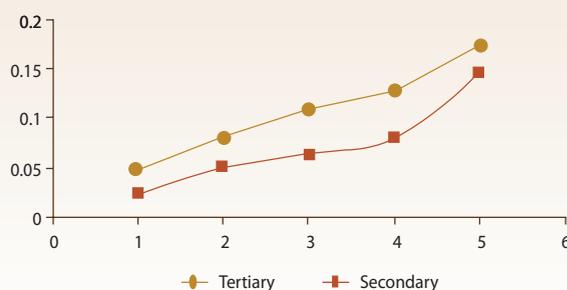
The coefficients of the tertiary and manufacturing dummies at the different quintiles are given in Table 3.12 and they are graphed in Figure 3.12. They show the ‘net’ difference in MPCE with respect to the base, the agricultural sector. The

**Table 3.12 Household Expenditures by Education and Expenditure Groups: Values of Dummies of Quantile Regressions (NSS 55th Round)**

Coefficients of Dummies (Base = Primary)	Mean Per Capita Household Expenditures				
	Q5	Q25	Q50	Q75	Q95
Tertiary	0.048	0.08	0.108	0.128	0.172
Secondary	0.024	0.05	0.064	0.079	0.145

Source: Mazumdar and Sarkar (2006b).  
Note: Q = quintile.

**Figure 3.12 Coefficients of (Dummy) Variables from Quantile Regressions on Mean Per Capita Expenditures**



Source: Mazumdar and Sarkar (2006b).

differential is, all along, higher for tertiary sector workers. The gap between the agricultural and tertiary sectors increases in the middle range and diminishes somewhat only at the highest quarter of the distribution.

The conclusion is that dualism is quantitatively more important in the tertiary sector when the ‘net’ earnings of the lowest quintile are compared with those of the higher quintiles—except that the difference is reduced for the highest quintile. There is, thus, some support for the popular perception that the tertiary sector is home to a body of low-earners, more so than the secondary sector.

## NOTES

1. Organized sector workers are defined as those working in private establishments employing more than 10 workers and those working in the public sector. The organized sector is generally referred to as the formal sector. All other workers are considered to be in the unorganized or informal sector. In this chapter, we also consider other definitions of the formal sector in order to analyse trends.
2. *Economic Survey, 2005–2006*.
3. While another source, the Annual Survey of Industries (ASI), estimates current organized manufacturing employment to be around 11 million out of a total manufacturing workforce of 46 million, the overall picture does not change significantly.

4. Dualism refers to the concentration of employment in very low productivity jobs at one end and high productivity jobs at the other end.
5. Significance is determined by the relative magnitude of the export-output and import-output ratios of the manufacturing sector.
6. While data is available for the period in between,
  7. The quantile regression technique estimates the coefficients of the explanatory variables, not just at the mean values as in ordinary least squares estimation, but at each of their five quintile values.it was left out in consideration of the fact that this was a period of adjustment.

# What do Regional Differences in Labour Market Outcomes Imply?

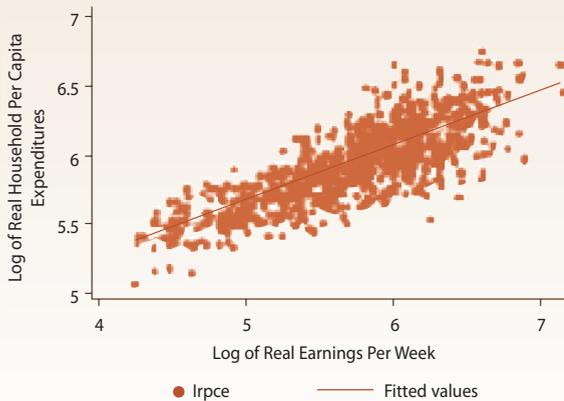
# 4

Not only are there significant differences in labour market outcomes across India's states and regions, but these differences have also been persistent. Employment outcomes have been consistently poor in the north-eastern states, the northern states of Uttar Pradesh and Bihar, the coastal regions of Orissa and Kerala, and the former French and Portuguese colonies of Pondicherry (now Puducherry) and Goa respectively. One important exception to these persistent differences is real wages, which show a slight tendency to converge across regions, and more robustly across rural and urban areas. This helps to explain why migration rates across Indian states have been unusually low, as have been urbanization rates. Two proximate factors stand out as the main drivers behind regional differences: first, differences in economic activity (that is, gross state domestic product [GSDP] levels) and economic growth, which appear to affect employment, earnings, and unemployment rates significantly, contrary to the widespread perception of 'jobless' growth. The second proximate factor is the differences in female participation rates, which in turn depend largely on the opportunities for employment and earnings. However, the GSDP and employment nexus is not robust in the short run, indicating the role of regulations, which differ from state to state, in affecting labour market.

## INTRODUCTION

Labour market outcomes vary significantly across India's 28 states and seven Union Territories.<sup>1</sup> The differences can be dramatic—for instance, male employment rates can vary from 65 per cent to 83 per cent, and female participation rates from 10 per cent to 53 per cent.<sup>2</sup> In 1999–2000, rural weekly earnings in one region were less than one-tenth of weekly earnings in another. Not only are these differences large, they have persisted over the past two decades. In this context, some important questions would be: What can regional differences tell us about the determinants of labour market outcomes in India? What role do economic growth and economic activity levels play in affecting labour market outcomes? Why do female participation rates vary so dramatically across India's states and regions, and what light can this

**Figure 4.1** Log Household Real Per Capita Expenditures Plotted against Log Real Weekly Earnings for Regions for Five Rounds from 1983 to 2004–5



Source: Estimates derived from the NSS 55th Round.

Note: An increase in wage earnings explains about 66 per cent of the variation in per capita household expenditures by itself.

phenomenon throw on the decline in female participation rates in the 1990s?

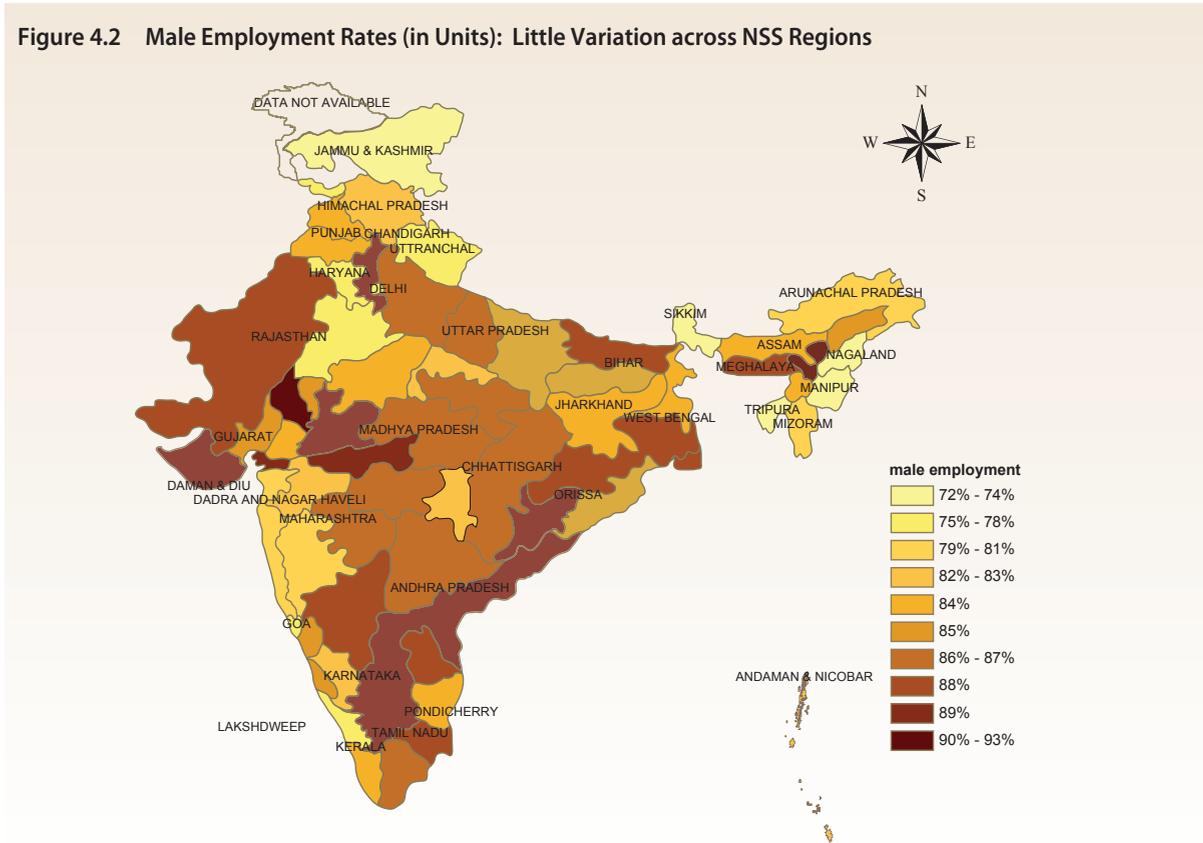
This chapter attempts to deepen our understanding of the determinants of labour market outcomes by analysing regional differences. The motivation is two-fold: first, by being able to examine the variations in labour market outcomes across states and NSS regions, and the changes in them over a period of time, this analysis can help shed light on the determinants of labour market outcomes in India in general; second, understanding regional variations is important for its own sake because it brings into focus the regional dimensions of employment issues. Regional perspectives can be advantageous, for instance, in providing evidence of the importance of labour force earnings in per capita household expenditures which, in turn, determine household welfare and poverty. Figure 4.1 highlights the dramatically tight link between labour earnings (the product of employment and wages) and household consumption, and thus, poverty rates and welfare. Before proceeding further, it may be worth highlighting a few significant key facts.

## THE STYLIZED FACTS—HOW SIGNIFICANT ARE REGIONAL DIFFERENCES?

Labour market outcomes and trends differ across India's regions in four respects. First, there is striking regional clustering of employment outcomes. The north-eastern states of Arunachal Pradesh, Assam, Nagaland, Tripura, Manipur; the northern states of Uttar Pradesh and Bihar; the coastal regions of Orissa and Kerala; and the former Portuguese and French colonies of Goa and Pondicherry respectively, have low employment rates (Figure 4.2). On the other hand, the southern states of Andhra Pradesh, Karnataka, and Tamil Nadu, and the western states of Gujarat and Maharashtra show higher employment rates. These trends largely mirror the participation rates across the same regions, indicating the close correlation between employment rates and participation rates (Figure 4.3).

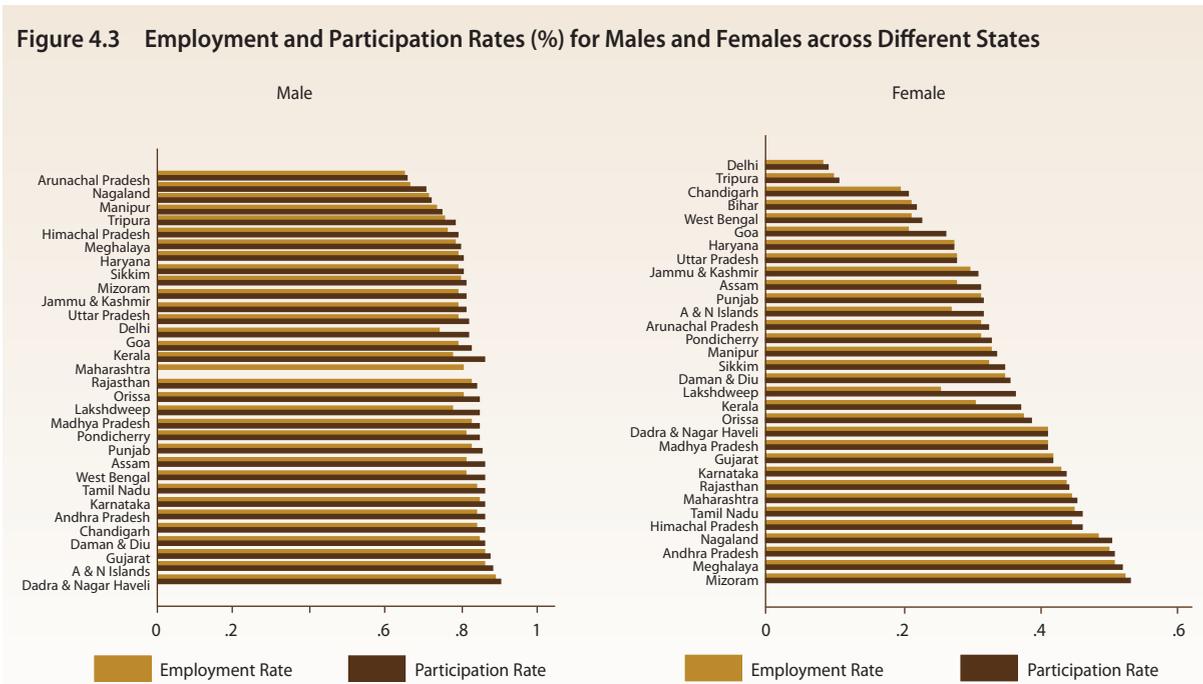
Second, variations in female employment and participation rates are markedly higher than those for males. These variations drive most of the regional differences (Figures 4.3 and 4.4). The coefficients of variation of employment and participation rates for females are nearly four times those of men. In addition to low employment and participation rates in the north-eastern regions (including Tripura), Uttar Pradesh, and Bihar, female employment rates are also very low in West Bengal and, perhaps not that surprisingly, in prosperous Punjab (Figure 4.4) as well. Once again, female employment and participation rates are much higher in the prosperous western states of Gujarat and Maharashtra, and the southern states of Karnataka, Andhra Pradesh, and Tamil Nadu. One implication of this pattern is that it makes it difficult to attribute the low participation rates in West Bengal, specifically, and India, generally, simply to higher school attendance rates because school attendance rates are also high in the western and southern states.

**Figure 4.2 Male Employment Rates (in Units): Little Variation across NSS Regions**



Source: Estimates derived from the NSS 61st Round.

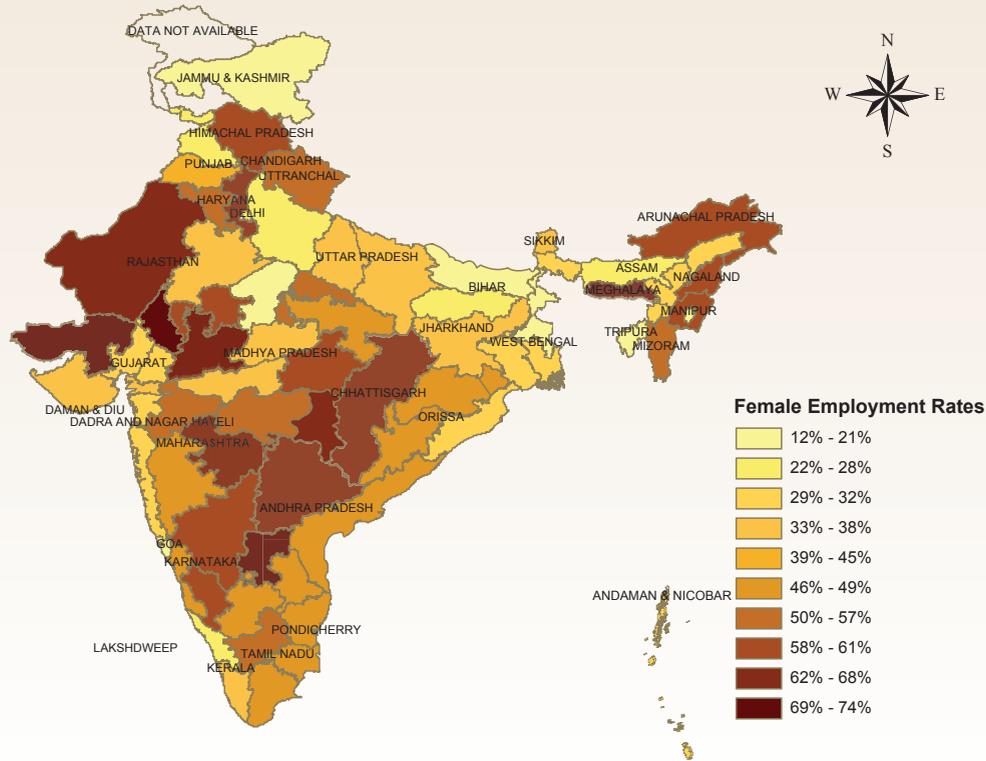
**Figure 4.3 Employment and Participation Rates (%) for Males and Females across Different States**



Source: Estimates derived from NSS 55th Round data.

Notes: Employment rate refers to the share of the population in the 15–59 age group that is employed. Participation rate is the share of the population in the 15–59 age group that is working or searching for work.

Figure 4.4 Female Employment Rates (in Units): Large Variation across NSS Regions



Source: Estimates derived from the NSS 61st Round.

Table 4.1 Employment and Participation Rates in Regions are Correlated across Rounds

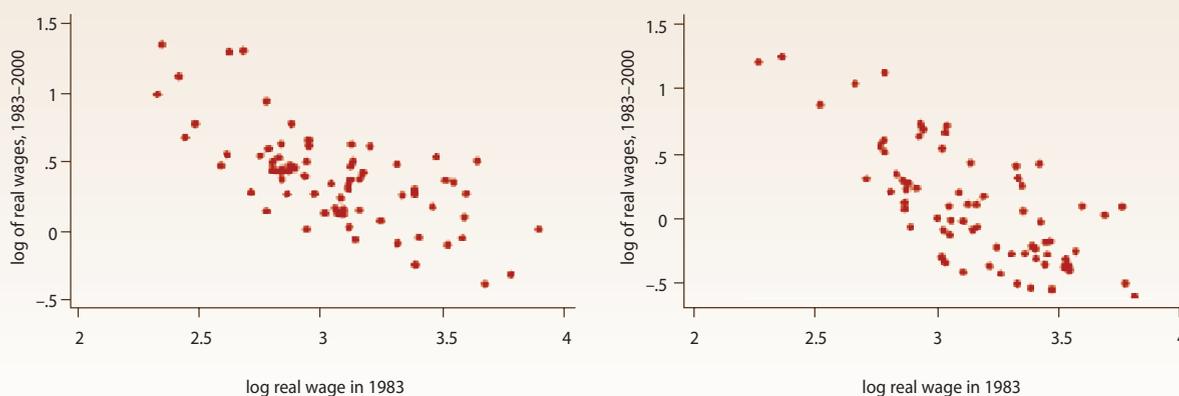
Correlation between One Round and Previous Round									
Employment Indicators						Real Wages			
Employment Rate		Participation Rate		Unemployment Rate		Urban	Urban	Rural	
Male	Female	Male	Female	Male	Female	Salaried	Casual	Casual	
0.8266	0.8971	0.7955	0.8924	0.6485	0.5581	-0.1143	-0.0547	-0.0819	

Source: Estimated from NSS Data—38th, 43rd, 50th, and 55th Rounds.

Third, regional differences are persistent. There are few signs of convergence in employment rates or participation rates across regions. If we use the threshold of one standard deviation from the Indian average to classify regions as being significantly different from all-India averages, the number of regions significantly different has either stayed the same or increased in the NSS 55th Round (male employment rates were significantly

different in 34 regions out of 78 regions in 2000) compared to the 50th Round (when 32 regions were significantly different in 1993). Particularly noteworthy is the increasing divergence from the all-India average in rural employment rates in the 55th Round, compared to the 50th Round. The persistence in employment indicators is also confirmed when we see that employment and participation rates are highly correlated across

**Figure 4.5 Convergence of Casual Wages: Growth from 1983–2000 against Real Wages in 1983**



Source: Ahsan and Pagés (2006).

**Table 4.2 Regional Convergence—Regions with Higher Initial Real Wages have Seen Slower Real Wage Growth (in % p.a.)**

Rounds	Urban Casual Industry	Urban Salaried Industry	Rural Casual Industry	Rural Casual Agriculture	Rural Casual Agricultural Operations	Rural Salaried Industry
38–50	-1.06	-0.64	-1.07	-1.21	-0.19	-0.68
50–55	-1.13	-1.24	-0.97	-0.95	-0.20	-0.92
38–55	-1.03	-1.03	-0.87	-0.99	-0.24	-0.97

Source: Ahsan and Pagés (2006).

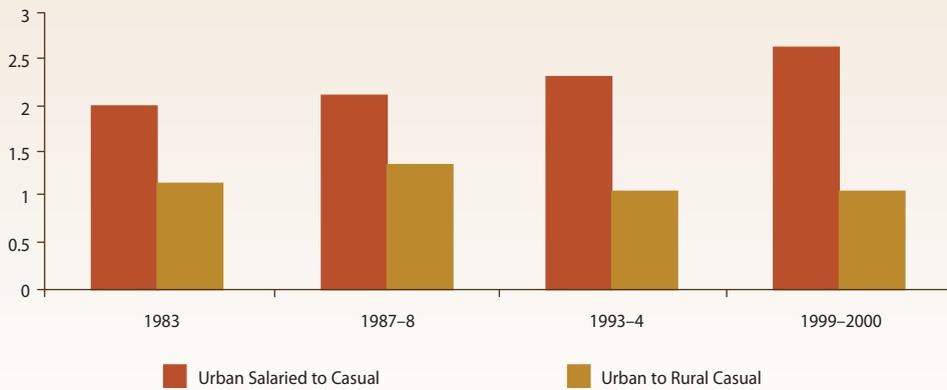
Note: All estimates are statistically significant.

Rounds (Table 4.1). Employment and participation rates tend to show persistence across the different Rounds, in sharp contrast to real wages which are not correlated across Rounds.

Fourth, in contrast to employment indicators, real wages are showing signs of convergence, even though there are still substantial differences in wage rates across regions. Wage inequality appears to be falling across regions for all categories of casual wages. There was a drop in measures of inequality—coefficient of variation and gini coefficients—in all three casual wage categories, rural, agricultural, and urban, between 1993 and 2000. Although there was a slight increase in regional inequality in salaried wages, the

inequality was low to begin with. Convergence in wages is also indicated by econometric tests of convergence which show that regions that had the lowest wage rates in 1983 had higher growth in wages in the next 17 years for which data is available. Conversely, regions which had higher real wages in 1983 experienced lower growth rates later on (Figure 4.5). This is also seen in the significant negative relation between growth rates of real wages and initial wages. Table 4.2 presents the estimates which show that wages are converging. Significantly, the convergence is least for wages in agricultural operations. Given that agricultural productivity varies widely depending on agro-ecological conditions, a slower degree of convergence is not unexpected.

Figure 4.6 Rural and Urban Casual Wage Ratio



Source: Estimated from NSS data.

Within each region, however, there are two contrasting trends. Differences between casual wages in rural and urban areas largely disappeared in the 1990s. However, salaried and casual wages began to diverge (Figure 4.6 shows urban casual and regular wages). Seen across the last four Rounds, the ratio of urban to rural off-farm casual wages declined as the growth rate of rural casual wages exceeded that of urban casual wages. While the growth rate of agricultural wages was lower than that of off-farm casual wages, it was still higher than the growth rate of urban casual wages. Indeed, once human capital attributes and the differences in cost of living are taken into account, there is little difference between rural and urban casual wages. Further, most states replicate the pattern of narrowing urban–rural wage differences. Unlike casual wages, urban salaried and casual wages show a divergence on average and across different regions. As noted earlier in Chapter 3, a substantial part of this divergence cannot be accounted for by skill and human capital differences, though these have certainly contributed. Regulatory barriers and public sector salaries (which account for most of the salaried

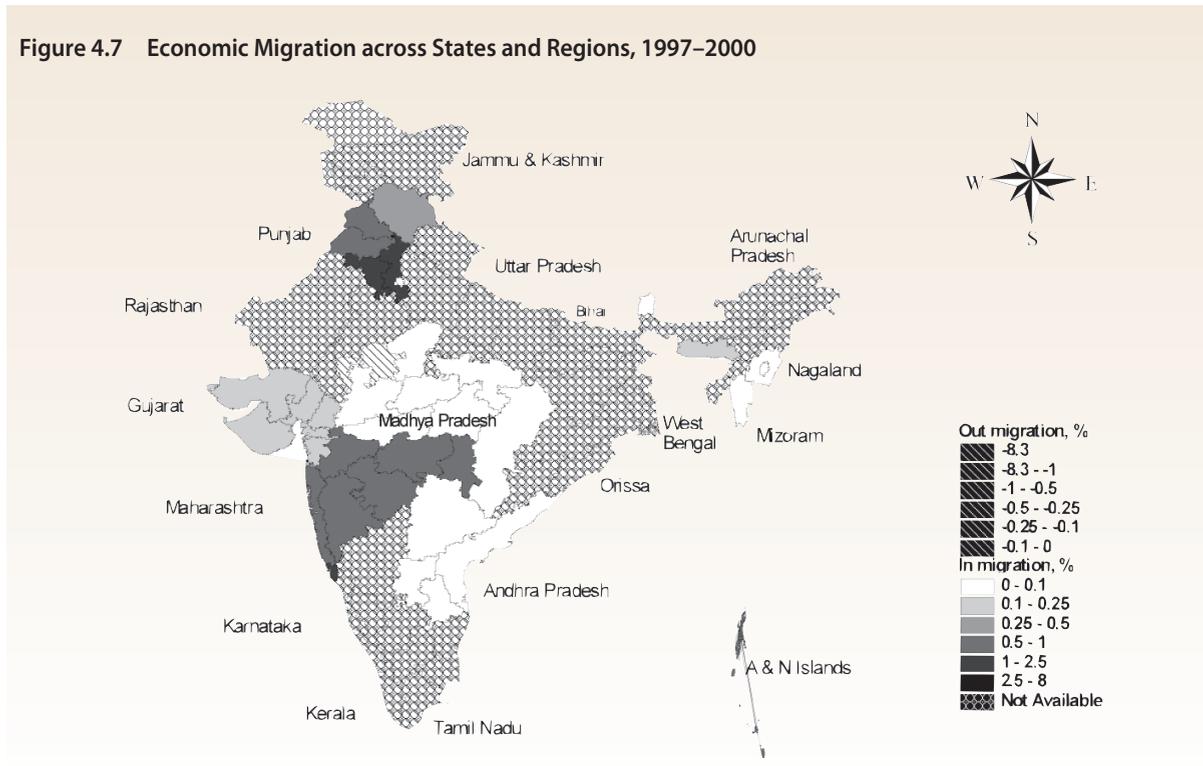
jobs) create market segmentation and shore up salaried wages, as elaborated in Chapter 5.

### LOW MIGRATION AND URBANIZATION RATES

Given the significant differences in labour market conditions across different regions, India's unusually low economic migration rates present a puzzle. Overall, while about 1.8 per cent of India's population migrated on average each year between 1997 and 2000, only about 0.3 per cent did so due to economic factors. A small number of them, 0.3 per cent, did so outside of their districts or states. In comparison, some 5.5 per cent of the US population migrated across the county or across states in a similar period.<sup>3</sup>

A look at the pattern of migration from and to different regions in the map of India in Figure 4.7 confirms that migration rates are low across many regions. In three years, from 1998 to 2000, most regions showed less than 1 per cent net in- or out-migration. Chandigarh, Goa, Daman and Diu, Haryana, Punjab, Delhi, Mumbai, and the Kolkata areas showed the maximum inflow, exceeding 1 per cent of the total labour force in the

**Figure 4.7 Economic Migration across States and Regions, 1997–2000**



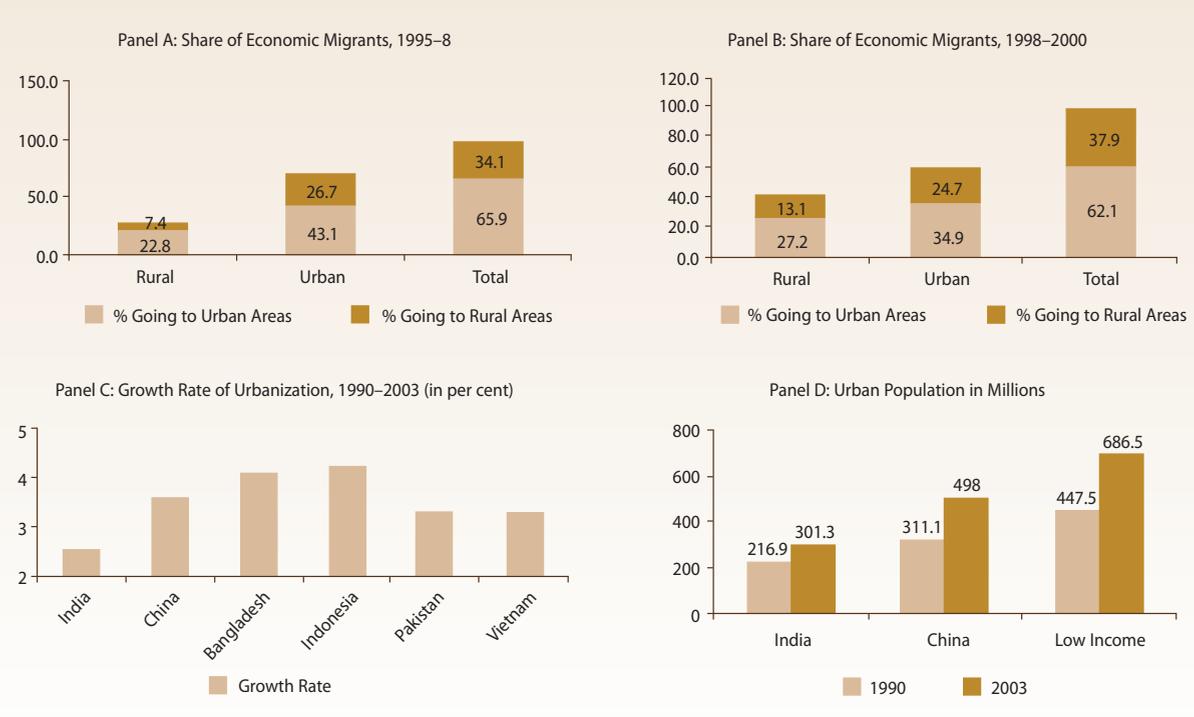
Source: Estimated from NSS data, 55th Round.

three years from 1998 to 2000. Overall, though, Maharashtra and Gujarat showed in-migration of around 0.5 per cent and 0.2 per cent respectively. Northern Tamil Nadu, Andhra Pradesh, parts of Madhya Pradesh, and less expectedly, Mizoram and Nagaland, also show in-migration. The main out-migration regions were Bihar, western Rajasthan, and Jammu and Kashmir. Kerala, Karnataka, and southern Tamil Nadu were also regions from where out-migration took place.

The trend of real wages converging across regions, on the one hand, and growing unemployment rates in major urban areas, on the other, can help explain why migration rates have not picked up. While wage differences are high, they are converging and do not appear to significantly affect migration. However, urban casual wages—the best proxy of spot-market wages—are positively related to in-migration. On the other hand, unemployment

rates are significantly inversely related to net economic migration rates. In sum, low migration rates appear to be related to low prospects for increases in earnings after migration.

Another issue related to labour markets in India is low urbanization rates. Even in the larger metropolitan areas of Mumbai, Delhi, Kolkata, and Chennai, which attract the highest rates of migrants, the in-migration rates, about 1.5 per cent of the population per annum, are low (Figure 4.8 presents a picture of rural to urban migration). Further, the share of economic migration to urban areas was stagnant from 66 per cent in the mid-1990s (Figure 4.8 A) to 62 per cent in 2000 (Figure 4.8 B). Compared to other Asian countries such as China, Indonesia, Vietnam, Pakistan, and Bangladesh, India has the lowest rate of urban population growth (Figure 4.8 C). China provides a dramatic contrast: urban population grew by

**Figure 4.8 India's Urbanization Growth by Types of Cities**

Source: Migration estimated from NSS 1999–2000 and urbanization from WDI data.

Note: The third bar showing 'Low Income' in Panel D refers to all low income countries (as defined by the World Bank).

close to 190 million from 1990 to 2003. In India, the corresponding number was about 87 million, or less than half.

Urbanization slowed down in India in the 1980s and 1990s as casual wages in rural and urban areas converged. Demographic projections in 1981 estimated that India's urban population would be about 31 per cent of the total population in 2001. In reality, it turned out to be only 27 per cent of the population, that is, lower by about 40 million persons (Mohan and Dasgupta 2005). Part of the answer as to why urbanization rates have been low would appear to lie in the converging trend in rural–urban wages. As the gap between rural and urban wages narrows, and the urban unemployment rate grows, the expected earnings from migration are falling. It follows then that the incentives to migrate to cities are declining accordingly. There may be important implications to these developments. Urban infrastructure and service development may not be growing fast

enough to create jobs that are better paying than those in rural areas.

Not only has urbanization slowed down, there is also evidence that job and population growth have shifted away from large metropolitan cities and rural areas to mid-size towns. Decomposing urban growth by size of cities (Table 4.3), we can see that there is a significant shift of jobs from rural centres and large cities to secondary towns and, to a lesser degree, to sub-urban areas of the large cities (or peri-metro areas). The implication of these developments has to be interpreted carefully. The growth of large cities (100,000 or more) is not fast enough to accommodate the movement of labour and population out of rural areas, hence this population is now moving to secondary cities (with population between 20,000 and 50,000). Given that these town sizes are probably too small to take advantage of agglomeration externalities, there is a particular need to develop peri-metro areas.

**Table 4.3 Growth of Population and Manufacturing Jobs by Size of Town**

District Type	Population, 1991 (in millions)	Percentage Share of Population	Percentage share of Manufacturing Employment in 1989	Percentage Share of Manufacturing Employment in 1996
Metropolitan centres (100,000 + persons)	40.4	5.1	15.7	13.5
Peri-metro (50,000– less than 100,000 persons)	21.7	2.7	3.9	8.3
Secondary cities (20,000– less than 50,000 persons)	100.2	12.6	10.4	21.1
Tertiary cities (10,000– less than 20,000 persons)	86.5	10.9	7.5	10.2
Towns and rural centres (less than 10,000)	549.2	68.8	62.4	46.9

Source: Authors' estimates from census.

### WHAT IS DRIVING REGIONAL DIFFERENCES IN LABOUR MARKET OUTCOMES?

Two proximate factors play key roles in driving regional differences in labour market outcomes. From the demand side, economic activity or, more specifically, differences in GSDP levels and economic growth play a key role in the long term in explaining differences in employment levels and earnings. From the supply side, the differences arise primarily because of variations in female labour force participation rates across different regions, with male participation rates remaining relatively invariant. A step deeper, differences in female participation rates depend on employment prospects and wages across regions in a complex manner. If opportunities and wages for female employment increase, female participation increases. On the other hand, increases in earnings of spouses and increases in household wealth (measured by household expenditures) create increased incentives for females to leave the labour force. These issues are discussed in more detail in the following section.

#### The Role of Economic Activity

A major policy issue in India is that economic growth in the 1990s, at the all-India level, was seen to be 'jobless'—meaning it did not create enough employment opportunities. Measured by the simple employment elasticity of growth,

which fell markedly from 0.52 between 1983–4 and 1993–4 to 0.19 between 1993–4 and 1999–2000, such a concern is not misplaced. But how accurate is this statement when we look within states and regions? Studying differences in labour market outcomes and growth across regions provides a good handle for addressing the employment–output relationship.

Across states economic growth is almost entirely driven by labour productivity growth. Figure 4.9, which decomposes per capita income growth in the larger Indian states, shows that quite remarkably, labour productivity has increased at a very high rate of above 4 per cent a year, in 12 out of 17 states. At the same time, employment to working-age population ratios have declined in all states but three. Moreover, Figure 4.9 shows that employment rates have typically fallen less (or increased more) in those states that have the lowest gains in productivity.

Across the world, productivity gains do not necessarily cause a decline in employment rates. In popular perception, productivity growth causes lower employment growth. In reality though, productivity growth and employment growth are related in a more complex manner. In the short run, an increase in productivity translates, by definition, into lower employment elasticity—that

**Figure 4.9** Decomposing Growth by Contribution of Productivity, Employment Rate, and Dependency Ratio

Source: Bank staff estimates.

is, lower employment growth for a given level of output growth. However, output can also increase with technological growth, implying that firms can do more with the same resources. What happens to employment then depends on whether firms decide to produce the same with less workers, or produce more with the same or even more workers. The decisions of the firms depend on how much more output can be put in the market and whether the firms want to try and substitute away from labour in the production process. The outcomes in India strongly suggest that firms are taking advantage of technological advances to substitute away from labour in the production process, something that will also be discussed in the next chapter. This is strongly related to current labour regulations and policies.

The inverse relationship between labour productivity growth and employment growth

in the current period disappears when we relate labour productivity growth in the previous period to employment growth in the current period. The right panel in Figure 4.10 indicates that the relationship between lagged productivity growth—productivity growth five to six years earlier—and current employment is positive and significant. It suggests that regions that had productivity growth in the past can, after a period of adjustment, generate relatively high employment growth compared to regions which had relatively low productivity growth in the past. The relationship between labour productivity and employment growth is largely the result of elasticity of employment (Box 4.1).

The lack of short-run correlation between economic activity and employment levels is highlighted again when state GSDP levels are related to employment levels, separately for

**Figure 4.10 Growth of Employment and Growth of Labour Productivity by Regions—Same Period and Previous Period**



Source: Bank staff estimates.

#### Box 4.1 Does Increase in Labour Productivity Imply a Decline in Employment?

It is commonly perceived that if an economy is able to produce the same level of goods and services with less labour, this leads to a decline in employment rates. However, this is not necessarily the case; it depends on what is driving the labour-saving process. For example, if excessively high labour costs drive employers to substitute labour for a less expensive factor (for example, capital), then this process of labour-saving is associated with a decline in employment in firms that undertake such labour substitution. If, instead, the underlying factor is an increase in the capacity of workers to produce more with the same factors, either because workers are learning new production techniques or because new technologies allow workers to be more productive, then there need not be a decline in employment rates. The final outcome on employment depends on the price elasticity of the goods produced by such workers.

For goods where large increases in production do not imply a large decline in their price, increases in the productivity of labour will result in an expansion of employment. This is because while fewer workers are needed to produce the same goods, more goods can now be produced at lower costs. Instead, if the gains in productivity occur in sectors where an increase in production leads to a sharp decline in prices, firms will be reluctant to increase the production of goods and will consequently need fewer workers. Notice, however, that even when some employment losses are likely to occur in this case, they need not be long-lasting. This is because increases in productivity lead to lower prices which, in turn, boost the ability of workers to consume other goods, in turn boosting the demand for workers to produce such goods. A successful and smooth process is such in which workers who lose jobs in one sector as a result of productivity growth, can be quickly re-employed in another thriving sector. Clearly, for this smooth process to take place: (i) cost reductions brought on by increases in productivity need to be passed on to consumers; (ii) workers need to have sufficient skills so they can quickly adapt to working in other sectors; and (iii) some form of income protection needs to be in place to protect the incomes of workers while they search for other jobs.

**Box 4.2 Relating GSDP Levels to Employment: The Need to Address Endogeneity**

A key issue in estimating the relationship between GSDP levels, employment levels, participation rates, and earnings is the endogeneity of GSDP, wages, and earnings; that is, these variables can have a two-way relationship because they affect each other. For example, not only do GSDP and wages determine employment, but employment also determines GSDP and wages. Or, these variables can be jointly determined by another third set of factors.

Econometric techniques such as two-stage least squares and the use of instruments can help address endogeneity problems, though they have their own pitfalls. In the estimates presented in this chapter, GSDP, wages, and earnings are estimated as being determined by the structure of the economy (share of industry), infrastructure variables, and credit flows as instruments.

Similarly, earnings are also instrumented in estimating the relationship between participation and earnings. Thus, endogeneity is accounted for. Then, using predicted GSDP and wages, a significant relationship is found to exist between GSDP and employment and earnings, and between labour force participation and earnings of workers and their spouses.

*Source:* Bank staff; see Appendices 4.1 to 4.4.

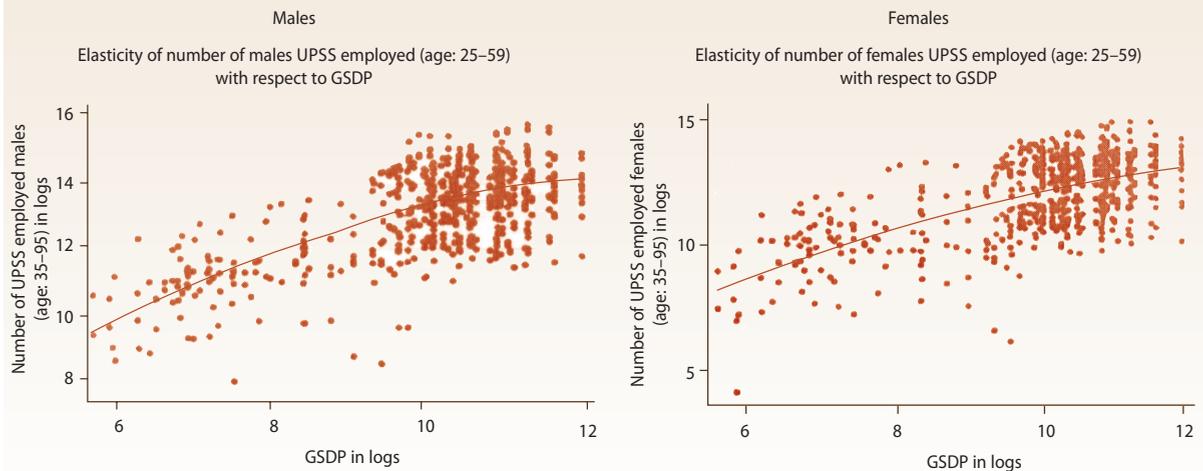
women and men and for rural and urban areas, controlling for regional fixed effects. This study looked at changes across the levels of states' GSDP, changes in GSDP across time, and took care to account for the fact that employment also determines GSDP levels (see Box 4.2). In doing so, the effects that other economic variables such as availability of credit, roads, power, and irrigation have in determining GSDP were also considered. Then, changes in GSDP caused by changes in these variables were linked to employment. The results of this exercise, provided in Appendix 4.1, suggest a lack of correlation between GSDP and any of the employment variables, when regional fixed effects are included and only the time variations around the state means are considered. (The results are substantially different if the fixed effects are not included.)

In the long run, however, there is an important relationship between employment and growth. The results, without regional fixed effects, indicate that across states, levels of GSDP have a significant impact on employment levels of males

in urban areas. A 1 per cent increase in GSDP leads to, on average, a 0.4 per cent increase in male employment levels. The effect is much weaker, though still significant, in rural areas where the elasticity is 0.2 per cent compared to urban areas, where the elasticity is 0.8 per cent (see Appendix 4.1). Figure 4.11 shows the average increases in male (left panel) and female employment (right panel) against the increase in the log of the state GSDP. It is evident from the left panel, from the fitted quadratic curve, that the increase in GSDP leads to an increase in the employment of males but at a declining rate: that is, elasticity falls as GSDP levels increase.

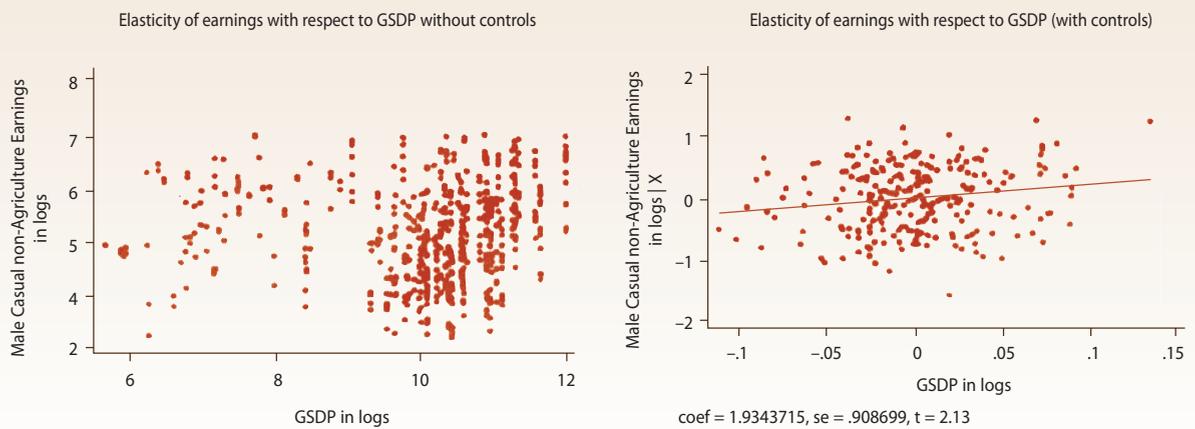
The long-run impact of differences in GSDP levels is more marked on female employment than on male employment, and is significant both in rural and urban areas. For female workers, a 1 per cent increase in GSDP leads to a 0.7 per cent increase in employment levels, a 0.8 per cent increase in urban employment, and a 0.5 per cent increase in rural employment. Analysis suggests that, unlike in the case of males, the relationship between GSDP

**Figure 4.11 Employment Levels of Males and Females and GSDP Levels: Variations across Regions and Time**



Source: Estimated from Appendix 4.1; Ahsan and Pagés (2006).

**Figure 4.12 The Effect of Variations in GSDP on Male Earnings**



Source: Estimated from Appendix 4.2.

levels and females earnings is linear—that is, there is no evidence of declining elasticity (Ahsan and Pagés 2006). This has important implications because it suggests that there is a pool of female workers for whom higher level of economic activity opens up employment opportunities.

In the short run, gains in GSDP contribute to gains in earnings in rural areas. Increase in GSDP levels by 1 per cent increases earnings by nearly 2 per cent for rural casual non-agricultural jobs, and

by 1.4 per cent for agricultural jobs held by males (see Appendix 4.2). Figure 4.12 presents this point in the following way: the left panel shows that earnings and GSDP levels are unrelated if the estimates are made without accounting for other factors such as education levels or tribal and caste groups. But once these factors are accounted for (as in the right panel of Figure 4.12), the relationship is very clear. This relationship is also visible when we correlate changes in earnings with changes in GSDP across states.

In sum, the results indicate that across states, the recent period has been characterized by strong GSDP and labour productivity growth, though relatively small gains in employment rates. In the long run, however, strong gains in productivity and output are related to higher employment. While in the short run, firms can do the same amount of work with few workers, in the long run the higher earnings and profits brought on by economic growth will create a demand for goods and services that will require more labour for production. As to how long this transition will take and how important growth is for increasing employment, will depend, among other things, on two major factors: whether growth brings more women into the labour market and whether firms make use of increased opportunities to produce more instead of cutting down on labour. The first issue is analysed in the next section. Labour institutions and policies are dealt with in the following two chapters of this report.

### Understanding Regional Variations and Trends in Female Participation Rates

Understanding the differences and trends in female participation rates—which account for most of the regional variations—is of vital importance. If India is to grow at a sustained rate and reach the ranks of middle-income economies, female participation rates will likely have to increase significantly.

There are two issues here. First, the large variation in female participation rates has to be understood: the coefficient of variation for female participation rates is some 15 to 20 times higher than that for men, even though female participation rates are uniformly lower than those of men (Table 4.4 and Figure 4.13). Female participation rates are particularly low in Bihar, Uttar Pradesh, Jammu and Kashmir, and parts of the north-eastern region. Second, it is necessary to understand why female participation rates declined over the 1990s. This is puzzling, given the increase in the education level of the female labour force, the decline in fertility rates, and India's already low female participation rates (compared to East Asian and Latin American countries).

Two factors have been identified to account for the decline in female participation rates (Sundaram and Tendulkar 2006a):

- First, the rise in secondary and high school attendance by females—that is, members of the age group 15–25 have opted for education over work.
- Second, the effect of higher incomes—as wage rates (for male spouses) increase, women workers drop out of the labour force to spend more time on housework or on leisure.

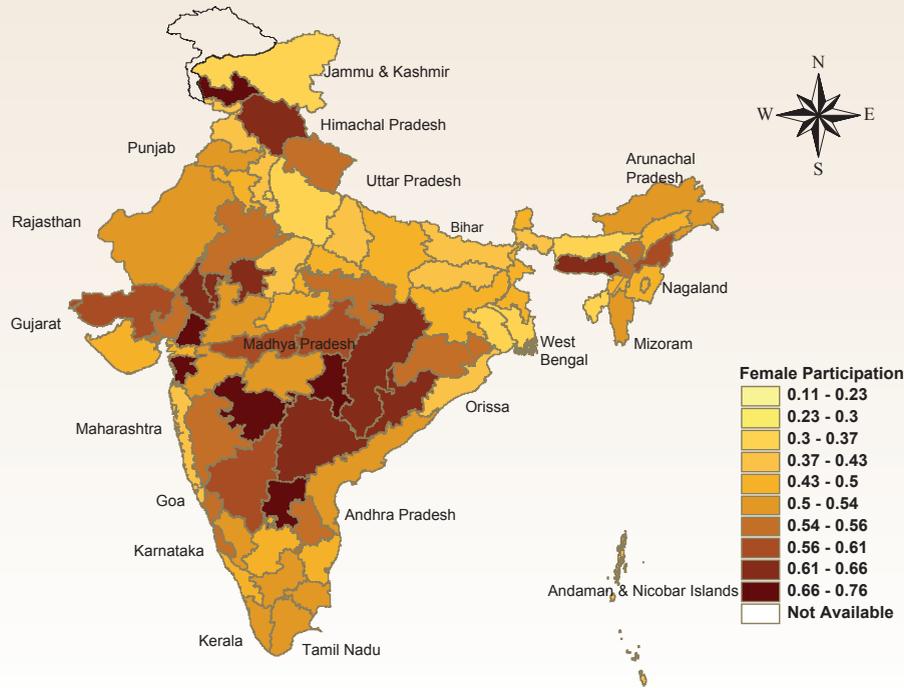
**Table 4.4 Participation Rates for Males and Females**

Variable	Rural		Urban	
	Mean	CV	Mean	CV
Prime-age Male, 15–59 years	0.8925 91	0.0539 57	0.8235 59	0.0607 79
Male (excluding school population), 25–59 years	0.9764 55	0.0199 59	0.9637 66	0.0190 26
Prime-age Female, 15–59 years	0.5486 92	0.3689 57	0.253 506	0.3583 85
Female (excluding school population), 25–59 years	0.5887 16	0.3514 26	0.2884 71	0.3562 56

Source: Estimated from NSS data.

Note: CV= Coefficient of variation.

Figure 4.13 Participation Rates for Females, 55th Round



Source: Authors' estimates. Participation rates measured as a share of the 15–59 age group, working or seeking work.

Further, decisions to marry, which often take place between the ages of 15 and 25, may also lead to women dropping out of the labour force.

A careful look at the evidence (see Chapter 1), though, suggests that education can only partly explain the decline in participation. Of greater importance is the decline in the participation rate of prime-age females in part-time or 'subsidiary' occupations, and an increase in the time they spend on housework or leisure. A better understanding of the reasons for the low participation rate of females is thus important.

Specifically, it is crucial to ascertain whether women are withdrawing from the labour force voluntarily, because the incomes of households are increasing (the 'income effect'), or whether they are doing so for lack of opportunity: jobs and good earnings (the 'substitution effect'). The 'income effect' refers to the effect of the rise in

household incomes which can take place due to increased earnings by spouses or from other sources; female labour can then opt out of the labour force to do housework or enjoy leisure. The 'substitution effect' refers to the better incentives women have to work—the availability of good jobs and higher earnings. Which of these effects is at play, and if both are at play, which is dominant? If the 'substitution effect' is dominant then the scope for including more women in the labour force increases if they can be provided with greater opportunities for employment.

Two approaches have been used to answer these questions in this report. The first approach estimates the determinants of participation rates for females aged 25 years or older, by testing the relationship of both female wages and spouses' wages with participation rates, to capture 'substitution' and 'income effects' respectively. A positive relationship between female wages

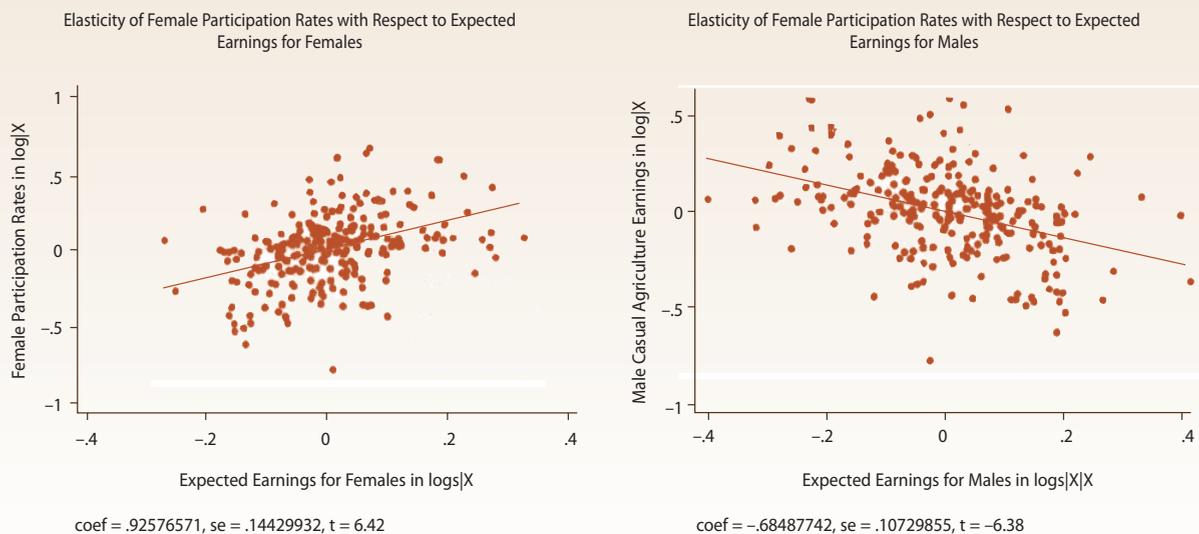
and female participation rates would highlight the presence of ‘substitution effects’. A negative relationship between spouses’ wages/household expenditures and female participation rates would point to ‘income effects’. In order to filter out any possible role played by decisions to go to school or decisions to marry, only females in the age group 25 or older are considered here. Unemployment rates are included to measure opportunities (specifically, the absence thereof) in the labour market. Finally, household per capita expenditures are used instead of spouses’ wages, after taking into account female wages. The results, presented in Appendix 4.4a, are clear:

- Urban unemployment and overall high unemployment rates for females appear to discourage participation. Thus, low urban unemployment rates are partly explained by lack of opportunities.
- Higher wages encourage female participation in rural casual work—again stressing that opportunities are important.
- Men’s wages appear to have little impact on female participation rates, indicating the weakness of the ‘income effect’ in this model.

Hence, in this first approach, it is the lack of opportunities that is highlighted as explaining low levels of female participation.

In the second approach, ‘expected earnings’ are used as a composite measure of labour market conditions: the prospects for employment and earning an average market wage. Variables are constructed to represent female and male expected earnings by multiplying wages with the probability of employment. Female ‘expected earnings’ represent ‘substitution effects’ and also capture the employment opportunities available to women. Men’s ‘expected earnings’ represent ‘income effects’. In sum, the higher the ‘expected earnings’ for females, the greater the incentives for females to participate in the labour force; the greater the ‘expected earnings’ for males, the greater the scope for females to drop out of the labour force, leading to a decline in participation rates. The effects are quite clear and consistent: female ‘expected earnings’ in rural areas robustly increase participation. Figure 4.14 presents the key results, with the detailed results presented in Appendix 4.4.

**Figure 4.14 Female Participation Rates (25 years and above) and Expected Earnings for Females and Males**



Source: Bank staff estimates.

The results are clear and similar to the first approach: the left panel in Figure 4.14 shows that an increase in the ‘expected earnings’ for females has a significant impact on increasing female participation, across regions, after taking other variables (education, caste, etc.) into account. The right panel shows that increasing ‘expected earnings’ for male casual workers in rural areas, and salaried workers in urban areas, reduce female participation after a certain point. However, the effect is weaker and does not hold for work in urban areas—that is, higher ‘expected earnings’ from casual urban work do not lead to lower participation rates. It is only higher ‘expected earnings’ from urban salaried work that lower the participation rate of urban women.

How can female participation be increased? From the analysis of household-level factors, some policy conclusions seem to emerge. As expected, earnings are important. First, unexplained wage differentials among males and females have to be reduced. This requires enforcement of equal pay for equal work (as mandated in the Constitution), especially in the casual labour market; it also requires galvanizing the legal system to respond to complaints about the infraction of this law. Policymakers also need to take a fresh look at minimum wages and whether the lower wages set for women may actually be harming women in the labour force. Second, it is likely that low quality of education and lack of technical skills are hampering women’s entry, at full potential, into the new services sector. Thus, it may be necessary to focus on higher education and technical education for women. Third, since the majority of women are employed in agriculture or agriculture-based occupations, policy also needs to address issues that would enhance women’s productivity in the agricultural sector. Fourth, almost 30 per cent of Indian women would like to enter the labour force, but as part-time workers. Thus, flexible work hours and part-time work

also need to be promoted by policy in regular salaried jobs. The possibility of more efficient, well-regulated child care arrangements would also likely encourage the entry of women into the labour force.

## SUMMING UP

Regional differences in labour market outcomes are striking in India and have persisted over the last two decades. The exception is real wages which show signs of converging across regions and across rural and urban areas. The latter fact, combined with unemployment in states, may help explain why economic migration rates and urbanization rates are unusually low in India. Some policy implications can be drawn.

Foremost among these is the fact that economic growth and activity levels have been important in causing good labour market outcomes, though in a somewhat nuanced way. When regional differences are taken into account, growth has not been ‘jobless’. In the short run though, growth has had a muted effect on employment. Increasing labour productivity, which leads to growth, is associated with lower employment growth as an immediate effect. But in the medium term, increasing productivity does not adversely affect employment growth. Over the longer term, the relationship between growth and employment is clearer. States with higher levels of GSDP are also states which have created more urban employment and rural earnings in the case of males. Given that male unemployment rates are negligible in rural areas, this result is understandable. The effect of differences in GSDP levels is more striking for female employment, which is low in India on average. Higher GSDP levels lead to higher female employment in rural and urban areas.

This analysis also reveals that increasing employment opportunities for females will help to arrest the decline in female participation rates.

Although there is some evidence of 'income effects' that lead females to drop out of the labour force, economic opportunities are the strongest factor affecting female participation.

The analysis in this chapter also highlights the importance of urbanization and domestic migration. The narrowing of the wage gap between rural and urban areas, in each region, and higher unemployment rates have lowered urbanization rates. Conversely, impediments to urbanization lower the growth of employment and higher wages. At present, slow urban development is also slowing down manufacturing growth—with about half of new manufacturing jobs being created in rural areas. A complementary approach would be to facilitate economic migration, both to regions that are more dynamic and also to urban areas. Policies that can mitigate obstacles to domestic migration, through better safety nets and insurance for migrants, will also improve labour market outcomes by allowing workers to work in areas where there are more opportunities and higher returns.

Given that poor employment outcomes are persistently clustered in the northern, north-eastern and some coastal regions, a regional focus on growth and employment is called for. Investment in infrastructure—power, road, irrigation, and credit facilities—which is found to affect GSDP positively, can lead to higher employment prospects. Related to this is the need to improve the investment climate in these regions, a key aspect of which is labour market-related regulatory reforms. Also, it is important to enhance the effectiveness of active labour market policies. In the next two chapters, we turn to regulatory reforms and active labour market policies that can improve India's labour market outcomes.

## NOTES

1. This refers to the 78 regions in the NSS, which correspond loosely with agro-ecological areas.
2. Employment rate refers to the share of the population in the 15–59 age group which is employed.
3. US Bureau of the Census, Geographic Mobility: March 2000 to March 2001.

# Labour Regulations in India

## Helping or Hurting Workers?

# 5

**A** growing body of evidence suggests that labour regulations in India are unusually complex and costly. Research conducted for this chapter suggests that some current regulations hurt workers by preventing good jobs from being created, especially in the manufacturing and formal sectors. These regulations discourage manufacturing sector growth, encourage informality, and deepen dualism (division or extreme disparities, especially between formal and informal sectors). They also foster inequality between a very small segment of workers in the organized sector and the vast majority, about 90 per cent of workers, in the informal sector, as well as between regions. Indeed, manufacturing firms employing more than 100 workers identified labour to be as big a constraint to their growth as the availability of power (electricity). Reforming labour markets should involve the following: simplifying regulations; reforming the dispute resolution processes in the Industrial Disputes Act (IDA) to reduce transaction costs; and ensuring that workers in both formal and informal sectors are protected and get adequate compensation by introducing broader and more effective employment programmes and social insurance (this topic is discussed in the next chapter). The aim should be to protect workers, not jobs.

### **THE ROLE OF REGULATIONS IN LABOUR MARKETS**

Well-functioning labour markets will be key to achieving equitable growth in India. First, growth prospects will depend not only on the economy's ability to provide employment opportunities to the 80 million new entrants to the labour force over the coming decade, but also to employ them in good, productive jobs. Second, the impact of growth on reducing poverty and promoting equity will depend on the extent to which labour markets help create employment opportunities, with good wages for the majority of people whose main source of earnings is their labour. It is evident from the previous chapter that labour market earnings in India's regions are closely correlated to household expenditures and welfare. But how well labour markets perform in meeting the goals of growth and equity will depend, in turn, on the quality of labour regulations in India—the theme of this chapter.

Regulations influence labour market performance in several ways. First, by affecting the efficiency and flexibility with which workers can be allocated among various jobs, regulations affect the productivity and wages of workers and the profitability of firms. Second, by changing the costs of adjusting production, regulations can influence the ability and incentives of firms and labour markets to create jobs. Third, by providing protection against sudden and arbitrary job losses and poor working conditions, regulations can enhance the welfare and productivity of workers. Fourth, by determining the processes by which wages are set, regulations affect the earnings of labour (from the point of view of workers) and hence labour supply, and the cost of labour (from the point of view of employers) and hence labour demand. Fifth, by affecting industrial relations between workers and employers, regulations can help or hinder profit and employment prospects. It is worth stressing here that although regulations

have costs attached to them, there are strong economic arguments for most countries in the world having regulations and for the existence of international labour conventions (see Box 5.1).

In India, 45 Central laws and 170 state statutes deal directly with labour market issues. These laws—a few dating back to the nineteenth century—regulate minimum wages, hours of work, benefits, safety, security, conditions of employment, dismissal, trade unions, and other aspects of industrial relations. As is widely recognized now, these numerous laws have created an unusual complexity in labour markets through overlapping and sometimes contradictory mandates, and inconsistencies in basic definitions of commonly used concepts and terms such as factory, worker, workmen, employees, and employer. These complexities have been further compounded by a long trail of judicial decisions that have interpreted these laws, sometimes in an inconsistent manner.

#### Box 5.1 The Economic Case for Labour Market Regulations

The economic case for labour market regulations arises from the need to correct labour market failures, that is, situations where the free market does not lead to outcomes that maximize social welfare. Specifically, labour market regulations and policies address:

- Asymmetry in market power between employer and employee that can lead not only to inadequate protection of workers, unsafe working conditions, and low wages, but also to inefficient economic outcomes.
- Information failures—lack of knowledge on the part of workers about existing opportunities and lack of information among firms about workers and credit market failures. These failures may lead to lack of opportunities for workers and high costs to firms. In both cases, output and employment will be less than the potential.
- Insurance market failures—around the world, information asymmetries prevent the emergence of private unemployment insurance markets. Labour regulations (by means of severance payments and other mechanisms) and labour policy (through unemployment insurance) address such failures by protecting the incomes of workers in the event of them losing their jobs.
- Spillovers from labour markets that affect other markets and society in general—for instance, unemployment lowers incomes for all, not just the unemployed. Unemployment can also strain the social fabric, creating political instability and adversely affecting social interests.
- Misalignment of private and social incentives—for instance, by improving poor working conditions or stopping child labour. These may be costly for firms and employers but are beneficial for employees and society as a whole.

This chapter surveys the main labour laws and regulations and assesses their impact on labour markets and job creation in general. It concludes that current labour regulations lead to several unintended and adverse consequences: (i) ambiguity and uncertainty in the interpretation of labour laws; (ii) high administrative and judicial costs in enforcement; (iii) large output and employment costs; (iv) inequality resulting from dualism between the formal and informal sectors; and (v) regional differences and disparities in labour market outcomes.

There are two overall effects. First, evidence presented in this chapter shows that these regulations constrain the growth of jobs, especially in the formal and manufacturing sectors. They also promote informality and dualism which, in turn, lead to inefficiencies as labour and other resources are not allocated efficiently. Second, in trying to protect about 26 million jobs in the formal sector, these laws fail to protect the employment conditions of the remaining 390 million workers in the informal sector. For instance, despite the average 40 or so minimum wages that are in force in the typical Indian state, large segments of the labour force receive below minimum wages. Finally, these regulations have not been helpful to the cause of industrial peace. In 2004, 482 major cases of work-stoppage cost industry 15 million man-days. The ratio of workers involved in major work-stoppages (strikes and lockouts) to total factory workers was in the range 8 to 10 per cent between 1995 and 2001. In China, by comparison, the ratio was consistently near zero.

Two kinds of laws have had particularly pernicious effects on the growth of manufacturing and formal sector jobs in India: laws concerning dispute resolution mechanisms and laws restricting retrenchment and layoffs of workers (including those arising from closures of firms). Both these aspects have had a significant adverse effect on job

creation—the severity of the impact depending on the labour intensity of the industry. On average, it is estimated that current regulations could have cost India almost 40 per cent of existing formal sector manufacturing jobs. This chapter also provides evidence that although the Contract Labour (Regulation and Abolition) Act, 1970, introduced a certain measure of flexibility in manufacturing labour markets, ambiguity surrounding the status of this law lends to uncertainty regarding its use and a large variation in its application across different states.

As a consequence, labour laws have actually reduced the welfare of workers as a whole. Labour regulations have not increased the share of income going to workers (labour share). Instead, a constant labour share has meant that any gains in wages and working conditions have quickly translated into lower job creation. With growing labour supply, the scarcity of formal sector jobs has fuelled income insecurity—the loss of a formal sector job is associated with a very low probability of re-employment in a similar type of job. Better regulations would enable more job creation and higher income gains for workers.

This chapter provides recommendations for regulation reform with a view to balancing the need to provide income security and good working conditions to formal sector workers with the need for providing more jobs, good jobs, and preferably formal sector jobs to the vast majority of workers in the informal sector. Chapter 6 discusses active labour market policies that can provide employment protection and better benefits to informal sector workers.

## **LABOUR REGULATIONS IN INDIA AND THEIR ENFORCEMENT**

Labour market regulations were first introduced in India in 1880 when the Factories Act was legislated. Driven in part by the English textiles

manufacturers' concerns about 'evening' the competition between the growing Indian textiles industry and its competition in England, and in part by a nationalist desire to protect the interests of Indian labour, from early on regulations placed more emphasis on employment protection and less on the efficiency of labour markets and on dispute settlement (Pagés and Roy 2006). Historically, the principle of 'employment protection' was subsumed under the principle of 'social justice': Employment security was enhanced in the formal sector not only by a whole range of new laws, but also by cases where judges referred to 'social justice' to interpret laws. Removing or changing laws became politically difficult, with the result that demand for new laws led to a proliferation of laws.

While most labour regulations are the concurrent responsibility of the Central government and the state governments, the implementation of regulations is almost wholly the responsibility of state governments. The Constitution's Article 246 divides legislative powers for promulgating labour laws between the Centre and the states. But most labour laws are listed on the Concurrent List, List III, where both Parliament and state legislatures have the powers to make laws. Only the economic activities enumerated under List I of the Seventh

Schedule lie in the exclusive purview of the Central government and Parliament. Prominent among these Central laws are the regulations on labour and safety in mines and oilfields, ports and insurance, and telecommunications. The important labour regulatory issues lie in the Concurrent List shared by the Centre and states—'trade unions, industrial and labour disputes' (item 22 on this list); 'social security and social insurance, employment and unemployment' (item 23); and 'welfare of labour, including conditions of work, provident funds, employers' liability, workmen's benefits, compensation, invalidity and old age pensions, and maternity benefits' (item 24). However, the implementation machinery for enforcing these concurrent list laws rests almost exclusively with the state governments.

Although many in number, Indian labour laws cover four main areas: industrial relations, working conditions, wages, and social security and welfare (see Table 5.1). The rest of this section discusses these four laws.

### Industrial Relations

Industrial relations between employers and employees are covered by several Acts, of which the two most important are: (i) The Trade Unions Act, 1926, which specifies the conditions that a trade

**Table 5.1 Labour Laws and Regulations Governing Industrial Regulations**

Laws and Regulations	Aim	Coverage
Industrial Disputes Act, 1947	Provides procedures and institutions for settling disputes. Sets out conditions for recruitment, discharge, and dismissal of workers.	Existing industry in all of India. Chapter Vb of the Act applies to establishments that employ 100 or more workers
Trade Unions Act, 1926	Provides legal and corporate status to registered trade unions and provides immunity to office-holders of these unions from civil and criminal liability.	All India
Bombay Industrial Relations Act (BIRA), 1946	Specifies the nature of collective bargaining in the textile industry of Maharashtra, cooperative banks, and the Bombay Electric Supply and Transport Undertaking of Maharashtra. These industries are not subject to the IDA, except in cases of retrenchment, closure, and dismissal.	State of Maharashtra

Source: Pagés and Roy (2006).

union needs to satisfy in order to be recognized under the Act, and (ii) the Industrial Disputes Act (IDA), 1947. Of minor importance are three other Acts: the Bombay Industrial Relations Act (BIRA), 1946; the Administrative Tribunals Act, 1985; and the Maharashtra Recognition of Trade Unions and Prevention of Unfair Labour Practices Act, 1971. The objectives of the major Acts and their coverage are presented in Table 5.1.

The IDA is probably the most important law governing the Indian labour market. The IDA specifies a multi-tier conciliation-cum-adjudication system, created and maintained by the state governments. Although the system is invariant in principle, its working changes from state to state. The lowest and most immediate tier consists of conciliation officers and boards appointed by the government. This tier was in place even before the IDA was enacted. The conciliation officer either settles the dispute or sends a ‘failure report’ to the government. The emphasis in the Act, however, is less on encouraging conciliation, and more on adjudication. The dispute then goes to the labour court and further to an industrial tribunal. The labour courts deal with disputes that affect workers. The industrial tribunals, apart from working as appellate bodies, deal with cases that affect all workers in an industry. Therefore, cases dealing with wages usually go to tribunals. In rarer cases disputes go to national tribunals, which are centrally administered bodies empowered to deal with cases of potentially national significance. There is some uncertainty about the status of labour court orders. Although the government can in principle suspend orders, in practice this option is not used often.

In addition to setting up adjudication systems, the IDA imposes significant restrictions on employers regarding retrenchment and exit of workers. Units employing more than 100 workers require authorization from the government (Chapter

Vb) for retrenchment and layoffs of employees. In practice, such authorization is rarely granted. Retrenched workers also receive priority in case of new recruitment. Closure of units (firms) also requires prior authorization as per Clause 25-0. All establishments that are going to close are required to provide one month advance notice and severance pay equivalent to 15 days of work per year of completed service to workers who have completed more than one year of service at the firm.

The provisions of the Trade Unions Act, largely unchanged since their enactment, facilitate trade union activities. Any seven or more ‘workmen’ can apply for registration as a union; the ‘workmen’ need not work for the same employer. In 1926, the year when the Act was legislated, the implicit idea behind allowing outside members into unions was that trade unions were not organizations *of* workers but organizations *for* workers. This notion was widely held among nationalistic circles in the late-interwar period and it influenced early labour legislation (see Box 5.2 for a discussion on trade unions in India).

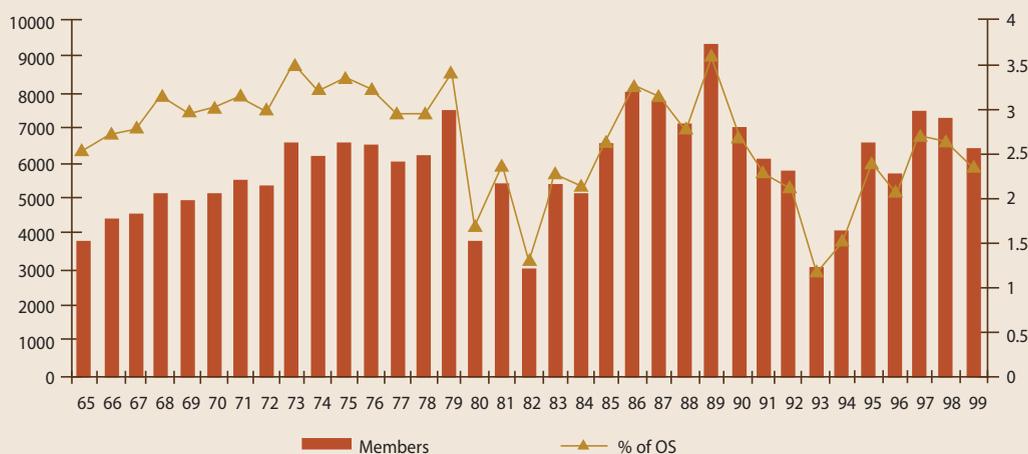
The coverage of the Trade Union Act has gradually extended beyond industry. Through the application of case laws, workers in government undertakings and religious trusts who made goods and services for sale were brought under the Act. Civil servants ‘engaged in the tasks of the sovereign and regal aspects of the Government’ were excluded from the purview of the Act (Tamil Nadu Non-Gazetted Government Officers’ Union, Madras *v.* Registrar of Trade Unions, Madras, 1962–63). It was also clarified that ‘industry’ would have the same meaning in the Trade Union Act as it does in the IDA; that is, ‘any business, trade, undertaking, manufacture, or calling of employers’ (Section 2j of IDA) or, essentially, any commercial organization. Thus, even though the IDA explicitly excludes hospitals, educational institutions, universities, charitable

### Box 5.2 Trade Unions in India

Trade unions have long been important in India. The 1950s and mid-1960s saw both public sector employment and unionism expand significantly. Unionism was aided by the important role assigned to the public sector which facilitated the creation of centralized unions with strong political affiliations. In the mid-1960s, reforms were also made in the IDA which gave greater legal footing to collective bargaining. However, in the 1980s, the union movement became more fragmented with decentralized bargaining emerging in some parts of the country. This reflected, in part, the growing role of unions which were independent of political parties and competed with traditional politically affiliated unions. The 1990s saw unions being further forced to make greater compromises in the face of economic liberalization and frozen, or sharply reduced, hiring in the public sectors where they had traditionally been dominant. In recent times, the increased reliance on contract labour (with very low unionization rates) and the rise of features such as voluntary retirement schemes also weakened the position of unions. In the private sector, unions now tend to focus more on job security than they did in the past, when wages and other conditions were the main issues. These pressures have also encouraged more coordination among unions.

Official data on the total number of members belonging to registered unions and their share in the organized sector workforce shows a decline over time as far as period averages go (Figure B5.2.1). There are, however, sharp annual fluctuations that emerge from 1980 onwards, suggesting the growing unreliability of these estimates. Household-level data are a more reliable source, particularly for the unorganized sector. The NSS 55th Round Survey found that around 8.6 per cent of Indian workers were members of trade unions or associations. There were substantial state variations, with Kerala having a union/association membership of 22 per cent, while Madhya Pradesh had a density of only 5.7 per cent. Also notable is the fact that trade unions were not equally present in all sectors, but where they were present, membership tended to be strong. Therefore, while only around 15 per cent of workers reported having a union or association in their work activity, around 58 per cent of workers said they were members of unions in places where there was a union presence.

Figure B5.2.1 Official Trade Union Membership Numbers and Rates (various years)



Source: Pocket book of Labour Statistics (various editions), Labour Bureau, Shimla.

An Asian Development Bank (ADB)-financed survey conducted in 2004, which covered a nationally representative sample of organized and unorganized sectors, also found that trade union membership

was strongly concentrated among workers in the urban organized tertiary sector (7.9 per cent) and among workers with higher education levels (5.4 per cent). Union membership in the unorganized sector was low, only about 2.2 per cent. Not surprisingly, given the urban and organized sector bias of membership, the poorest people had very low membership rates. Average membership rates kicked in only above the 50th percentile of income distribution among workers.

Though overall membership is small, unions can potentially play an important role in settling disputes through conciliation and arbitration. The Second National Commission on Labour made a number of recommendations to improve the effectiveness of conciliation. The reasons why arbitration has failed to catch on in a significant way to date are well understood (see Hazra [2005]). Apart from the supply-side issue of there being too few qualified arbitrators, the absence of a legal framework for determining a representative union in a firm (except in a few states) is problematic. Overall, there is a lack of adequate grievance-redressal options within firms and beyond that would promote more rapid settlement of disputes.

Some measures which could help unions remain relevant in the new environment are:

- Strengthening the legal framework for collective bargaining, which could have benefits for both employers and workers, provided there is scope for bargaining to remain decentralized and at the firm level where preferred.<sup>1</sup> A key element of this would be to create provisions for the recognition of unions in the workplace to represent workers' interests in bargaining. A second issue would be to clarify the legal status of collective agreements. These have no direct legal force in Indian law, except insofar as they are formally endorsed as the outcome of conciliation proceedings.
- Addressing factors that undermine the link between trade union representatives and workers (see Hazra [2005] and Nath [2005]). With the exception of a few states such as Rajasthan and Maharashtra, there is *no provision for trade union recognition* in the bargaining and dispute settlement processes. This results in fragmentation among worker representatives and lack of clarity about whom employers should negotiate with (union formation requires only seven workers, with no lower limit on the share of enterprise workforce in a particular union). There is also a lack of internally democratic procedures in trades unions. Under the Trade Unions Act, 1926, office bearers of unions are not required to be elected by secret ballot of members, a procedure common in most countries. Similarly, there is no requirement of approval from the membership for initiating activities such as strikes, amending the rules of the union, or maintaining a political fund. A further dimension to this is the lack of requirement for union representatives to come from the enterprise workforce. All these features increase the risks of unions pursuing agendas which go beyond the interests of the workers they represent. They also undermine the accountability of union management, which in turn reduces the appeal of union membership for workers.
- In order for unions to become more appealing to unorganized sector workers, it is necessary that unions strongly emphasize service provision for their members. While all unions are committed to expanding their memberships in the unorganized sector, this has largely failed to happen to date, particularly in rural areas. In this respect, the experience of non-governmental organizations (NGOs) such as the Self-Employed Women's Association (SEWA), which are transforming into unions, provides lessons. The membership of these unions is being driven by a demand for services (for example, social security schemes) which the unions can provide or facilitate. Particularly for unorganized sector workers, it is likely to be the appeal of different services which the union can provide or intermediate that will facilitate expansion in membership.

institutions and welfare organizations, clubs, cooperatives, and research institutes, these have come to be covered by the Act because of court rulings over the years.

### **Working Conditions**

Working conditions are governed principally by: (i) the Factories Act, 1948; (ii) the Industrial Employment (Standing Orders) Act, 1946, which specifies the form of the employment contract; and (iii) the Contract Labour (Regulation and Abolition) Act, 1970. Of minor importance is the Apprentices Act, 1961.

The Factories Act governs the health, safety, and welfare of workers in factories and plantations that use power and employ 10 workers or more (20 workers or more if firms do not use power). However, Section 85 of the Act empowers state governments to extend the provisions of the Act to smaller factories. In several states, small-scale and seasonal factories such as rice and oil mills and textile powerlooms have been brought under the Act by the use of this provision. The Act, which requires all units to file annual returns about their activities, extends to the whole of India and includes service sector units employing intellectual labour. Separate acts cover mines and railways workers. In 1987, a major amendment incorporated elements of occupational health and safety into the Factories Act.

The Industrial Employment (Standing Orders) Act, 1946, requires employers with industrial units that employ 100 or more workers (excluding managers and supervisors) to ensure that working conditions conform to 'model standing orders'. Like the Factories Act, this is a Central act but the states are empowered to change some of its provisions. Many states apply the Act to units below the specified size and even to shops and establishments. The 'model standing orders' distinguish between 'permanent' and various

types of casual workers, and set out rules regarding leave, disciplinary action, layoffs and retrenchment, and other minor issues.

The Contract Labour (Regulation and Abolition) Act, 1970, another key law in industrial relations today, is a major source of regulatory ambiguity. Initially created with the objective of gradually abolishing casual labour hiring, this law is now being used extensively—in many but not all states—as the primary recourse by employers and state governments to increase labour market flexibility within the existing legal regime. Notably, the original purpose of the Act was quite the opposite.

### **Wages**

The principal laws relating to wages are: (i) the Payment of Wages Act, 1937 and (ii) the Minimum Wages Act, 1948. Of lesser importance are the Payment of Bonus Act, 1965, and the Equal Remuneration Act, 1976. The Payment of Wages Act, 1937, is again a Central act, the enforcement of which is a state responsibility, except in mines, railways, oilfields, ports, and air transport which lie in the central sphere. The Act specifies the standard wage period (a month or less), payment day, permissible deductions, mode of payment, and inspections. It applies to workers below a certain salary range. The Minimum Wages Act, 1948, is a Central act, the enforcement of which is a state responsibility, except in mines, railways, oilfields, ports, and air transport. This Act specifies minimum wages (and is also empowered to specify the length of the working day) in 'scheduled' employment (that is, those jobs explicitly identified in a schedule). The statutory minimum wage is set based on proposals by Central and state advisory boards.

### **Social Security and Insurance**

Coverage of workers by formal social security and insurance programmes is extremely limited

and covers less than 10 per cent of India's labour force. The principal laws here are: (i) the Workmen's Compensation Act, 1923, which specifies compensation that employers need to pay on account of injury by accident at the worksite or because of occupational diseases. An important provision of the Act is the liability of the principal employer in case of contract labour employment; (ii) the Employees State Insurance Act, 1948, extends to workers who earn less than a certain salary limit in factories covered under the Factories Act and commercial establishments employing 20 or more persons. It requires contributions from both employers and employees for insurance covering sickness, maternity, death, and disablement; and (iii) the Employees Provident Funds Act, 1952, applies primarily to factories and specifies deposit-linked provident funds or pension schemes.

### **Reform of Labour Laws**

There has been little legal or de jure liberalization in labour regulations in India despite demand from industry and recommendations by several government commissions. Even the cautiously worded recommendations of the National Labour Commission (2002) exceeded the limits on changes placed by the national trade unions. As a result, Indian labour regulations, formulated during a period when India was largely a closed economy unexposed to international competition and when the arrival of information technology had not speeded up business processes enormously, have remained largely unchanged for the past 50 years.<sup>2</sup>

Some liberalization has taken place in recent years. The IDA has been revised the maximum number of times, but these revisions have more often been aimed at making laws more stringent rather than liberal (Table 5.2). The Trade Unions (Amendment) Act, 2001 (Act No. 31 of 2001), was aimed at reducing the multiplicity of unions,

limiting the number of 'outsiders' in the executives of trade unions, and prohibiting professional politicians from becoming members of the executives of trade unions. More recently, in March 2005, the Union cabinet decided to amend the Factories Act, 1948, to allow women workers to do night shifts. This was done in view of the fact that there are already a large and growing number of female workers in the information technology industry and in export-oriented manufacturing units.

Even bolder initiatives have occurred at the state level. In June 2000, the government of Maharashtra announced a fairly broad-based labour law reform package, the highlights of which were: (i) raising the employment limit of a 'factory' that is subject to the Factories Act, from 10 or 20 to 50; (ii) restricting trade union size, restricting number of trade unions to one per company, laying down minimum conditions for registration, and restricting links between unions and political parties; (iii) rationalization of visits by government inspectors; (iv) raising the permissible extent of contract labour employment; and (v) abolishing the Maharashtra Recognition of Trade Union (MRTU) and Prevention of Unfair Labour Practices (PULP 1971) Acts 'as the required purpose is being efficiently served with the use of the Industrial Disputes Act, 1947.' Uttar Pradesh amended its own UP IDA, 1947, to raise the threshold of applying Clause Vb of IDA from 100 to 300. The government of Punjab introduced fast-track courts, called Labour Lok Adalats, which cleared more than 11,000, or two-thirds, of the pending cases in the labour courts and tribunals in three rounds of hearings since 2000. The Andhra Pradesh government announced its intention to introduce liberalized labour laws for designated special economic zones (SEZs).<sup>3</sup>

The SEZs are another possible means to introduce labour policy reforms. For example, in China,

Table 5.2 Amendments to the IDA

Central Amendments	Major Change/Clause Introduced
1953	Layoff compensation
1956	Layoff compensation rules detailed
1965	Section 29: Penalty on employers for breach of Section 25 (layoff compensation) introduced.
1971	Revision of layoff rules for mines that close because of exhaustion of resources.
1972	Chapter Vb is introduced. Sixty days' notice required for closure of industrial undertakings employing more than 300 workers.
1982	A number of changes based on the National Commission on Labour (1969) recommendations. The most important change is the revision of Vb in view of the Excel Wear case in which the Supreme Court rejected the government's right to refuse closure. The government is now empowered to refuse or grant closure to units employing 100 or more workers.
2002	Amendments to Sections 2(a) and 2(s) defining 'appropriate government' and 'workmen'. Higher salaried employees brought under the Act; the state governments are the appropriate governments to issue orders refusing or granting permission for retrenchment, closure, or layoffs.
Major state clauses and amendments	
Industrial Disputes (West Bengal Amendment) Act, 1971	First introduced requirement of prior notice for closure of undertakings with 50 or more workers. Generalized in the 1972 Central amendment.
Layoffs, retrenchment, and closure	<ul style="list-style-type: none"> <li>• Government is authorized to force an undertaking to maintain 'continuity and normalcy' of work (West Bengal).</li> <li>• Maharashtra and Andhra Pradesh stipulate compensation payments before closure.</li> <li>• Permission required for retrenchment and closure of undertakings with 50 or more workers (West Bengal), 100 or more workers (Karnataka), 300 or more workers (Maharashtra and Rajasthan), and later brought down to 100 workers in most states.</li> <li>• Notice required for 90 days before closure (West Bengal, later Maharashtra).</li> <li>• Closure is valid when it occurs due to non-renewal of licenses (Maharashtra).</li> <li>• Full compensation to workers for retrenchment on any ground other than discontinuance of power supply (Maharashtra).</li> </ul>

financial, legal, labour, and other policy reforms were introduced and tested first within the SEZs before being extended to the rest of the economy. Internationally, export processing and other zones are witnessing increasing share of trade flows and are employing a growing number of workers. In 1986, there were 176 zones across 47 countries; by 2003, the number had increased to over 3,000 across 116 countries. Export processing zones (EPZs) have a long history in India dating back to 1965. In 2000, the government replaced the old EPZ regime by a new scheme of 'special economic zones' (SEZs) with several lucrative incentives/benefits that were not available in the earlier scheme. In 2005, it enacted the SEZ Act and the SEZ Rules were notified in February 2006 (see Box 5.3). The commerce ministry's website described

the SEZs as 'designated duty free enclaves to be treated as foreign territory for trade operations and duties and tariffs'. The most important change of the new law is that it offers a highly attractive fiscal incentive package consisting of (i) exemption from custom duties, central excise duties, service tax, central sales taxes, and securities transaction tax to both the developers and the units; (ii) tax holidays for 15 years (currently the units enjoy a seven-year tax holiday); that is, 100 per cent tax exemption for five years, 50 per cent for the next five years, and 50 per cent of the ploughed back export profits for the next five years; and (iii) 100 per cent income tax exemption for 10 years in a block period of 15 years for SEZ developers. States have the right to modify the form in which existing labour laws apply here.

### Box 5.3 Special Economic Zones and Employment

There is a variety of reasons why countries have gone for economic zones. These include export promotion, attraction of foreign investment, development of depressed regions, and policy reform experimentation. In China, financial, legal, labour, and other policy reforms were introduced and tested first within the SEZs before being extended to the rest of the economy. The main rationale for the Shannon Free Zone in Ireland, in contrast, was to establish a 'growth pole' in the economically distressed southern part of the country.

India has not remained immune to these developments. In 2005, it enacted the SEZ Act and the SEZ Rules were notified in February 2006. The commerce ministry's website described the SEZs as 'designated duty free enclaves to be treated as foreign territory for trade operations and duties and tariffs'. The most important change of the new law is that it offers a highly attractive fiscal incentive package. There has been a tremendous rush to set up SEZs since the Act came into effect in February 2006. The Ministry of Commerce claims that these zones are expected to attract investment of about US\$ 20 billion, including FDI of US\$ 5 billion, and create additional 500,000 direct jobs.

The supporters of the SEZ Act claim that promotion of SEZs is an attempt to deal with infrastructural deficiencies, procedural complexities, bureaucratic hassles, and barriers raised by monetary, trade, fiscal, taxation, tariff, and labour policies. Under the given socio-economic and political institutions, the establishment of industrial enclaves (SEZs/EPZs) is seen as an important strategic tool for expediting the process of industrialization. These claims notwithstanding, the policy has come under heavy criticism. Dissenters contend that the policy would be misused for real estate development rather than for generating exports. Concerns have also been expressed on the displacement of farmers by land acquisition; loss of fertile agricultural, forests, or coastal land; a huge revenue loss to the exchequer; and adverse consequences of uneven growth. Many contend that the SEZ Act was framed without giving sufficient attention to the ancillary issues, such as for massive land acquisition.

International evidence suggests that the role of SEZs in employment generation is often relatively marginal. In most countries SEZs are not a major source of employment and they account for less than 1 per cent of the global workforce. Their role in employment generation in India too has been muted: compared to the 30 million jobs created in 15 SEZs in China, India EPZs have created less than 100,000 jobs (see Table B5.3.1).

The SEZ Act may entail significant revenue losses and also set the stage for tax exemptions in other sectors. The Ministry of Finance has estimated that SEZs will lead to a revenue loss on account of direct and indirect taxes of around 0.4–0.6 per cent of GDP a year. Estimates by the National Institute of Public Finance and Policy (NIPFP) suggest similar numbers. Moreover, the SEZ Act may well set the stage for further tax exemptions in other sectors. Importantly, the inclusion of IT in the SEZ Act has contributed to re-igniting the debate on extending the tax holiday in the IT sector beyond 2009. At the same time, international experience shows that tax incentives by themselves will not attract investment. This is supported by both econometric studies and surveys of investors, which are generally in agreement that investors do not consider tax incentives as a determining factor in their location decisions.

**Table B5.3.1 India's EPZs have not been as Effective in Generating Employment as Zones in Other Countries in the Region**

	No. of Zones	Total Empl. (2000–3)	Investment (US\$ million)
Bangladesh	6	2,138,341	750
China	15	30,000,000	43,560
India	8	95,000	NA
Malaysia	14	322,000	NA
Pakistan	22	410,540	815
Philippines	34	820,960	387
Sri Lanka	12	461,000	2,627

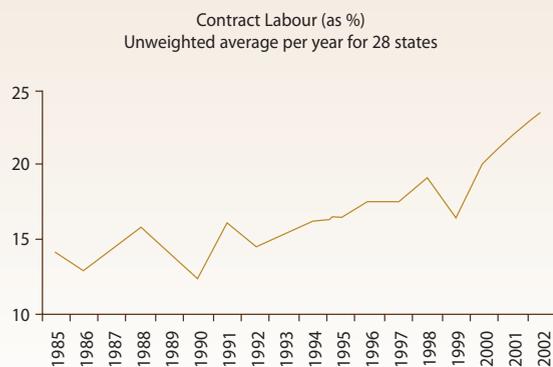
Source: RIS (2006).

### Enforcement of Laws and De Facto Reforms

Although de jure reforms have been limited, de facto there has been perceptible liberalization. At the state level, where the implementation takes place, de facto labour regulations appear to have undergone a fair amount of liberalization. Signs of weakening law enforcement are appearing in ineffective and corrupt inspections and an increasing recourse to contract labour. A shift in the stand of the judiciary may also be contributing to a more flexible application of the law. The incidence of voluntary retirement and contractual employment has increased. Firm-level bargaining has increased too, suggesting some decline in the penetration of national trade unions, which usually lead the resistance to legal reforms.

In particular, the significant increase in the use of contract labour (see Figure 5.1), rent seeking, and corruption has reduced the bite of the IDA, though there are considerable variations across states. There has been a large decline in the number of factories inspected (inspections are the key instrument for enforcing labour laws), again with considerable variations across states.

**Figure 5.1 Percentage of Contract Labour in Total Manufacturing Labour**



Source: Annual Survey of Industries.

However, more than the decline in inspections, the evidence of the widespread use of bribes (or rents) collected by inspectors from factories (where managers report labour legislations to be more of an obstacle to growth) is eroding the application of these laws.

Industrial disputes declined significantly during the 1990s, with exceptions in some states. But the *number of man-days lost in such disputes has increased since 1997*, suggesting the continuing costs of the IDA.

### Core Labour Standards

India has ratified four out of the eight ILO core labour standards. These include: the Forced Labour Convention (No. 29), Abolition of Forced Labour Convention (No. 105), Equal Remuneration Convention (No. 100), and Discrimination (Employment Occupation) Convention (No. 111). The remaining four that have not been ratified so far are: Freedom of Association and Protection of Right to Organize Convention (No. 87), Right to Organize and Collective Bargaining Convention (No. 98), Minimum Age Convention (No. 138), and Worst Forms of Child Labour Convention (No. 182). Box 5.4 discusses issues related to the implementation of the core standards.

## ASSESSING INDIA'S LABOUR REGULATIONS

### Some Key Issues

Notwithstanding some liberalization and the easing of enforcement in recent years, there is increasing awareness, supported by research, that Indian labour laws are stifflingly complex and restrict growth of the manufacturing and formal sectors in particular. Work done by several national commissions and government-appointed working groups, business and trade groups, firm-level surveys, and recent research on labour issues in India, all point in this direction.

#### Box 5.4 Implementation of Core Labour Standards

India is a founder member of the ILO and has ratified 39 of its conventions. ILO instruments have also provided guidance in the formulation of domestic legislation and government measures aimed at protecting and advancing workers' interests. So far, the Government of India (GoI) has ratified four of the eight core labour standards. Conventions 87 and 98 have not been ratified, with the government citing its own inability to promote the unionization of government servants given the political nature of trade unions in the country. On minimum age, existing laws mandate different minimum ages for employment in different sectors—bringing these into conformity would be a prerequisite for ratifying Convention 138. The government is considering the possibility of enacting an omnibus legislation that would designate 14 years as the minimum age for entry into all occupations, other than agriculture in family and small holdings that produce for self-consumption. Similarly, on the child labour convention, the government is examining the feasibility of ratification. It should be noted that in the Indian Constitution, labour is a concurrent area between the Central and state governments—this makes it necessary to build consensus and coordination internally before any major legislation or ratification can be undertaken.

At the same time, India has declared that it remains committed to giving effect to the principles contained in the core conventions, whether or not they have been ratified. In this spirit, national legislation (the Trade Union Act, the IDA) largely fulfils the requirements of freedom of association and collective bargaining, though the absence of clear rules regarding recognition of bargaining agents and the status of such agreements remains problematic (see Box 5.2). In the case of child labour too, Article 24 of the Indian Constitution mandates that no child below the age of 14 can be employed in any factory, mine, or other hazardous job. The Factories Act, 1948, also prohibits the employment of children below the age of 14 years. In addition, in 1986, the government passed the Child Labour (Prohibition and Regulation) Act, which further listed occupations and processes where children cannot be employed. These include activities like slaughterhouses, carpet weaving, wool cleaning, cloth printing, and dyeing and weaving, which were not covered in the previous Acts. These actions by the government underscore the legislative intent to progressively eliminate child labour in India. The government also recognizes that significant progress in this regard cannot be made without tackling the socio-economic milieus which force children to work. It has formulated a National Child Labour Policy to design a specific programme of action in this regard. There is also a Central Advisory Board which reviews progress and recommends further action. Besides, the government also runs programmes, directly and through voluntary organizations, to rehabilitate child workers. The government has also redoubled efforts to put children in schools by improving access and providing free mid-day meals in schools. In addition, there are many state-level initiatives, such as the Andhra Pradesh Integrated Action Plan to Eliminate Child Labour. This is innovative in that it defines child labour not as 'working kids', but more broadly as children out of school, thus getting around the vexed issue of what types/extent of child work actually constitute a harmful situation. Despite these efforts, child labour remains a significant issue. According to NSS, slightly fewer than 11 million children remained in India's workforce in 1999–2000, mostly in rural areas, employed in agricultural activities.

For instance, the report of the Second National Commission for Labour criticized labour laws as being 'ad hoc, complicated, mutually inconsistent, if not contradictory, lacking in uniformity of definitions and riddled with clauses that have

become outdated and anachronistic' (Planning Commission Report 2001b). Further, a growing body of research, discussed later, shows how labour regulations complicate dispute resolution and restrict retrenchment and layoffs of workers

in manufacturing, effectively constraining the growth of the manufacturing sector and manufacturing jobs. The existence of these laws helps partly explain why the Indian manufacturing sector is so small relative to that of many other countries.

Overall, there are three main issues. First, there are too many laws. Some 47 Acts directly regulate working conditions, wages and benefits, industrial relations, social security, and insurance. States have as many as 40 minimum wages, corresponding to different types of workers. This multiplicity of laws—several of them overlapping and sometimes inconsistent in their definitions—leads to ambiguities in interpretation. This in turn not only creates difficulties in enforcement but also provides opportunities for discretionary behaviour, rent-seeking, and corruption. Specifically, it creates conditions for the ‘inspector raj’ to operate and extract rents (bribes) from industry. It has a particularly pernicious effect on small- and medium-scale industries for which these costs are disproportionately high. Further, the numerous laws, by cross-referencing one other, often extend the mandate of labour laws to organizations far different from manufacturing enterprises.<sup>4</sup>

Second, clauses in Chapters Va and Vb of the IDA impose inordinately high administrative costs on retrenching or laying-off workers and on closing firms. These administrative costs are among the highest in the world (Doing Business in 2006 [World Bank]). For instance, Section 25-0, which makes it mandatory for employers to refer cases of retrenchment due to firm closure to state governments, has been in the eye of a legal storm for nearly 50 years on account of the barriers it creates for failed firms to close their operations. Chapter Vb and Clause 25-0 effectively make labour a fixed factor. They create

disincentives for employers to hire more labour on a permanent basis and encourage the use of contract labour or casual labour. This law also creates incentives for employers to choose more capital-intensive techniques and increase wages instead of employment.

Section 9A of the IDA also restricts the flexibility of firms to quickly adjust to changing market conditions. It requires employers to provide three weeks’ written notice for changes in (i) shift work; (ii) grade classification; (iii) technology that may affect labour demand; and (iv) occupation, process, or department. The worker then has the right to dispute such changes, leading to the costs of dispute resolution.

Third, the design of labour dispute settlement processes in the IDA creates incentives to adjudicate disputes rather than reconcile them. The IDA makes provisions for dispute settlement in three stages: (i) negotiation; (ii) mediation; and (iii) adjudication—involving seven tiers of officers (Table 5.3). The first stage involves voluntary communication between the disputants. The Act provides for works committees to be constituted for the purpose of mediating. These bodies are internal to firms. However, if a significant number of outsiders are represented in the union, then conciliation marginalizes the unions and other

**Table 5.3 Industrial Dispute Reconciliation Bodies**

- Works Committees,
- Conciliation Officers,
- Board of Conciliation,
- Courts of Inquiry,
- Labour Courts,
- Industrial Tribunals, and
- A National Industrial Tribunal.

Source: Debroy (2005).

outside political actors. It is then in the union's interests to sabotage conciliation. Second, and more important, the majority of cases of dispute concern discharge, dismissal, and retrenchment. The legal provisions of the IDA are so protective of workers that they expect to gain more from the courtroom than from conciliation efforts. As a result, the number of pending court cases concerning labour disputes is huge (around 533,000 at the end of the 1990s).

Numerous, and often conflicting, court decisions on labour disputes have increased uncertainty about the interpretation of labour laws. This has raised transaction costs, created large rents in enforcing these laws, and lowered investors' confidence (Debroy 2005; Pagés and Roy 2006). Enforcing the IDA has also become more unwieldy and complex with the state governments and courts intervening more in enterprise-level disputes and raising the costs and rents to regulators. This has resulted in excessively long waiting time for resolving labour disputes. Labour termination disputes that should in principle take no longer than three months to decide, in practice sometimes take as long as 10 years with, at times, 2,000 pages of reported materials being submitted for review (Khan 2005: 90). Disputes referred to high courts too can lie pending for as long as 10 years (Table 5.4).

An important consequence of these costs imposed by the IDA is that firms are encouraged to remain small and thus outside the purview of the law. Interviews suggest that medium- and small-scale firms are threatened by permanent loss of business and clientele due to prolonged disputes. A recent McKinsey report on India's textile industry pointed out that Indian manufacturers often set up multiple small plants instead of a single big one in order to take advantage of easier

**Table 5.4 State-wise Details of Number of Dispute Cases Pending in Labour Courts (October 2000)**

Major States	No. of Cases Pending	No. of Cases Pending for More than 10 years
Assam	189	138
Bihar	5,200	566
Delhi	28,837	2,342
Gujarat	133,916	8,616
Kerala	3,450	63
Karnataka	17,457	2,924
Maharashtra	142,345	11,508
Madhya Pradesh	89,341	0
Punjab	14,784	110
Rajasthan	20,066	775
Tamil Nadu	21,713	150
Uttar Pradesh	22,539	10,303
West Bengal	2,225	283
Total (All States and Union Territories)	533,038	28,864

Source: Ministry of Labour.

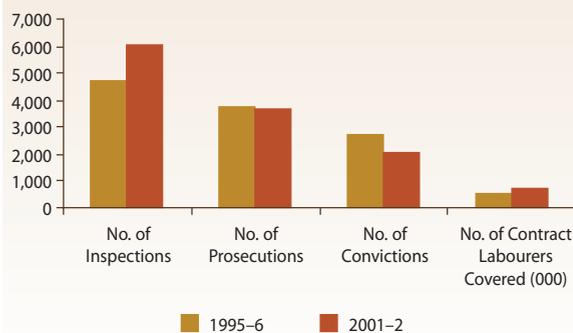
labour laws. As a result, Indian clothing plants typically have 10–20 per cent of the capacity of Chinese plants and work at lower levels of efficiency (*Business Standard*, 19 February 2005).

The uncertainty surrounding some of the labour laws also leads to high transaction costs, a most prominent example of which comes from the Contract Labour Act. The most important example of this is the large number of prosecutions and cases concerning the Contract Labour (Regulations and Abolition) Act. While the Contract Labour Act provision has been interpreted by firms and many states as a means of introducing flexibility in the labour market, leading to a marked increase in the use of contract labour in many states, the provisions of the law contain considerable ambiguity regarding the legality of using contract labour. Section 10 of the Act prevents firms from outsourcing most core functions or hiring workers on temporary contracts for more than 120 days

(anyone so employed can demand permanent employment from the company). The prohibition of contract workers in 'core' areas follows from a Supreme Court judgment (*Standard Vacuum Refinery Company v. their workmen*, 1960) which prohibited temporary labour in tasks that were (i) perennial; (ii) necessary for the work of the factory; (iii) sufficient to employ a considerable number of whole-time workmen; and (iv) being done in most concerns by regular workmen.

These detailed rules on the use of contract labour are backed up by strong discretionary enforcement powers vested in government bodies. A Central Advisory Board and a State Advisory Board, consisting of the labour commissioners and nominees of the governments, have the discretion to determine whether the work involving contract labour is of a perennial nature and justifies the use of casual, in place of permanent workforce. On the advice of such Boards, state governments can issue orders prohibiting contract labour and/or its absorption in the core workforce. A series of government notifications has extended the scope of this prohibition to individual industries and fields of service. From 2001 to 2002, there were close to 4,000 prosecutions and over 2,000 convictions arising from the use of contract labour, which affected nearly half a million workers (Figure 5.2).

**Figure 5.2 Prosecutions and Convictions from Violations of the Contract Labour (Control and Abolition) Act**



Source: Ministry of Labour.

The uncertainty surrounding the use of contract labour even extends to the new information technology enabled services (ITES) firms which use many contract labourers in non-core services. These firms face the prospect of standing in violation of the Contract Labour Act or being compelled to add contract workers to their regular workforce.<sup>5</sup>

### International Comparisons with Indian Labour Regulations

India comes across as one of the most restrictive countries in the world in terms of regulations governing retrenchment and layoffs. These comparisons are based on the *Doing Business* indicators, a publicly available database based on a detailed study of employment laws across the world.<sup>6</sup> Besides providing other information, this data summarizes information on legal provisions related to hiring, hours of work, and retrenchment of workers. These provisions are assigned scores which increase progressively as labour laws are revealed to be more pro-worker (see Box 5.5). According to these measures, Indian labour laws are atypically restrictive in those provisions that refer to worker retrenchment and, within this group, those that effectively deny firms authorization to retrench. On the other hand, neither do provisions related to hours of work, nor those related to the hiring of workers, appear to especially favour workers or restrict employers, relative to the rest of the world. India scores 20 on the *rigidity of hours* index, well below the international median score of 40 and the international average of 37.4. Indian scores are also much lower than the mean of the group of comparators, with the exception of Malaysia and Nepal which have similarly unrestricted laws on hours of work (Figure 5.3).

While Indian labour laws exert little restriction on hours of work, they impose high administrative costs on dismissal. Indian labour laws impose high

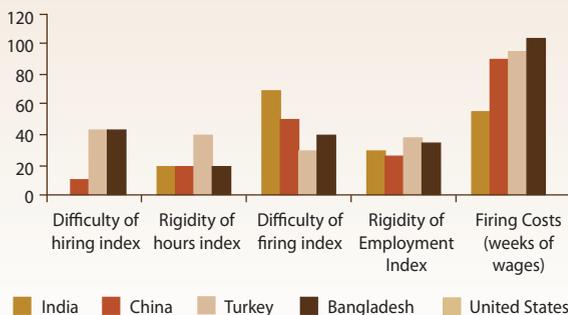
### Box 5.5 Doing Business Indices

The first index (*Difficulty of hiring*) measures how difficult it is for employers to offer non-standard contracts, that is, they have to hire workers using modalities other than open-ended, permanent contracts. A higher score indicates higher difficulty in hiring through alternative contracts.

A second index (*rigidity of hours*) measures legal provisions pertaining to hours of work. It compares countries in aspects related to overtime, restrictions on night work, and length of the work-day and work-week. Countries where employers face more restrictions on hours of work are given a higher score.

A third index (*difficulty of firing*) measures legal and administrative constraints on dismissals. Finally, the *rigidity of employment* index provides the simple average of the above three indices.

**Figure 5.3 India Labour Laws Compared to Selected Countries**



Source: World Bank (2006a).

administrative constraints on dismissals relative to most countries in the world.

On a scale of 1 to 100, India scores 70 on the restrictions on dismissals index, well above the international median of 30 and the international average of 31.3. Indian firms also experience much higher bureaucratic restrictions on dismissals than firms in the sample of comparator countries. However, retrenched workers in India receive fairly low compensation compared to those in other developing countries.

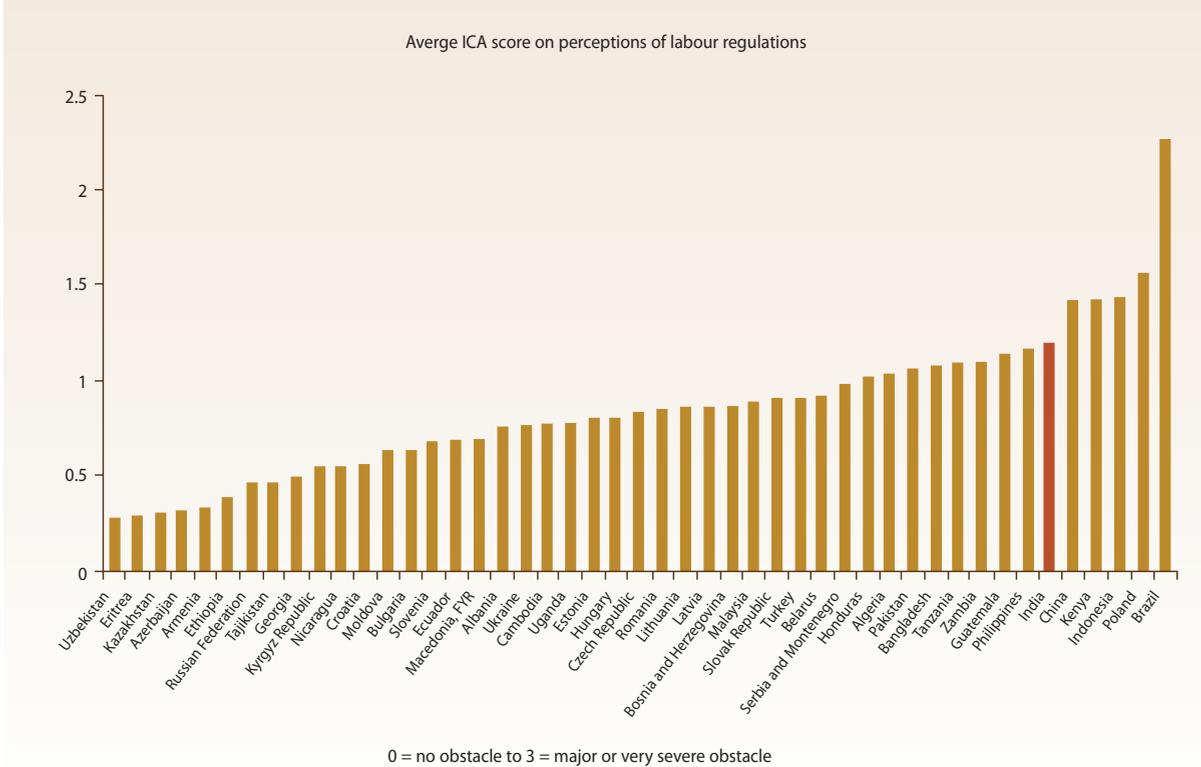
### THE IMPACT OF SOME KEY LABOUR REGULATIONS IN INDIA

How important are labour regulations in the eyes of employers? The information on this is available

from a survey of 1,900 firms that were asked about the various constraints to growth that they face, including those from labour regulations. The results of this combined Confederation of Indian Industries (CII) and World Bank Investment Climate Survey (see World Bank 2004a) can be used to assess, first, how constraining labour regulations are relative to other factors. Second, how do responses regarding labour regulations and other constraints in India compare with those from other countries? Figure 5.4 shows the average response to labour laws (as an obstacle question) across all countries for which the survey is available. All surveys were conducted in the period starting at the end of the 1990s and continuing into the early 2000s. It is interesting that India (along with Kenya, Indonesia, Poland, and Brazil) is one of the countries which rates high in terms of how much of an obstacle firms consider labour laws to be. Somewhat surprisingly, Chinese employers rate China's labour regulations to be at least as binding as the ones in India, while objective measures of labour regulations, such as the ones presented in the World Bank *Doing Business* Report, classify India as a country with more stringent regulations than China.

Importantly, the perception of constraints posed by labour regulations varies greatly according to

**Figure 5.4 Firms Consider India's Labour Laws to be More Binding than Those of Most Other Countries**

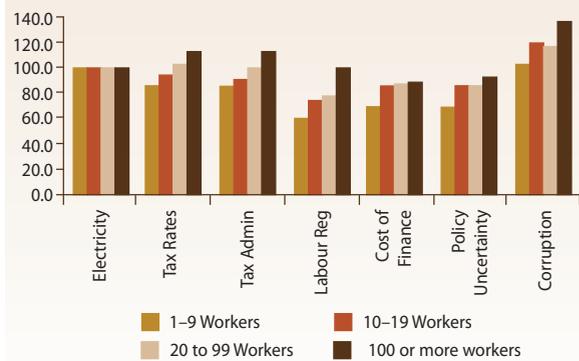


Source: Estimated from Investment Climate Survey of 2002; Ahsan and Pagés (2007).

firm size. Overall, given that Indian firms score labour regulations to be a minor to moderate obstacle (that is, a score between 1 and 2), it may appear that labour problems are not very significant in comparison to other obstacles. However, when perceptions of labour constraints by firms are broken down by firm size, labour regulations are highly significant for the larger firms for which most regulations apply.

Large firms consider labour issues to be as big a constraint as electricity. Infrastructure and, in particular, unreliable and insufficient supply of power have been identified as major constraints for the future growth of India. For instance, Krueger and Chinoy (2002: 31) note that, 'By the end of the decade, the growth of the 1990s had already pushed infrastructure utilization well above the optimum. It is then noticeable that the data from

**Figure 5.5 Ranking, by Firm Size, of Constraints to Manufacturing Growth Relative to Power Shortage Problems**



Source: Computed by authors from Investment Climate Survey; Ahsan and Pagés (2007).

the 2002 Investment Climate Survey show that firms with more than 100 workers consider labour regulation to be as important a constraint to their growth as electricity shortages'<sup>7</sup> (Figure 5.5).

## What Are the Economic Costs of Regulations?

Recent research provides mounting and clear evidence on the adverse impact of restrictive labour laws. A priori, economic theory would suggest several reasons why poorly designed labour regulations can be costly in terms of growth and jobs lost (see Box 5.6). Empirical research on the impact of labour regulations in India first started in the early 1990s and has grown considerably in the last two years. This literature shows how

costly rigid labour regulations can be in terms of foregone production and job growth in formal manufacturing, and deepened dualism, and how they can reduce the mobility of labour. In one of the early works on the impact of labour regulations in India, Fallon and Lucas (1991 and 1993) showed how labour demand fell significantly due to amendments to the IDA in 1976, which made it binding on firms to seek government permission before retrenching regular workers. This law reduced the mobility of labour.

### Box 5.6 What does Economic Theory Say about the Costs of Labour Regulations?<sup>8</sup>

*Higher adjustment costs:* By restricting changes in the use of labour, a key factor in production, regulations hinder firms from adjusting output and labour in response to changes in demand and market conditions. Consequently, firms may be unable to produce at the most efficient scale of production.

*Higher labour costs and wage stickiness:* Protecting jobs of existing workers and deterring recruitment of new workers creates a wage premium for formal sector workers over casual workers that is unaccounted for by skills, experience, or other human capital attributes. Further, regulations restricting labour retrenchment or layoffs can also result in wage rigidity in the formal sector, creating unemployment.

*Higher transaction costs and rents:* When administrative and judicial procedures dominate recruitment, retrenchment, and industrial relations, transaction costs increase for both firms and workers. This is because instead of simple and transparent financial compensatory mechanisms being used, the use of administrative or legal procedures can result in rent-seeking or bribe-taking by inspectors.

*Reduced incentives to invest:* Excessively protective labour laws reduce the returns to capital, leading to reduced investment and capital accumulation.

*Uncertainty:* Complicated regulations that are enforced mostly through administrative rules create uncertainty for investors. This leads, in turn, to lower investments (because investments are costly to reverse), lower hiring of regular and permanent workers, and reduced training of workers.

*Slower growth of jobs and employment in the formal sector:* The sum total of effects leads to slower growth of production and jobs in the sectors affected by the laws.

*Lower productivity:* By hindering the movement of labour from less productive to more productive jobs, regulations can lower overall economic and labour productivity, adversely impacting wages and growth.

*Off-setting factors:* Simple, transparent regulations that rely more on financial compensatory mechanisms can lead to increased welfare of workers, more harmonious industrial relations, and less uncertainty for investors and workers—leading to overall better outcomes than when markets are entirely unregulated.

Recent research, focusing on differences in labour laws among Indian states, shows how states that increased the stringency of the IDA experienced a decline in formal sector manufacturing value-added and employment (Besley and Burgess 2004). Building further on this work, Hasan et al. (2003) find that states with more stringent labour regulations have lower demand elasticities and these elasticities are less affected by trade reforms. A recent work (Lall and Mengistae 2005) that analysed plant-level data in 40 of India's major cities using a measure for the enforcement of laws, suggested that an inadequate investment climate (principally inadequate power supply and the rigidity of labour laws) results in lower productivity at the plant level and lower manufacturing development in the states most affected by these laws.

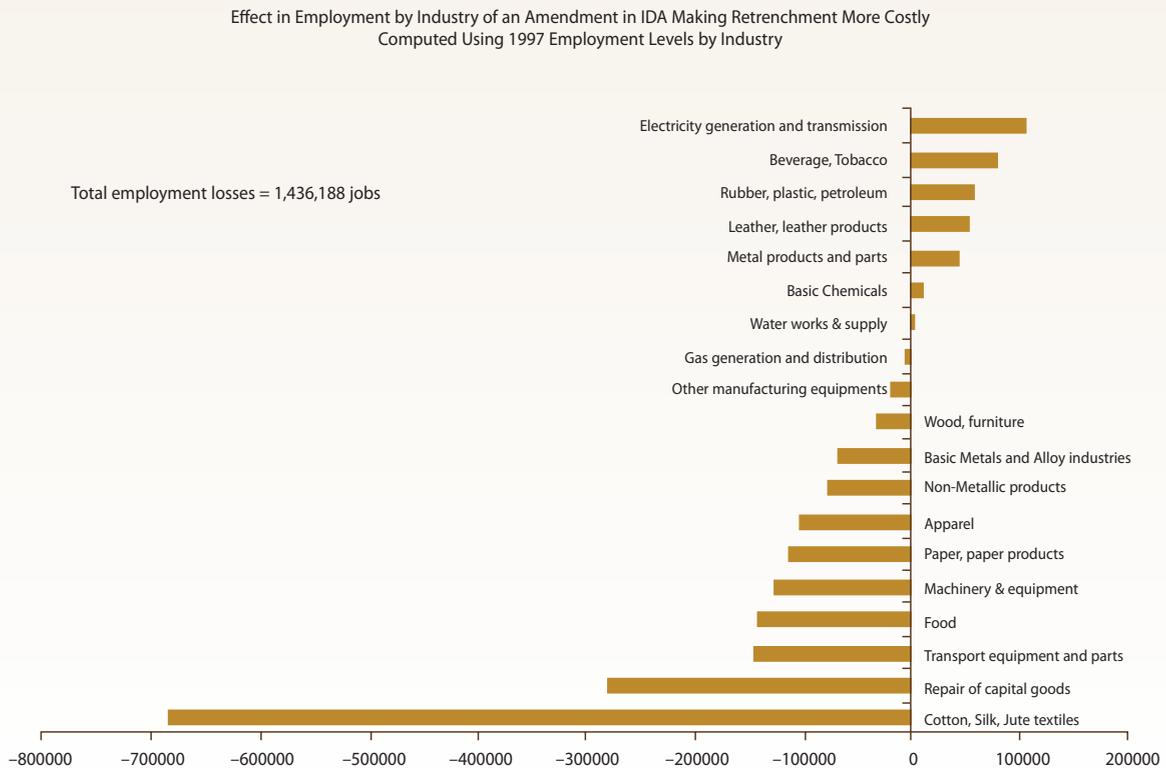
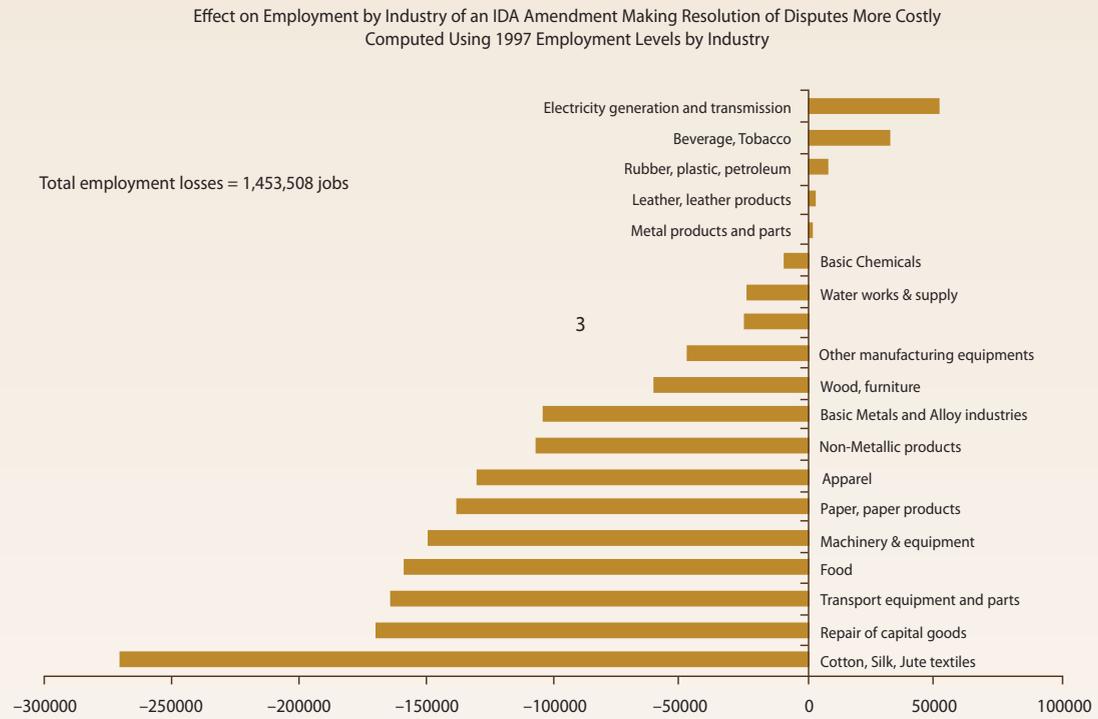
Recent research, which tries to measure both *de jure* and *de facto* applications of the IDA, has also shown how manufacturing value-added, employment, and the number of factories are all adversely affected in states with more restrictive labour laws. This research assesses the impact of state amendments to the IDA on output, employment, wages, labour share, and number of factories in the manufacturing sector of such states during 1959–97. Some states made amendments to reduce the costs of labour disputes while other states passed amendments that made labour disputes more costly.<sup>9</sup> As mentioned earlier, state amendments that increased the cost of labour disputes or retrenchment, above the cost stipulated by the Central Act, resulted in declines in registered manufacturing employment and output in that state, relative to the states that did not implement such changes. There is some evidence that the use of contract labour across different states in the 1990s may have helped to reduce adjustment costs for firms, but did not do away with all the effects of regulations. Figures 5.6 through 5.8 present the results of research that

measure the costs of IDA regulations that (i) make labour disputes costly and (ii) raise retrenchment costs through the Vb clause. The main results are the following:

- Overall, India loses out on 2.8 million jobs in the formal manufacturing sector due to the IDA per se, which is about 45 per cent of the 6.4 millions jobs that currently exist in the formal manufacturing sector.
- The costs, in terms of jobs lost, are caused almost equally by the disputes-related sections of the IDA and the retrenchment barriers clauses in the IDA.
- However, the disputes-related regulations cost more jobs in capital-intensive industries (top panel of Figure 5.6), while retrenchment-related regulations cost more jobs in labour-intensive industries (bottom panel of Figure 5.6).
- Retrenchment-related regulations affect jobs in more states (top panel in Figure 5.7) than disputes-related regulations. This is due, in part, to the fact that some states have implemented laws that reduce the costs of labour disputes, resulting in employment gains. But no state has implemented laws that reduce the costs of retrenchments.
- West Bengal and Maharashtra pay, by far, the biggest costs in terms of jobs lost—accounting for more than half of gross job losses.
- States such as West Bengal, Maharashtra, Gujarat, and Rajasthan pay the costs in terms of thousands of factories that do not exist because of the IDA regulations. This is because these states have more stringent labour regulations relative to the rest of states.

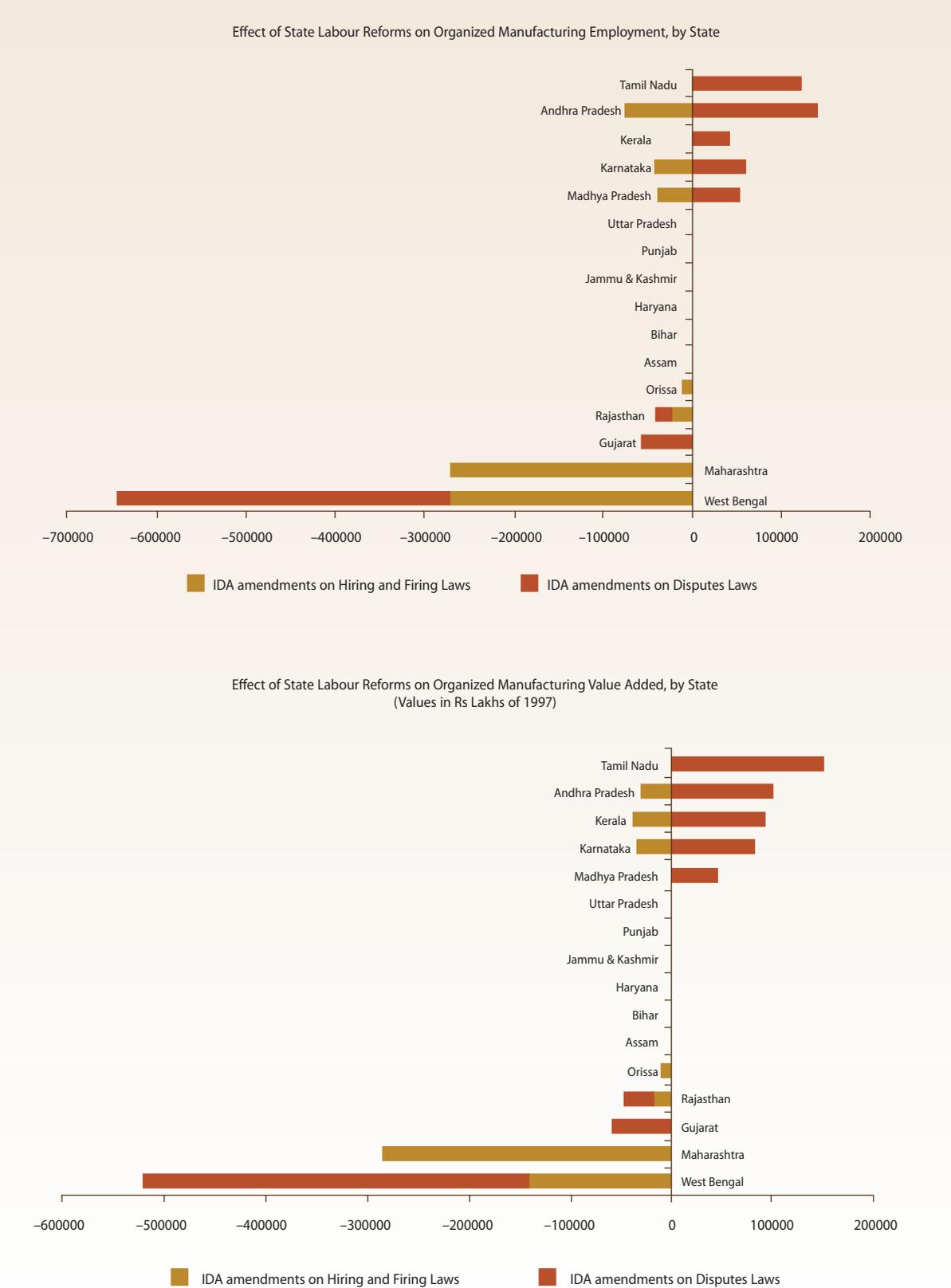
Quite surprisingly, restrictive regulations do not make formal sector workers, as a whole, better off. Restrictive regulations on employment adjustment increase wages but not enough to compensate for the decline in formal jobs. As a consequence, total

**Figure 5.6 Measuring the Costs of Regulations on Employment, By Sectors**



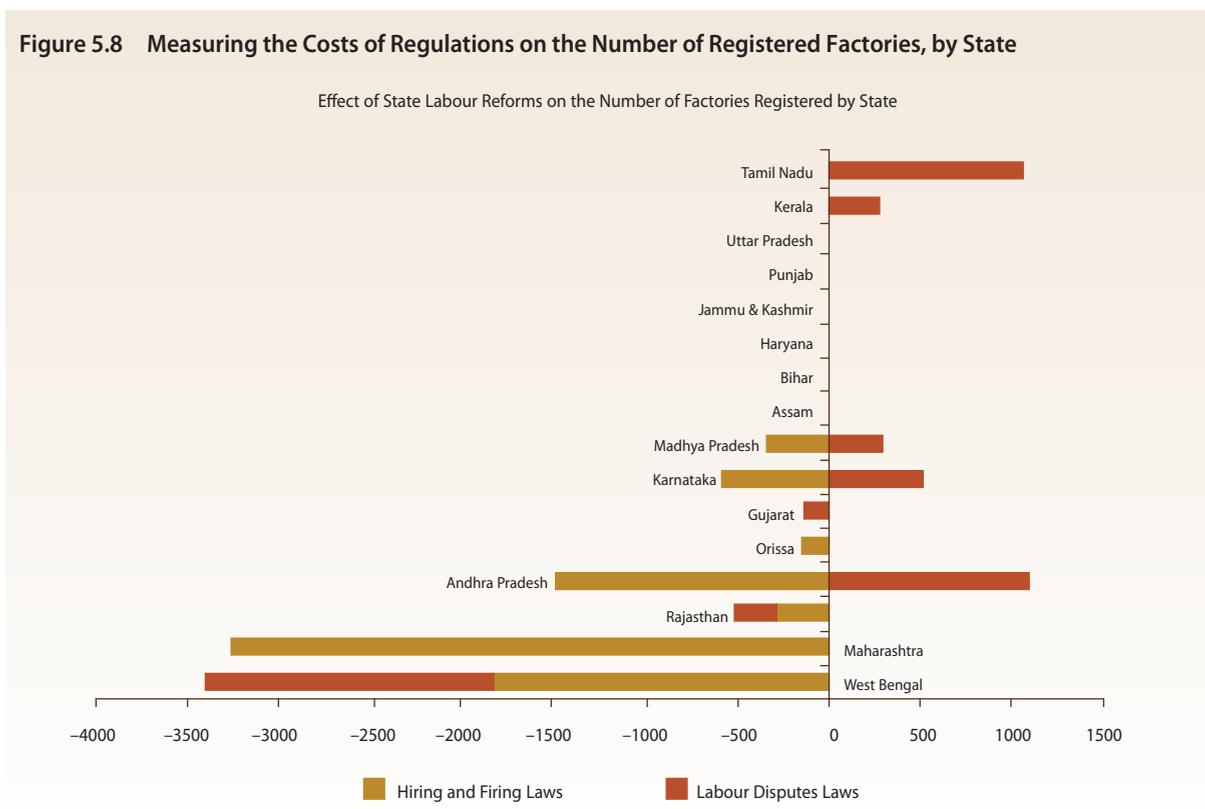
Source: Ahsan and Pagés (2007).

Figure 5.7 Measuring the Costs of Regulations on Employment and Value-Added, by State



Source: Ahsan and Pagés (2007).

**Figure 5.8 Measuring the Costs of Regulations on the Number of Registered Factories, by State**



Source: Ahsan and Pagés (2007).

payments to formal workers decline and the labour share (the share of a company’s value-added that goes to workers) does not increase. Dispute-related laws are even more costly for formal sector workers as they reduce both employment and wages, and therefore, total payments to workers (Ahsan and Pagés 2006).

Dispute-related laws have large adverse effects on labour productivity, mostly driven by declines in investment and capital–output ratios. The lengthy procedures and uncertainty involved in dispute resolution reduce incentives to invest. In turn, lower capital–output ratios result in lower labour productivity rates and lower wages for workers.

Some additional evidence points to the effect of regulations on reducing the mobility of labour:

- Separation of workers happens markedly less in India than in other countries. In 2001, for

instance, records show there were only 151 closures in the manufacturing sector that affected 11,599 workers. In the same year, another 133 retrenchments and 236 layoffs, respectively, led to 3,668 workers and 26,231 workers being laid off (Khan 2005). Overall, this makes for a job destruction rate of about 1 per cent of the private sector labour force in formal manufacturing. Similarly, data from the annual India Labour Yearbook (various years in the 1990s) reveal the total job flow—including voluntary separation and entry—to be around 14 per cent in the 1990s. In comparison, gross worker flows for the formal sector in OECD (Organisation for Economic Co-operation and Development) countries can range from 60 per cent in Germany to about 80 per cent in the US. Middle income countries, such as Mexico and Brazil, have gross worker flows of 65 per cent and 80 per cent, respectively.

- Firm-level surveys reveal that 'labour hoarding' can be as much as 17 per cent; that is, firms may have as many as 17 per cent more workers than their desired number of labour force.
- To avoid disputes, firms are willing to pay two to six times the legally mandated compensation for retrenching or laying-off workers. Instead of the mandated two weeks of wages for each year of service, firms often offer up to four–six weeks of wages as compensation.

Restrictive regulations and labour laws also contribute to inequality by perpetuating dualism between the formal and informal sectors. With the exception of chapter Vb in the IDA, most regulations, including labour regulations, become binding in manufacturing firms which have more than 10 workers (if power or electricity is used) or 20 workers (if no used) registered under the Factories Act. The impact of this is seen starkly on the overwhelming share of workers (about 75 per cent) in firms or plant sizes of below 10 workers—the bulk of employment is in firms that remain unregistered. In contrast, less than 20 per cent of workers in a sample of fast-growing East Asian countries work in such small firms. More generally, as seen in Chapter 3, Indian manufacturing sector firms continue to show a highly bi-modal size structure: the bulk of the firms are low-productivity small enterprises at one end and on the other, upper end, are relatively large firms with high productivity.

Recent data suggests that dualistic trends are persistent in the manufacturing and tertiary sectors. In manufacturing, for instance, only 2 per cent of firms belong to the formal organized sector. But the share of employees working in these firms has declined to 25 per cent of all manufacturing sector employment (Unni 2006). Thus, on the one side are the more productive, relatively better paid, salaried, formal sector workers (14 per cent of the Indian labour force) who enjoy the 'insider

benefits' of being protected by employment protection legislation, and on the other side are the vast majority of informal or unorganized sector workers who work for much lower wages and have little or no social protection. This is evident from the persistent real wage premium of about 28 per cent that exists for salaried workers over casual workers, even when they have similar human capital characteristics.

The dualism in India's manufacturing sector spills over to the tertiary sector through two channels. First, by discouraging growth of the formal manufacturing sector, in particular, and the manufacturing sector in general, regulations push a large number of workers towards low-end tertiary sector employment. Second, regulations can also directly impinge on the services sector through the broader application of laws such as the IDA, something that was not originally intended. For instance, clauses in the Shops and Establishment Act sometimes overlap with those of the IDA and some court decisions have extended the reach of the IDA to cover tertiary sector activities.

Contrary to the adverse impact of some clauses of the IDA, preliminary analysis suggests that minimum wages for unskilled workers can be welfare-enhancing in India. Minimum wages may be supporting the wages of less skilled workers, without apparent costs to employment. However, minimum wage regimes need to be streamlined. With individual states having as many as 40 or more minimum wages in place, set by both Central and state governments, minimum wage regulations in India are as complex as other labour laws. Within the agricultural sector alone, there are minimum wages for ploughing, weeding, sowing, transplanting, harvesting, winnowing, threshing, picking, and herding. In the construction industry, the Central government has set eight minimum wages which are differentiated by the thickness of around an inch of the stones meant to be

broken. There are also floor minimum wages for unskilled workers which have been set by the state governments.

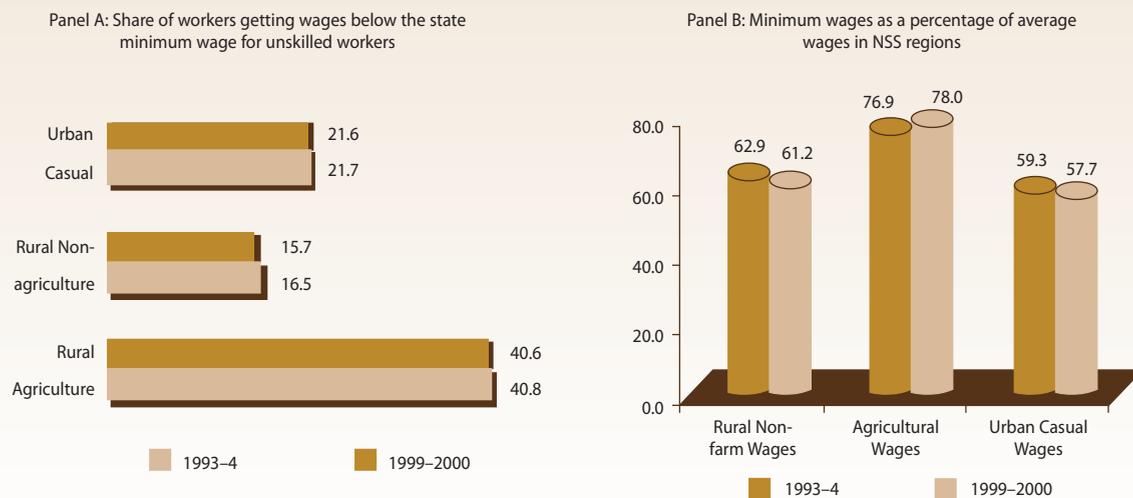
One result of this complexity is that minimum wages laws are not well-enforced. A large share of workers, some 40 per cent of agricultural workers and 21 per cent of urban casual workers (see left panel of Figure 5.9), get wages below the lowest minimum wage (typically the one set for unskilled casual workers). These figures likely underestimate the lack of compliance since in most states, minimum wages are considerably below the average wages of casual agricultural and urban workers (right-hand side panel in Figure 5.9).

The data suggests the strong effect minimum wages have on supporting wages for unskilled casual workers in urban and rural areas. In most states, casual wages tend to be concentrated around the minimum wage for unskilled workers (Figure 5.10). The data also shows that casual wages for agricultural and urban workers, as well as minimum wages, moved in the same

direction over the period between 1993–4 and 1999–2000 (Figure 5.11). This is the case even after controlling for state-fixed effects which take into account other factors that determine the level of minimum wages.

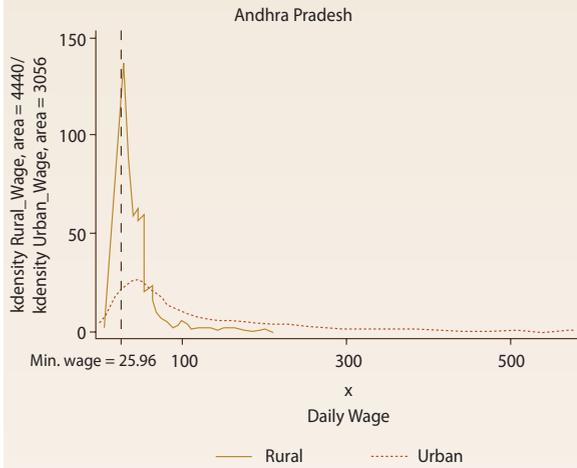
On average, minimum wages did not seem to ration jobs in the 1990s. A separate exercise shows that unemployment (usual principal status [UPS]) and underemployment (current daily status [CDS]) rates in the different states do not appear to be related to minimum wages.<sup>10</sup> Such results are consistent with our finding that real wages do not affect casual employment levels or employment rates. A preliminary conclusion of this analysis is that minimum wages for unskilled workers can be welfare-enhancing as they raise wages for unskilled poor workers without increasing unemployment significantly. Such a conclusion is only tentative in that it needs to be supported by further analysis. However, it points to an under-researched area of major policy importance as it can imply that a streamlined regime of minimum wages can be welfare-enhancing for those in more need.

**Figure 5.9 Minimum Wages and Employment**

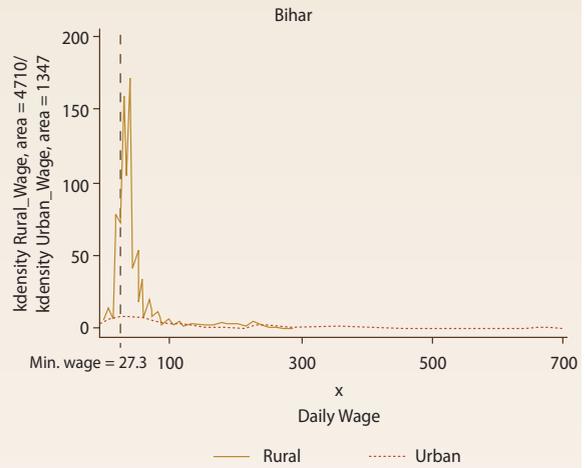


Source: Wage data from NSS. Minimum wage data from Indiatat.com

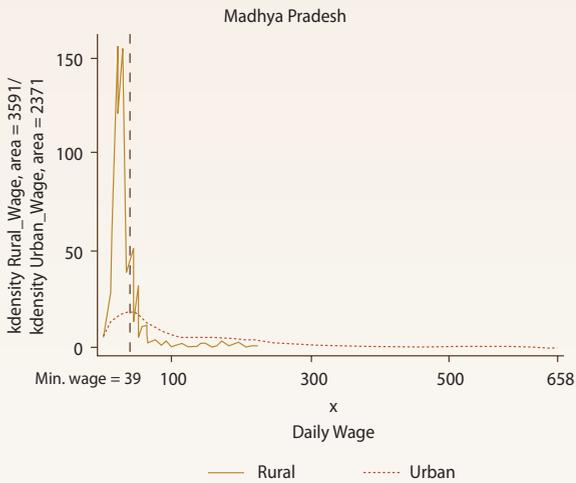
**Figure 5.10 Clustering of Urban and Rural Casual Wages and Minimum Wages, by State (Kernel Distribution of Urban and Rural Casual Wages)**



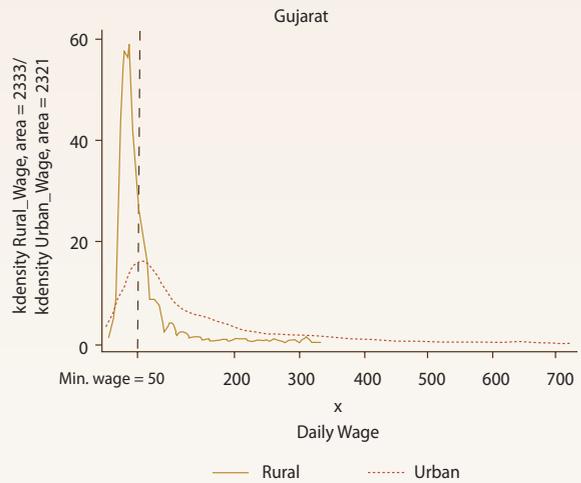
Note: excluding 1% of highest earners within +/-4 standard deviations



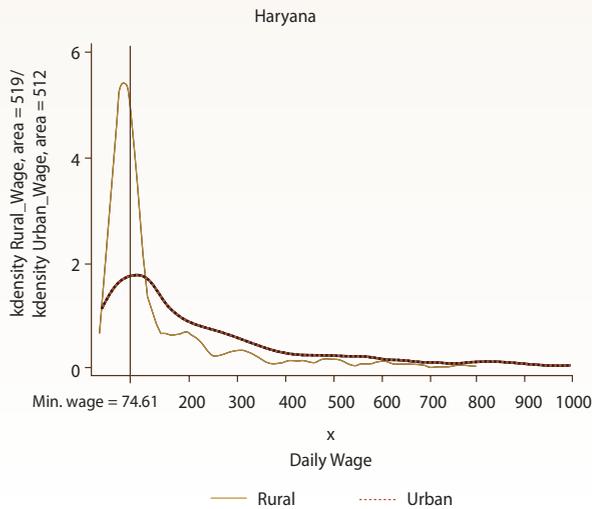
Note: excluding 1% of highest earners within +/-4 standard deviations



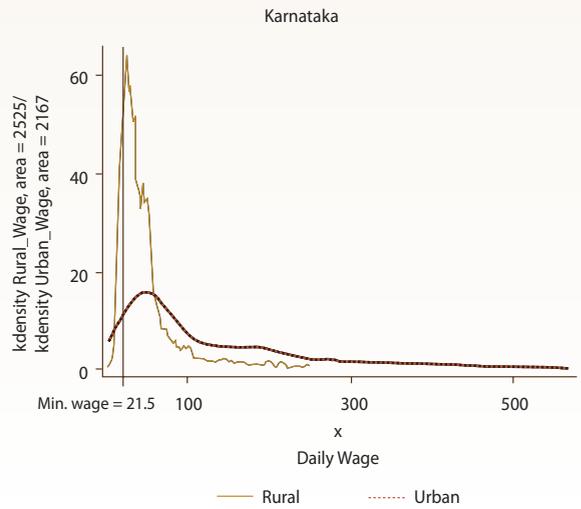
Note: excluding 1% of highest earners within +/-4 standard deviations



Note: excluding 1% of highest earners within +/-4 standard deviations

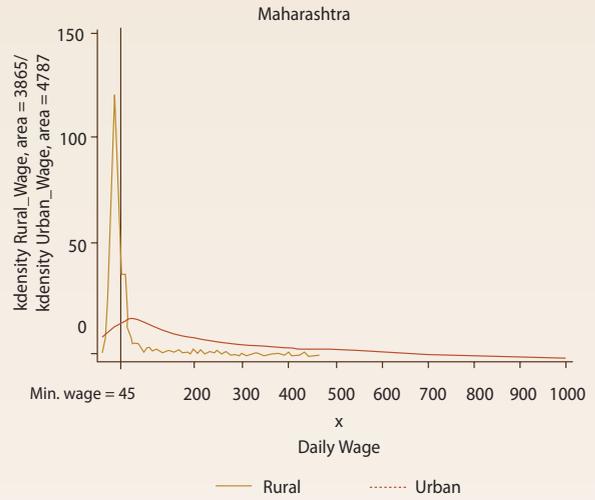
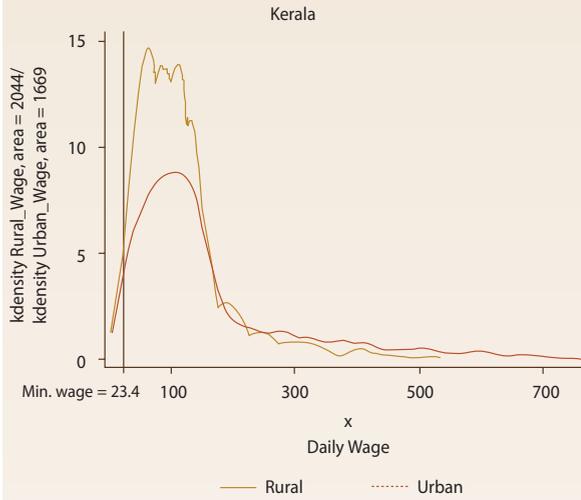


Note: excluding 1% of highest earners within +/-4 standard deviations



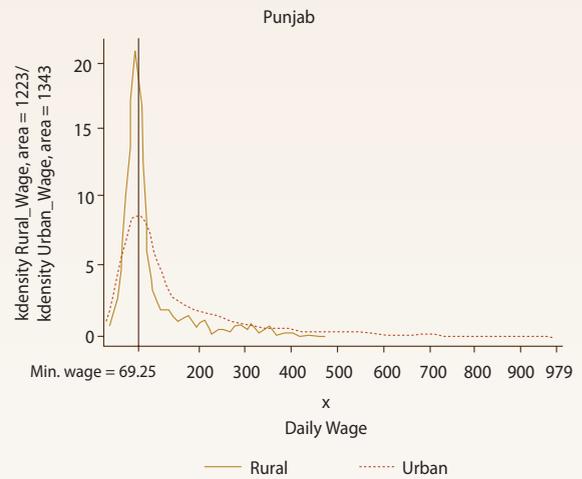
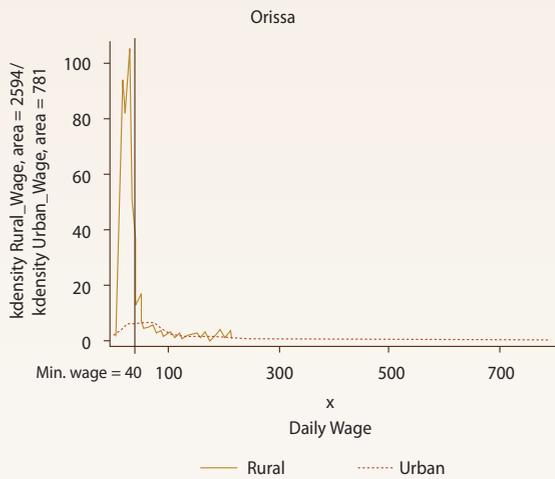
Note: excluding 1% of highest earners within +/-4 standard deviations

Figure 5.10 (continued)



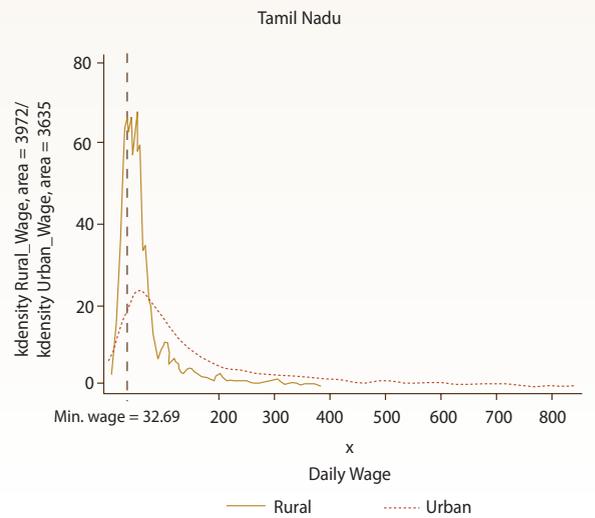
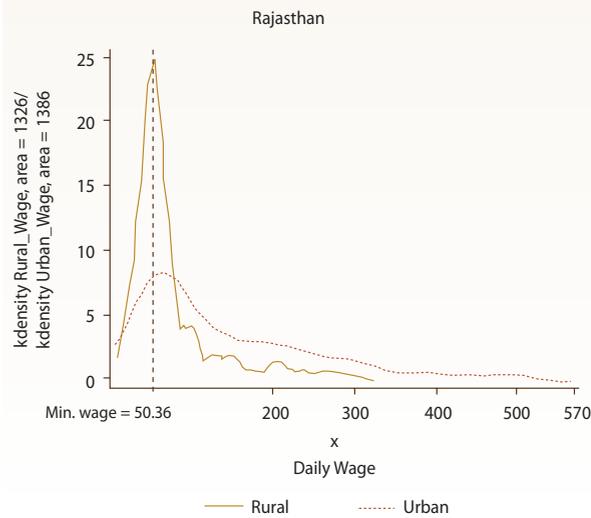
Note: excluding 1% of highest earners within +/-4 standard deviations

Note: excluding 1% of highest earners within +/-4 standard deviations



Note: excluding 1% of highest earners within +/-4 standard deviations

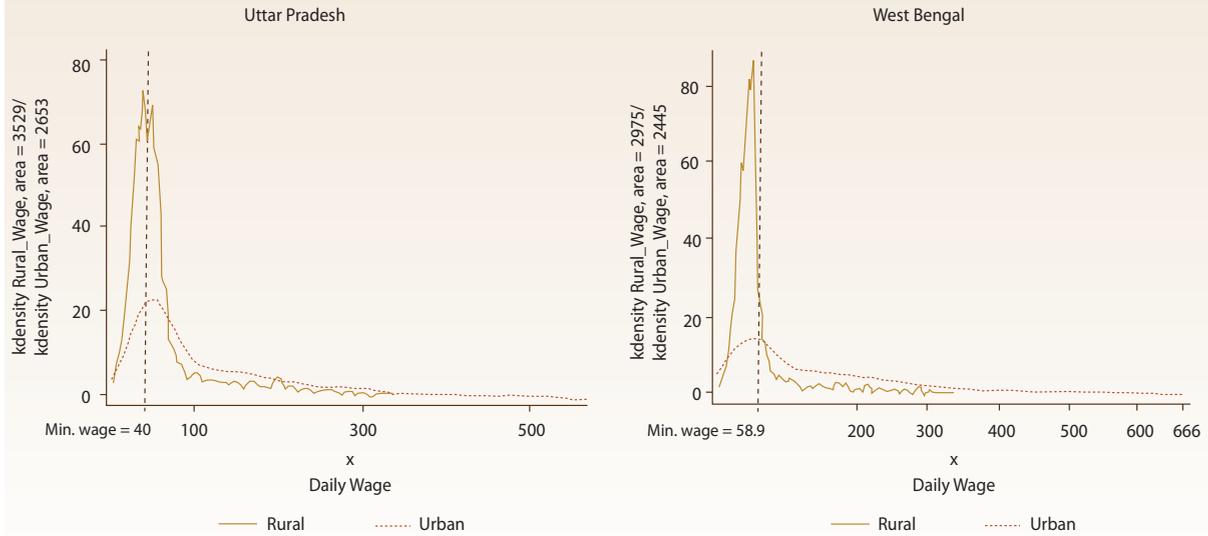
Note: excluding 1% of highest earners within +/-4 standard deviations



Note: excluding 1% of highest earners within +/-4 standard deviations

Note: excluding 1% of highest earners within +/-4 standard deviations

Figure 5.10 (continued)



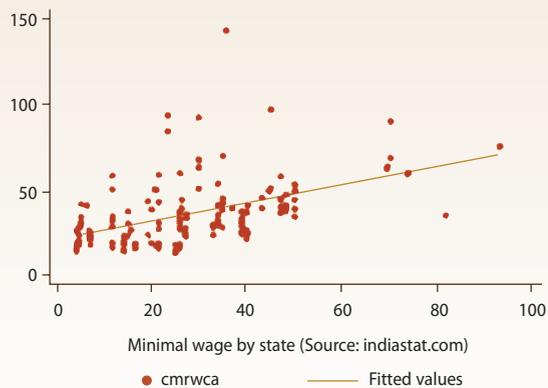
Note: excluding 1% of highest earners within  $\pm 4$  standard deviations

Note: excluding 1% of highest earners within  $\pm 4$  standard deviations

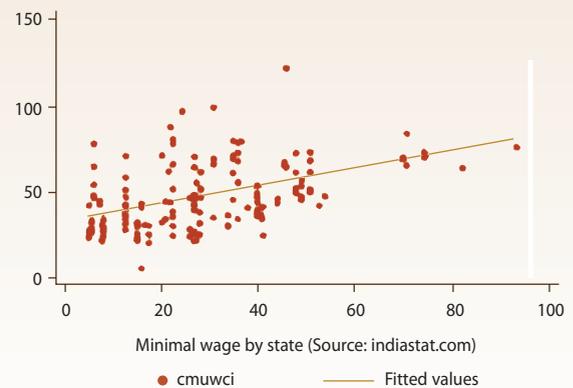
Source: Authors' estimates based on NSS 55th Round data.

Figure 5.11 Rural and Urban Wages

Panel A: Rural Agricultural Wages and Minimum Wages, by Regions, in 50th and 55th Rounds



Panel B: Urban Casual Wages and Minimum Wages, by Regions, in 50th and 55th Rounds



Sources: NSS and Ministry of Labour for minimum wages.

Note: Adjusted R squared for the two estimates at 0.85 and 0.75 respectively.

## SOME OPTIONS FOR REFORMING LABOUR REGULATIONS

Recent research and employer surveys suggest that the costs of labour regulations are high—both in terms of growth of jobs in general, and in terms of growth of good formal sector jobs in particular. The direct costs mainly arise from

lowering manufacturing value-added and jobs. But the indirect costs, in terms of the spillover effects on tertiary sectors like services, trade, hotels and restaurants, and construction, can also be significant. The complexity and ambiguity of labour laws not only lead to efficiency losses for the economy but also undermine their

effectiveness in protecting workers' welfare and security. By widening the gap in earnings between the formal and informal sectors, labour regulations also increase inequality between a small section of formal sector workers and the vast ranks of unorganized sector workers.

It is widely recognized by now that labour regulations in India need reform. A rapidly growing and increasingly open economy faces higher opportunity costs from restrictive labour laws. At the same time, it is also easier to reform labour laws in a growing economy where workers have greater opportunities for finding jobs and are less concerned about moving from their current ones. A more prosperous economy can also make available more resources to provide temporary support for workers who have to change jobs or re-train in order to increase their employment prospects. The current phase of rapid growth in India thus offers

the country a window of opportunity to reform its labour laws. What are some of the ways by which India's labour markets can be reformed?

### **The Way Forward**

Before suggesting specific reforms, it is useful to outline some general principles that labour market reforms should follow. These are presented in Box 5.7.

In the case of India, the preceding analysis suggests labour market reforms should address four priority areas:

- (i) streamlining and simplifying labour laws;
- (ii) reducing market rigidities by modernizing the IDA;
- (iii) resolving ambiguities concerning the Contract Labour (Regulation and Abolition) Act; and

#### **Box 5.7 Principles to Guide Labour Market Reforms**

*Having balanced objectives.* Labour market reforms should balance the objective of protecting the rights of workers with the objective of promoting investment, productivity, and growth. This is because in the long run, investment and growth of productivity and earnings are the best jobs programmes that a country can introduce. However, no less important are short-run welfare goals that ensure workplace safety and humane working conditions, protection against arbitrary action by employers to eliminate jobs or reduce wages, and provision for the rights of workers to form associations to protect their rights.

*Basing policy reforms on well-identified market and policy failures.* Given political and capacity constraints, reforms are costly and should only be based on good research that identifies exactly the market and policy failures that regulations need to address.

*Objectives and instruments should be well-distinguished.* For instance, it should be clear that labour market flexibility is not an end in itself but rather a means to create more jobs and better outcomes.

*Reform legislation should be flexible so that unforeseen and undesired consequences can be easily mitigated.* The clearer the distinction between objectives and instruments for reforms, the more effective reforms can be.

*Identifying the winners and losers from the reforms, and providing compensation as needed.* Even when reforms have clear net gains, they can still hurt some groups of workers and employers. The challenge for the government is to organize assistance to compensate the losers.

Source: Pagés and Saavedra (2002).

- (iv) improving enforcement of laws to make them more effective, while reducing transaction costs and rents for firms.

### Rationalizing and Consolidating Labour Laws

Perhaps the greatest consensus between government, labour, and industry is in the case of this reform. The existence of 55 Central labour laws and more than 100 state laws is causing extraordinary confusion and complexity. It is impossible for either firms or workers to be aware of their rights and obligations when rules and regulations are spread over so many national- and state-level Acts. The current 47 Centrally enacted labour laws can be consolidated into four Acts centred on industrial disputes, wages and benefits, conditions of employment, and social security (Table 5.5).

Alongside consolidation of laws, key concepts such as workmen, industry, and factory—the

meanings of which are ambiguous and variable among Acts—should be clarified and harmonized. Concepts should be broad and comprehensive and give room to very few exceptions and ambiguities. If the objective is to provide a minimum set of rights and obligations, it is unclear why employers and workers in certain sectors or industries (say hospitals or educational institutions) should be exempted from or devoid of such obligations and rights respectively. As stated by Debroy (2005: 37–76), while there may be debates on the nature of regulations, ‘unification and harmonization is an issue on which there should be no lack of consensus’. Harmonization and consolidation are also two of the recommendations submitted by the Second National Commission on Labour (2NCL).

### Modernizing the IDA

Next to simplifying and consolidating labour laws, which can take some time, modernizing the IDA is a priority. IDA reforms should focus on two main areas. First, the disputes resolution mechanism should be simplified to reduce time and resources consumed in disputes (see Box 5.8).

The second major reform of the IDA should aim at protecting workers rather than protecting jobs. Change, transformation, and upgradation are the engines of economic growth. In order to foster growth while ensuring the livelihoods of workers, governments are turning to mechanisms that protect the incomes of the workers rather than their jobs. This, in turn, implies that current provisions aimed at ensuring job security have to be transformed into mechanisms that protect the incomes and welfare of those workers who are adversely affected by technological change or market fluctuations. Some specific measures are suggested in Box 5.9.

In addition to amending the IDA, India may also consider other broader measures to undertake

**Table 5.5 Suggestions for Consolidating Labour Laws**

Current Laws	Possible Consolidation into New Law
Industrial Employment (Standing Orders) Act,	Terms and Conditions of Employment and Disputes Mechanism
Industrial Disputes Act,	
Trade Unions Act.	Conditions of Work and Welfare
Factories Act,	
Maternity Benefits Act,	
Workmen's Compensation Act,	
Contract Labour (Regulation) Act.	Wages and Benefits
Minimum Wages Act,	
Payment of Wages Act (1937),	
Payment of Bonus Act (1965).	
Employees Provident Funds Act,	Social Security
Employees State Insurance Act,	
Payment of Gratuity Act.	

Source: Federation of Indian Chambers of Commerce and Industry (FICCI).

### Box 5.8 Amending the IDA to Simplify Dispute Resolution Mechanisms

- *Only rights-based disputes should be adjudicated.* By distinguishing between ‘rights disputes’ (those disputes that are based on a legal right)—and ‘interest disputes’ (disputes which are not based on any existing rights), transaction costs can be lowered by limiting dispute cases. Disagreements belonging to the ‘interest disputes’ category should be solved by means of collective bargaining or, if that fails, conciliation and arbitration mechanisms (Nath 2005).
- *Strengthening grievance-handling mechanisms at the enterprise level.* The grievance-redressal mechanism at the enterprise level provided by Section 9C is not generally enforced. Employers and employees often fail to recognize it. Accordingly, Section 9C could be enforced better after suitable procedural amendments. The aim should be to provide greater authority and incentives to Conciliation Officers to resolve disputes at their level or at the Conciliation Board level.
- *Providing Conciliation Officers with the powers currently awarded to the Conciliation Board.* Conciliation should be made a compulsory step to adjudication in industrial dispute cases. Appropriate training and incentives can be given to officers to enable them to resist pressures from interested groups (Hazra 2005).
- *Reintroducing the Labour Appellate Tribunals which were abolished in 1954.* This will reduce the work of higher judiciary, that is, High Courts and the Supreme Court, which consumes considerable time and cost.
- *Addressing the shortage of well-trained presiding officers in labour courts and tribunals* (Hazra 2005).
- *Fixing the limit of filing disputes to, say, one year after occurrence of disputes (by amending Section 10 of the IDA).* The aim should be to reduce the burden on the courts and discourage the filing of non-genuine claims.
- *Making industrial dispute decisions enforceable within 30 days after they have been communicated in writing to all parties, as in civil court cases.* At present, Section 17 of the IDA makes laws enforceable 30 days after publication of the decision; this can often delay implementation.

### Box 5.9 Amending the IDA to Increase Labour Market Flexibility

- Eliminating the requirement for firms employing 100 or more workers to seek prior permission from governments for layoffs would be the first best solution. Such arbitrary thresholds only create strong disincentives for firms to grow above the thresholds. This in turn prevents firms from enjoying economies of scale at a time when India’s manufacturing trade is increasing. The threshold for all industrial establishments, plantations, and mines, employing 100 workers or more, having to seek prior permission from the appropriate government before layoffs, retrenchment, or closure, should be increased to at least 500 workers. Anything less than this reduces incentives for firms to grow and, in the process, create jobs. It should be noted that investment climate data suggest that increasing the threshold from 100 to 300 will not be effective in solving the problem but will involve similar political costs.
- Waiving the condition of prior government permission for retrenchment under Section 25N, if workers accept compensation higher than that prescribed by the IDA.
- Removing the requirement for prior government permission for layoffs (Section 25M) and replacing it with Section 25C.
- Eliminating Section 25G which requires that employers should start retrenchment by laying off the last person hired. In the current, fast-changing work environment, this section penalizes firms that seek to

## Box 5.9 (continued)

hire and maintain workers with the latest up-to-date skills, relative to firms that rely on experience. This creates disincentives because it secures the jobs of older and more experienced workers, even if they do not perform in their jobs.

- Eliminating the requirement of notice for change of service (Sections 9A and 9B of IDA) under which employers cannot change the terms and conditions of service without 21 days' notice. This can be replaced with a requirement of notice for a smaller period.
- Increasing compensation for retrenchment and firm closure. The current compensation contemplated in the IDA is well below the standards of developing countries. Although it is in line with compensations prevalent in developed countries, workers in industrial countries have access to other forms of unemployment insurance. A compensation equivalent to one month's salary per year of work, with an upper maximum of 8–12 months' pay, would be in line with international standards.<sup>11</sup>
- Building funds for a rainy day would allow the very meagre compensation that workers now receive in case of closure (Section 25FFF) to be increased to the same level as compensations awarded for retrenchment. To make this possible, firms that default on their contributions should be penalized for breaching the law. A slightly different alternative, already in effect in some Latin American countries (Colombia, Peru, Ecuador, and somewhat differently in Brazil), is to create individual accounts for each worker in which firms deposit a certain percentage of the worker's wage every month. The funds accumulated in the individual accounts are available to the worker in case the worker is retrenched, laid-off or quits, or in case of firm closure.<sup>12</sup>
- Making job search assistance and training available to workers affected by retrenchment. The most successful income-support mechanism for a worker who loses his/her job is to find a similar or better job as fast as possible. Labour policy should assist workers to this end.

labour market reforms. Malaysia, perhaps, offers one of the more extreme models of introducing labour market flexibility by allowing specific contracts to be freely negotiated between workers and firms. The lead article of the 1995 Employment Act in Malaysia states: 'Every employee must be given a written contract of employment which states the terms and conditions of employment, including the notice period required to terminate it.' This is an example of a legal system that gives freedom to employers, workers, and unions to enter into mutually satisfying contracts. By allowing unions to advise workers on contracts, the interests of the workers are also protected. The role of the state is limited to providing a legal framework that respects and enforces these contracts. Examples of reforms in other countries are provided in Box 5.10.

### Reducing Uncertainty by Making Contract Labour Law Clearer

Reducing regulatory uncertainties surrounding the use of contract labour is another priority. Currently, the Contract Labour (Regulation and Abolition) Act is designed to prohibit and discourage the use of contract labour, thereby introducing considerable uncertainty in the working of this increasingly important contractual arrangement. There is a need to formalize contract labour. The main instrument for implementing this would come from restricting the application of Section 10, Chapter 3 of the Contract Labour (Regulation and Abolition) Act, 1970, under which, currently:

- (1) Notwithstanding anything contained in the Act, the appropriate Government may, after consultation

### Box 5.10 Examples of Labour Market Reforms Aimed at Increasing Market Flexibility

Slovakia	<p><i>Main Reforms</i></p> <ul style="list-style-type: none"><li>• Pre-reform: No part-time contracts; term contracts could not be extended; limit of 150 hours of overtime a year; approval by union for firing a worker; retraining before dismissal; union approval for flexible work time; and approval by union for group dismissals.</li><li>• Now: Part-time contracts for students, women, and retirees; extension of term contracts possible; limit of 400 hours of overtime, with worker consent; no approval for shifting hours in a four-month period; no notification/retraining requirement; and notification for group dismissals.</li></ul>
Colombia	<p><i>1990</i></p> <ul style="list-style-type: none"><li>• Reduction in severance payments (from one month of last salary for each year worked, to a monthly contribution equivalent to one month of yearly salary into a severance account).</li><li>• Wider definition of fair dismissals (extended to include non-compliance with company regulations/instructions). Also employees with less than 10 years of service cannot sue company for unfair dismissal.</li><li>• Extended use of temporary contracts (permitted to be used for periods of less than one year; can be renewed up to three times).</li><li>• Faster process for mass dismissals (reduction in advance notice requirement).</li></ul> <p><i>2002</i></p> <ul style="list-style-type: none"><li>• Employers permitted to hire workers by the hour.</li><li>• Severance payments for employees with 10 years of service reduced to 45 days' pay for first year, and 20 days' pay for each year thereafter.</li></ul>
Thailand	<p>Labor Protection Act enforced in August 1998. Covers working hours, wages, severance pay, child labour, holidays/leave, female workers, and so forth. Key changes introduced were:</p> <ul style="list-style-type: none"><li>• Employee Welfare Fund created to assist employees who become unemployed or face other problems. Contributions made by employer, employees, government, and income from penalties.</li><li>• Severance pay enhanced. Workers fired because of no fault of their own are entitled to severance pay depending on their tenure of employment. This payment was enhanced for those with more than six years of service. Provision for special severance pay in case firm relocates.</li></ul>

with the Central or a State Board, prohibit by notification in the National Gazette, employment of contract labour in any process, operation or other work in any establishment.

Although the appropriate government is required to consider whether the 'contracted' work is incidental for the industry, trade, or business, or whether it is 'perennial' to the operation, the

government makes the final decision regarding this. This is leading to uncertainty even among firms in the ITES sector. The way to resolve this may lie in clearly identifying certain specialized and supporting occupations that 'naturally' tend to use contractual work for a variety of industries. Such a list could include: cleaning, security, maintenance, housekeeping, laundry, loading, information technology, support services for

ports, airports, hospitals, and export-oriented units in SEZs. A second issue is that contract law prohibitions are being applied to establishments as small as those employing 20 or more workmen. Raising the threshold over which the Contract Labour (Abolition and Regulation) Act applies would be another way to introduce flexibility.

### Improving Enforcement

At present, labour laws are not very effective in providing protection, security, and benefits to workers due to weaknesses in the enforcement machinery. Not only do regulations raise transaction and adjustment costs for firms, they also provide scope for rent-seeking and corruption. Hence, a key area of reforms would be strengthening labour inspections and labour law enforcement. The aim of the reforms should be that firms should not have to devote too much valuable time in dealing with inspections, and inspectors should not be able to use their powers to extract unofficial payments. With this objective in mind, the following reforms can be considered.

First, the system of multiple inspections under different laws may be replaced with an optional 'self-certification' system, the enforcement of which can be selectively (risk-based) or randomly enforced through inspections and audits. The self-selection system can be given force by requiring legal affidavits, laying the responsibility on the CEO, and specifying a few crucial laws that are amenable under this. Alongside, the current system of multiple registers and records may be replaced with one register for each broad area covering muster rolls, accidents, and wages. The process of filing many returns can be reduced drastically by switching over to a system of single filing.

For those firms that do not opt for 'self-certification' systems, the inspection regime can be reformed on the following lines:

- *Inspections should be targeted and publicly pre-announced.* Firms to be inspected should be selected based on formal complaints raised by workers' representatives. For firms where no complaints are raised, inspections should be targeted based on an assessment of which firms are more likely to evade the law. The list of firms to be inspected every month should be posted on an official, public list in advance, and an inspection order should be signed by the labour commissioner to be valid. Priority should be assigned to firms where workers have raised a complaint. Firms that engage in irregular payments to inspectors or those that do not report irregular behaviour on the part of inspectors should be made liable. Inspections for the numerous labour acts should be merged in a consolidated inspection that covers all labour acts.
- *Inspections should focus on technical assistance and not just sanctions.* This, in turn, requires that inspectors be appropriately trained to be able to perform. On this issue, the ILO recommends that the inspectorate not be funded from revenues generated from fines, as this inhibits the educational/promotional role of the inspectors. Some initiatives, such as employer-generated implementation plans (EGIPs), have produced good results in other countries. Employers can tailor implementation plans and policies to suit their needs. They report to the inspectorate on progress against self-defined benchmarks in their annual plans for improving working conditions. Compliance is more likely since employers and often, as recommended, workers 'own' the strategy. Other useful strategies are providing special educational components and information provision to small and medium firms.
- Other important measures are: (i) *building a culture of compliance* through mass media campaigns and education in business schools

and (ii) *professionalizing* inspections by providing adequate training and compensation.

In conclusion, reforming labour market regulations which hinder the creation of jobs is one of two key approaches for addressing India's employment challenge. The other part will be to help workers by providing more protection against unemployment and uncertainty, and giving them the skills that are in demand by employers. Increasing the effectiveness of active labour market policies will help to achieve these goals. The next chapter takes up this issue.

## NOTES

1. Note that Indian employers are not obliged to bargain collectively. The question of whether it is desirable for them to do so is not addressed here. However, facilitating bargaining where both parties are agreeable would be desirable, whatever the position on obligation of bargain in good faith.
  2. There have been a number of state amendments to the IDA; most often the laws were changed with the objective of increasing protection of workers.
  3. (*Business Standard* online, 24 May 2005): 'In the race for new investments, the state is expected to go all out in modifying the labor laws', the online report of *Business Standard* said.
  4. For instance, Section 2i of the IDA states: 'Industry means any systematic activity carried on by cooperation between an employer and his workmen (whether such workmen are employed by such employer directly or through any agency, including a contractor) for the production, supply or distribution of goods with a view to satisfy human wants...whether or not—(i) any capital has been invested for the purpose of carrying on such an activity; or (ii) such activity is carried on with a motive to make any gain or profit...'
- Consequently, all activities can be defined as industrial and under the purview of the IDA. In practice also, organizations as different as panchayat samitis, hospitals, real estate companies, operators of tubewells, religious institutions, etc., have been considered to be industries, making, in principle, laws applicable to industries also applicable to these institutions.
5. Interview with IT firm in Bangalore, February 2005.
  6. See <http://rru.worldbank.org/DoingBusiness>.
  7. Although most firms rank labour regulations as 99.5 compared to 100 for power, statistically there is no difference between the two scores.
  8. See Basu (2006) for a theoretical exposition of how India's labour market regulations, especially the provisions of the IDA, can harm labour market outcomes.
  9. For example, in 1988 Tamil Nadu introduced an amendment that increased the power of conciliation officers in terms of enforcing attendance, compelling the production of documents, and issuing commissions for the examination of witnesses. Examples of laws that reduce the costs of disputes are: (i) eliminating the need for the parties to refer labour disputes to the government prior to referring them to a tribunal, and (ii) granting the government the power to transfer any industrial dispute pending before a tribunal to any other tribunal constituted by the state government for adjudication.
  10. This accounted for other omitted factors. See chapter 1 for definition of these terms.
  11. It should be noted that a level of compensation of 45 days and 60 days of compensation per year of service, in case of restructuring sick industries and profit-making companies, respectively, is above the norm in both developing and developed countries.
  12. For more information on the operation of these schemes, see Heckman and Pagés (2004) and IADB (2003).

# Increasing the Effectiveness of Active Labour Market Policies



Increasing labour market flexibility will be most effective in creating good jobs if it is complemented with policies that help workers obtain social protection, skills, and help in finding good jobs. Increasing social protection for workers in the informal sector who are mostly not covered by these policies, and for workers affected by regulatory reforms, should be a priority. Presently, the major government intervention in this regard is employment generation through public works programmes. However, despite their progressive incidence, the employment and income effects of public works programmes have been limited historically. The programmes have been beset by problems of poor accountability, uneven implementation, and design issues. The government's commitment to a major expansion of public works through the NREG Act has considerable potential to provide protection and reduce poverty through employment but only if its many design innovations can be delivered in practice. More broadly, India is also poised to move from its current reliance on safety net programmes to a more comprehensive system of social protection which promotes risk management among unorganized sector workers to reduce their vulnerability. But serious administrative challenges and high transaction costs have to be overcome first. Social insurance coverage should be expanded in a phased manner which takes account of constraints and adjusts programmes in the light of initial experience. The government has also made substantial efforts to establish a vocational training system to fill the skills gaps in the economy. This system, however, suffers from a lack of proper targeting and an overly bureaucratic approach which stresses delivery over quality. In order to make it more relevant, the system needs to be made more flexible and responsive to market needs. There is also a need to reassess where public interventions are most needed and the forms these interventions should take.

## INTRODUCTION

The close correlation between labour earnings and poverty in India has created a demand for active labour market policies. These are especially necessary to improve conditions for vulnerable groups such as the poor, the young, and women, particularly in rural areas where employment tends to be seasonal. There is also a strong equity

rationale for such policies since one of the major factors driving both chronic and transient poverty in India is the uninsured risk faced by households from loss of work due to unemployment, poor health, or injury.<sup>1</sup> In turn, such uninsured risks and associated credit and insurance market failures may be contributing to workers remaining in low productivity employment in the unorganized sector and making poverty more persistent.<sup>2</sup> In the current situation, where there is a need to reform labour regulations, there is an additional rationale for such policies. Public interventions to provide social security and employment support to workers, some of whom may face increased risk of unemployment due to reforms, may be necessary to build up acceptance of such reforms.

Public works programmes have a long history, dating back to the colonial period, starting with famine relief works. Since the late 1970s, they have been an increasingly important component of the Indian safety net, with a succession of Centrally sponsored and state-specific workfare programmes. Most schemes operate largely in rural areas where they perform a social assistance function and provide, possibly, an insurance-like element. It is difficult to form a comprehensive picture of public works programmes across India because there is a multiplicity of schemes. There have also been frequent changes in the names and guidelines of these programmes, though in practice this has not implied any fundamental change in approach. The 1990s saw two major policy shifts though. The first was an increase in the role of the panchayati raj (local government) institutions (PRIs). The second was a shift from scheme-based commitments to providing work in rural areas through a legislatively backed 100-day employment guarantee, the newly launched national NREG Act.

After the decline in real spending that started in the mid-1990s, India appears to have now entered

a new phase of expansion in public works spending. This is being driven, in large measure, by a shift towards greater Central financing. Though the rate of expansion is unlikely to be sustained, reversal is also unlikely, given legal commitments. This puts the country at an interesting stage in the evolution of social protection spending. While public works programmes provide some form of social protection in rural areas, urban areas remain mostly outside the reach of these programmes. At the same time, there is considerable scope for increasing social insurance coverage in urban areas as well. Another thing of note is that the increased commitments to NREG, combined with existing significant spending on other social protection programmes, will raise social welfare spending (as a share of GDP) to a level which international evidence suggests is about as high as countries reach. This, together with democracy and the opening of the economy, suggests that future expansions in social protection spending are likely to come through the expansion of social insurance rather than through social assistance.

Given the high rate of informality of Indian labour markets and the low levels of income, the current coverage by social insurance is predictably very low and concentrated in the organized sector. At the same time, the public sector and the non-government and private sectors are all making efforts to expand social insurance coverage. The GoI has, in recent years, increased its efforts to expand social security among unorganized sector workers. It has tabled a bill—The Unorganized Sector Workers' Social Security Bill, 2007—before Parliament on social security in this sector, its most ambitious effort to date.

This chapter concentrates on the major active labour market programmes of the government. These can be broadly grouped under (i) public

works programmes; (ii) social insurance for workers; (iii) employment exchanges; and (iv) training workers to increase their employability. It discusses the labour market impacts and shortcomings of these policies and makes recommendations.

### CENTRAL PUBLIC WORKS PROGRAMMES

In terms of spending, public works, confined largely to rural areas, are the most important element of the government's active intervention in labour markets. Box 6.1 lists the major rural works schemes run by the Central government

from the late 1980s to date. Nominal spending on these increased rapidly during the 1980s but was broadly stable in the mid-1990s. This means that as economic growth picked up, expenditure on the schemes, both as a share of GDP and total Central government spending, fell. At its lowest level, the share of expenditure on these schemes in 2002–3 was a third of what it was in the early 1990s—about 3.5 per cent of Central spending. This trend has reversed in recent years and if the NREG is rolled out as rapidly as is anticipated, the spending share can be expected to further increase sharply.

#### Box 6.1 Major Central Rural Employment Programmes in the 1990s and at Present

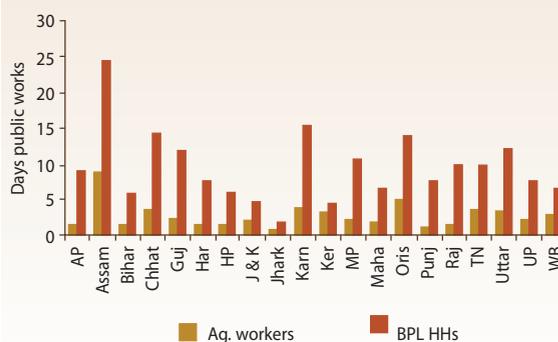
- *Jawahar Rozgar Yojana* (JRY), from 1989 to 1999, was a centrally sponsored scheme (CSS) targeted at below poverty line (BPL) households in rural areas, with preference given to Scheduled Castes/Scheduled Tribes (SCs/STs) and women. The financing for this programme was split 80:20 between the Centre and states respectively, and the wages to materials ratio was 60:40. The District Revenue/District Administration (DRDAs) and zila parishads (ZPs) were the main implementing agencies through line departments and gram panchayats (GPs).
- *Employment Assurance Scheme* (EAS), from 1993 to 2001, was a CSS that initially focused on 261 districts and gradually expanded to provide nation-wide rural coverage by 1997. The EAS committed to provide 100 days of lean season employment per year, for up to two adults per rural family. It was financed on the basis of an 80:20 Centre and state split. As with JRY, the wages to materials ratio was 60:40 and the DRDAs and ZPs were the main implementing agencies through line departments and GPs.
- In 1999, the JRY was restructured into the *Jawahar Gram Samridhi Yojana* (JGSY), with the main difference being that the creation of demand-driven community infrastructure moved from being a secondary objective to the primary objective, and conversely rural employment generation became the secondary objective.
- In 2001, the EAS and JGSY were merged into the *Sampoorna Grameen Rozgar Yojana* (SGRY), which has a target of providing 100 days' employment, per year, per rural household. Financing is split 75:25 between the Centre and the states respectively, and PRIs have in principle been given an increased role in its implementation.
- In late 2004, the *National Food for Work Programme* (NFFWP) was introduced in 150 backward districts with a massive increase in funding to Rs 5,400 crore in the 2005–6 budget.
- The *National Rural Employment Guarantee* (NREG) Act was passed in August 2005 and commenced implementation in February 2006. It initially covered 200 backward districts with commitment to national rural coverage within five years of launch. This is the first legislated national rural employment programme and it commits to 100 days' guaranteed employment per rural household, annually. The funding split is 90:10 between the Centre and states respectively, and PRIs are the primary implementing agencies. The programme is self-targeting, designed to encourage the participation of the target population and deter participation by others.

Source: O'Keefe (2006).

Public works programmes can potentially improve labour market outcomes in several ways. Other than the direct benefits (cash or kind) to participating households, they may also have a positive spillover impact on overall wages which could be felt by non-participating households. There may also be indirect benefits from the assets created under the scheme. Depending on their scale and comprehensiveness, such programmes may also perform an insurance function by acting as an effective minimum wage. Other potential effects stem from the skills development of workfare participants, either directly through work provided or indirectly through training provided to workfare participants (though this has not been emphasized in Indian programmes to date).<sup>3</sup> Such programmes could also impact gender and other social and economic relations, for example, through increased female labour force participation. However, in India as well as internationally, the focus of policymakers has overwhelmingly been on the direct transfer effect arising from employment generation and of the economic impact of the assets created.

The direct employment effects of these public works programmes, prior to the NREG, were far lower than those stated in the objectives. The official numbers show that the average annual employment under JRY was 16 days of employment per BPL household; 15 days of employment per registered EAS worker between 1992 and 1999; and, at best, about seven days of employment per rural household annually under SGRY from 2001 to 2004. Underlying these averages were large inter-state variations in coverage, but even relatively better performing outliers such as Assam and Orissa generated less than 10 days of work per agricultural worker, and none but Assam and Karnataka generated more than 15 days SGRY employment per BPL household (Figure 6.1). This, when the official numbers are likely to be overestimates due to the method of calculating employment generation.<sup>4</sup>

**Figure 6.1 SGRY Work Days per Agricultural Worker and per BPL Household, 2003–4**



Source: O'Keefe (2006).

Why have the employment effects of public works, so far, been less than expected? With the recent major expansion of the public works programme through the NREG, it is important to assess the reasons why historically there was such a large gap between programme expectations and actual outcomes. First, potential employment effects were overestimated to start with because, in practice, the actual share of wages in expenditure was lower than the recommended 60 per cent. Reliance on contractors further whittled away at this share. Second, national surveys show that public works wages were often significantly higher than the average wages of casual agricultural workers, their best comparator (Deshingkar and Johnson 2003; Murgai and Ravallion 2005). Public works wages also rose rapidly over the 1990s, at a time when real spending on these programmes declined; this further hurt employment generation. Apart from these issues, the persistence of major implementation problems—lack of accountability in workfare design, financing, and management—reduced the potential impact of the programmes. Assessments by the government and others point to significant leakages, in part due to poor monitoring and evaluation of programmes, both administrative and through mechanisms such as social audits, and the lack of reliable records (in particular, of muster rolls of funds).<sup>5</sup>

Do public works programmes provide some insurance to the target population? Even if employment generation through workfare programmes is small, they can still play an important safety-net role if they reach the people who need them the most, at the time when they need them the most. This should be one of the most important objectives of well-designed schemes. The evidence in India suggests that where the coverage is good, workfare programmes do play a positive insurance function. Most of the evidence comes from Maharashtra, which has been running an employment guarantee scheme (EGS) for some time. A 1980s study from Maharashtra found that income variability among landless agricultural households, in villages where EGS was available, was half the level of villages where it was not (Walker and Ryan 1990). Farmer studies in Maharashtra also found that there was greater adoption of higher-risk higher-return agricultural practices in the state, though what percentage of these can be attributed to the EGS is open to debate (O'Keefe 2006).

Most public programmes (other than JRY) are aimed primarily at the poor. The main targeting mechanisms for most schemes have been the wage rates and work requirements under the programmes. The programmes appear to be mildly progressive. For example, in 1999–2000, 57 per cent of beneficiaries of employment generation programmes lived in households with monthly per capita incomes equal to or less than Rs 400, compared to an overall population share of 45 per cent (O'Keefe 2006). Interestingly, programmes explicitly targeted at poor households appear to achieve no better outcomes than self-targeting, even when the wages paid by these programmes are above market wages. This is consistent with findings on targeting performance from other developing countries; it suggests that the choice of method is less important than effective implementation. Evidence suggests that poor

households may benefit relatively more from increased public works and be hurt relatively more by cuts in works spending (Lanjouw and Ravallion 1999).

The timing of public works programmes has often not matched the timing of the need for such programmes. There have been consistent difficulties in matching peak periods of public works provision with periods of lowest market demand. In Maharashtra, public works employment drops sharply during the monsoon when market-based work is also least likely to be available. This is also consistent with the findings in Rajasthan and Orissa where public works are typically carried out January–March when the opportunity costs of labour are high. Part of the problem is that certain work cannot be executed during the lean season due to the monsoons. Public expenditure management practices, which concentrate disbursements for works in the final quarter of the fiscal year, make the problem more acute.

Historically, the insurance effects of Central public work programmes have also been low due to their patchy geographical and household coverage. Despite commitments to full rural coverage, the share of villages covered by employment schemes is far less than complete. The assessment of EAS for 1993–7 found that only 53 per cent of villages had any EAS works, with the numbers for some states being much lower. Analysis from the 2002 NSS village data also confirmed that partial spatial coverage had continued, with only 48.5 per cent of villages (56.4 per cent of population) reporting any public employment programmes in 2001. Coverage is also not consistent. Strikingly, the proportion of villages covered in all the four assessment years from 1993 to 1997 was only 5.4 per cent. This is consistent with anecdotal reports of rotation of public works between different areas/villages. Thus, in terms of local availability,

public works to date have been a rather unreliable source of employment in most of India.

Evidence suggests that public works prior to the NREG did not help ease gender differences in participation. Female labour force participation in SGRY appears to have been lower than general rural female participation rates. The all-India share of SGRY female participants was only 12 per cent, which is similar to the Comptroller and Auditor General's (CAG) report findings on JRY and EAS of only around 16 per cent female beneficiaries (the target share was 30 per cent). In states such as Uttar Pradesh, Bihar, and Punjab, female participation in public works was less than 2 per cent. Clearly, an important range of issues will need to be addressed to make the new NREG more effective (see Box 6.2).

Overall, it is too early to make conclusions about the effects of the NREG on parameters such as poverty, labour markets, and the local economies. Nonetheless, relative to previous public works schemes, there are a number of design features in the NREG which are very sensible, and in many states there has been greater political and institutional commitment to trying to 'make the scheme work'. Administrative data show that the NREG generated significant demand from rural households in its first 18 months of implementation, with 66 million rural workers issued with job cards and around 20 million people provided with work. This is a major achievement in programme coverage relative to prior public works schemes. That said, the summary of initial implementation experience suggests that implementation is highly variable across (and even within) states and that there remain major challenges in implementation.

While the NREG has the potential to reduce poverty through workfare, ongoing improvements in implementation will be needed to realize this

potential and justify its costs. Initial field-based studies of NREG implementation suggest that it will take some time to consolidate the good practices reflected in the implementation to be included in programme design.<sup>7</sup> These include: operationalizing the anticipated roles of communities in a meaningful way; making the 'guarantee' stronger through provision of unemployment allowance where necessary; continuing to work on the difficult issue of mobilizing demand for work from the poor; increasing transparency in implementation to reduce corruption; and staffing and equipping administrative support systems.

Public works, set to become an expanded component of the social safety net in India, are one of the easiest instruments for providing social protection in rural areas. They combine elements of social assistance and insurance and possibly have a productivity-enhancing impact through asset creation. However, the experience so far suggests that the delivery of works will need to undergo major improvements if their potential effects are to be realized in a manner that justifies their significant fiscal costs (see Box 6.3). Their opportunity costs, in terms of foregone spending on a range of alternative public services including education, health, and nutrition interventions, will be high. It is also important to realize the limitations of these programmes. First, they are not likely to be major drivers of rural employment and productivity growth, and should not be viewed as such. Rather, they can—if better implemented—be a useful tool at the margin for poverty alleviation and for providing some level of insurance to the poor. Even here, such programmes can, at best, be only one risk management strategy for poor households. Such households will continue to rely on informal sources of support and look towards different types of public interventions for additional risk protection. It is in this context that the other major public intervention—providing

### Box 6.2 The National Rural Employment Guarantee (NREG) Programme

The NREG is the Gol's most ambitious public works initiative. Financed almost wholly by the Central government, it guarantees every rural household up to 100 days' employment per year at the agricultural minimum wage. Coverage was initially confined to 200 backward districts, and expanded to 330 districts in 2007, with nation-wide rural coverage planned within five years of launch (from February, 2006).<sup>6</sup> Analysis to date suggests a mixed picture of costs and benefits. First, there is significant potential for a lean season NREG. Simulations of a nation-wide 100-day employment guarantee suggest (Murgai and Ravallion 2005):

- The lean season rural poverty rate can be reduced from 37 per cent to around 23 per cent, or to around 30 per cent on a year-round basis.
- The annual fiscal cost will be around 1.7 per cent of GDP, if implemented nationally at a wage rate of around Rs 60 per day at current prices.
- Gains should be progressive, with the poorest 20 per cent of the rural population accounting for 29 per cent of participants. For them the gains from the EGS, direct and indirect, would be 51 per cent of their pre-EGS consumption levels. The bulk of participants are expected to be casual labourers.

There are, however, issues about scheme design that influence effectiveness, efficiency, and equity:

- Using the state agricultural minimum wage rates as the scheme wage rates is likely to be problematic. If scheme rates are above market rates this typically results in 'rationing' (that is, the demand for scheme jobs is greater than available jobs so they have to be 'rationed' according to some criteria). The experience from the Maharashtra EGS confirms that this 'rationing' could also apply to 'guarantees'.
- Participating in the NREG, for many, implies giving up work that they are already doing and also the income from this. The additional income they get from the NREG, therefore, is lower than what they would receive if they did not change their current employment and the wage portion of the NREG was simply distributed to everyone on a pro-rata basis. Using this option would reduce poverty to around 15 per cent—as against 23 per cent from NREG. While the comparison is imperfect—as it measures only the transfer impact of NREG and not the other economic impacts—it implies that the non-transfer gains from NREG would need to be substantial for it to be better than an untargeted transfer. The point highlights the importance of achieving significant economic returns from the NREG assets and for the poor to capture a reasonable share of the gains.
- A significant improvement in the NREG over previous works schemes is the strengthened role of panchayats in design, implementation, and monitoring. However, it will be important to develop accountability mechanisms that avoid the bundling or concentration of functions with specific actors (in particular DRDAs), which has contributed to implementation problems in previous schemes. It remains to be seen if the incentive and accountability structure ensures that GPs are at the heart of NREG implementation. In addition, the Act offers limited guidance on funds flow mechanisms. If GPs are to be empowered, it will be important for them to have direct control over a portion of scheme funds.
- The scheme benefits from a stronger monitoring and evaluation (M&E) system than previous works schemes, including funds earmarked for this purpose. In order to expand the system of concurrent evaluation to include robust impact evaluation, it will be critical to collect regular surveys for evaluation purposes.

Source: O'Keefe (2006).

### Box 6.3 West Bengal's Provident Fund for Unorganized Sector Workers

Since 2001, West Bengal has operated a Provident Fund for workers in the unorganized sector, not including agricultural workers. By mid-2005, enrolment was almost 640,000, with a further 60,000 membership applications pending. Membership is open to wage and self-employed workers in designated industries/activities (which are expanding over time), whose family income is no more than Rs 3,500 per month (though the means test appears to be rather informal). The key feature of the Fund is that it is a defined contribution scheme. Members contribute Rs 20 per month, with a matching contribution from the state government. Interest accrues in the account at a rate designated by the government (the Employee Provident Fund Organization rate is being used to date). Accrued principal and interest are paid to the worker at age 55 years, or at death, or when there is no account activity for six months.

Rapid expansion has been driven by a highly decentralized distribution network and governance structure, with support from trade unions and political parties in mobilizing awareness and interest. Collection agents are typically public workers who are incentivized with a Re 1 payment for each enrollee. The state government covers the administration costs of the Fund. While the West Bengal experience shows great promise, particularly given its defined contribution basis, it remains to be seen whether the promotion and distribution success it has achieved is replicable in states with less stable political institutions.

Source: ILO (2004) as cited in O'Keefe (2006)

social security to unorganized sector workers—becomes important.

### SOCIAL INSURANCE SCHEMES

International evidence suggests that as countries become richer, social insurance usually accounts for an increasingly higher share of GDP. In this context, India is at an interesting threshold in the evolution of social protection; international experience suggests that it is likely to start moving away from reliance on public safety net programmes towards greater provision of social insurance. At the same time, country experience also shows that major coverage expansions typically do not come from voluntary social insurance systems. More formalized labour markets, where mandated participation can be enforced, are associated with higher coverage rates of social insurance. In India, however, the bulk of the workforce is employed in the unorganized sector; this will be a challenge in expanding coverage.

Given the high rate of informality of Indian labour markets and the general low level of income,

coverage by social insurance is predictably low and concentrated very heavily in the organized sector. Even within the organized sector, coverage is concentrated in the public sector. Table 6.1 provides coverage estimates of different social insurance types for the organized and unorganized sectors in 2004. It should be noted that apart from life insurance, contributory initiatives for other types of social insurance, in both public and commercial sectors, have achieved minimal coverage in the unorganized sector. The singular exception of life insurance may give an indication, from the demand side, on where attention should be focused in terms of sequencing expansion of public intervention.

Most of the employed in the unorganized sector, especially the poor, face an array of uninsured risks that renders them highly vulnerable to shocks. Presently, the effect of public safety nets is limited and the poor rely on family, jati (caste), and other informal support networks to tide over shocks. The risk-sharing functions these networks perform are, however, far from perfect.

**Table 6.1 Coverage Rates of Social Insurance for Organized and Unorganized Sectors, 2004**

	Organized Sector Coverage (%)	Unorganized Sector Coverage (%)
<i>Public Schemes</i>		
Employees' Provident Fund	25.1	0.18
Employees' Pension Scheme	12.2	0.02
Government Pension Scheme	48.7	0.24
Government Provident Fund	54.0	0.21
Contributory Provident Fund	4.0	0.02
Any Formal Pension Coverage	Around 95 per cent	Less than 1 per cent
<i>Commercial Schemes</i>		
Life Insurance (endowment)	54	23
Personal Accident Insurance	3.6	1.2
Private Health Insurance	2.0	0.5
Non-life General Insurance	2.8	1.4

Source: O'Keefe (2006).

It is more effective in the case of individual shocks rather than those which affect the group as a whole, and for small and intermediate rather than catastrophic shocks. The role that such informal institutions play also declines with increased labour mobility. Migration and marriage outside the community, for example, often trigger loss of access to support systems.

It is evident from surveys that uninsured shocks impact the welfare of households. This is particularly the case with health shocks, especially for the poor.<sup>8</sup> Data indicate that at least 24 per cent of Indians who are hospitalized fall into poverty as a result. There are also concerns that credit market failures lead to coping mechanisms, which may turn transient poverty into long-term and even inter-generational poverty. This may happen, for example, if transient poverty induces the withdrawal of children from school or pushes people into debt bondage. Evidence from countries such as Indonesia shows that the benefits of social insurance in poor countries may come less from their direct contribution to consumption

smoothing and more from their help in reducing destructive coping strategies (Gertler and Gruber 1997; Chetty and Looney 2005). The vulnerability of households to shocks also has a wider economic effect—credit and insurance market failures may be important factors in limiting the ability of rural workers to seek more productive employment opportunities, both outside traditional occupations and away from home.

The public sector (central and state governments), non-government sector, and private sector are all involved in efforts to expand social insurance to unorganized sector workers, most of whom have little or no coverage. Various approaches are being tried with differing degrees of success in terms of reaching scale, achieving financial viability, and providing financial protection. Each approach has potential advantages and drawbacks, some inherent to the intervention (for example, viability in the face of co-variate and/or catastrophic idiosyncratic shocks for genuine community-based initiatives) and others a product of specific design and/or implementation features. The

main initiatives discussed in this section are: (i) welfare and provident funds for unorganized sector workers at both Central and state levels, both occupation-specific and generalized for the sector; (ii) national schemes for unorganized sector workers outside the welfare fund model; and (iii) non-governmental organization (NGO) and community-based initiatives, which range from coverage of specific insurance types (most often health) to somewhat more bundled social insurance packages.

### Welfare Funds

Welfare funds are traditionally occupation-specific and provide a range of benefits for members. The earliest fund dates back to 1946, though welfare funds have proliferated since the late 1970s. It is difficult to obtain a comprehensive picture of such funds due to their typically decentralized nature, both geographical and occupational, and attention here is restricted mainly to documented funds. Most discussions about welfare funds have been centred around the Kerala funds (of which there were more than 20 in the year 2000) and the Central government funds (of which there are five with direct Central financing, and one under a Central act but which is implemented and financed at the state level). However, in terms of total coverage, welfare funds in other states—initially the southern and western states but spreading in recent years to the north and east of the country—have had an increasing share of participating workers since the 1990s. The membership, contribution structure, and benefits provided in a sample of these funds are presented in Appendix 6.1.

The financing of welfare funds follows two basic models. Some are financed through either a proper cess or excise duty. This is the mode for all Central government welfare funds. The more common mode though (for 24 out of 30 documented funds)

is financing through contributions. Contributions may be either tripartite (between government, employers, and workers) or bipartite (between employers and employees). In cases where the government contributes, the dominant method is direct contribution. Contribution rates exhibit dramatic variations—from very low amounts to rates more akin to formal sector contribution rates (see Appendix 6.1). Management of the funds is either tripartite or rests solely with the government, for roughly equal proportions of documented funds.

Welfare funds may have a potential as vehicles for expanding social insurance to some segments of the unorganized sector, if some key design and implementation challenges can be met. They are most likely to work in segments which are amenable to a cess, and/or those segments where there is a strong presence of intermediary organizations which can share the transaction intensity inherent in a wide-membership/low-contribution scheme. They are, however, less likely to succeed where employers feel reluctant to allow a formal registration process for workers, given the potential costs associated with quasi-formality. Other issues and challenges that can constrain their use are inherent in the nature of these funds:

- These funds are often small and, as a result, administrative costs are high: between 25 and 54 per cent of fund value.<sup>9</sup> The high administrative costs and the inherent concentration in the risk pool suggest a weak capacity to absorb significant shocks which affect the entire sector. In theory, these challenges can be surmounted through group insurance with larger and diversified commercial insurers, but in practice it is unclear as to what extent this avenue has been exploited to date.
- Welfare funds typically cover entitlements ranging from education and housing support

to benefits such as medical cover and pensions, so that their pure social insurance focus is diluted.

- An initial examination suggests little correlation between contribution rates and benefits. The scope of benefits provided in many funds may therefore lead to inadequate financial protection for any specific type of benefit. For the pensions portions of schemes, the large majority are defined-benefit programmes, with benefits typically expressed in nominal rupees and hence subject to deterioration in real value.
- Similarly, for the more insurance-like benefits, there appears to be no actuarial basis for determining contributions. This raises concerns about their long-term viability.

The emerging experience of the West Bengal Provident Fund for unorganized sector workers presents a promising case of a fund which appears to have got around a number of these design issues by relying on a defined contribution (rather than defined benefit) approach to pension payments (see Box 6.3). While not a welfare fund per se, it is a most interesting model of a contributory approach which is likely to avoid the financial viability problems of welfare funds, and may provide lessons for future reforms throughout the country.

### **Other Government Initiatives**

The Central government has, in recent years, increased its efforts to expand social security to unorganized sector workers through non-welfare fund mechanisms (Report of the Planning Commission [2002], headed by S.P. Gupta). It launched the Krishi Shramik Samajik Suraksha Yojana scheme in 50 selected districts in 2001. This scheme closed in February 2004. It was operated through the Life Insurance Corporation of India and covered life, survivor, and pension insurance

for agricultural workers. Another major initiative was the Universal Health Insurance Scheme (UHIS), launched in 2003 and targeted at poor households. In 2004, the government introduced a social insurance scheme for unorganized sector workers (excluding agricultural workers), with the intention of targeting 2.5 million workers in 50 pilot districts nation-wide. It provides for old age, medical, and accident insurance. Membership in both schemes is voluntary. Both are funded by contributions primarily from the government and partly from the covered parties. Unfortunately, these schemes have had negligible penetration.

A recent initiative that uses a different approach is linking participation in anti-poverty programmes with social insurance. This can be seen in the social insurance component of the SGSY credit scheme targeted at BPL individuals and self-help groups. This approach has the advantage of providing effective mandatory coverage for a sub-group of the poor, though the extent of its financial sustainability is less clear.

A final and important element of public sector attempts to expand insurance cover for the unorganized sector is crop insurance. Although this is not addressed in any detail here, research on different efforts is rather negative on the effectiveness of major public schemes to date.<sup>10</sup> Despite repeated major initiatives to expand subsidized crop insurance, penetration has been relatively low, estimated at around 12 per cent of farmers nationally in 2002. Several concerns recur in assessments, including lack of actuarial viability, low awareness of schemes among some categories of farmers, partial coverage of crop types, and complex administration.

Though the coverage of previous initiatives here is by no means comprehensive, some preliminary conclusions may be drawn. First, the

#### Box 6.4 The Government's Recent Initiatives on Social Security for Unorganized Sector Workers

In 2006 and 2007, the Gol did considerable work to develop proposals for expanding social security to the unorganized sector, with a strong focus on health, life, and disability insurance, together with benefits for old age. This came from the strong commitment in the Gol's Common Minimum Programme for improving social insurance in this sector. A first proposal was made by the National Commission on Enterprises in the Unorganized Sector (NCEUS) in 2006 and, building on this, the Gol in mid-2007 submitted a draft Bill on the subject to Parliament.

The Bill provides for several types of social insurance, with particular emphasis on BPL workers and their families. In contrast to some of the earlier approaches for reform in this area, the Gol's proposals place more emphasis on the intermediary and other implementation arrangements necessary to make different insurance schemes functional for the target population. They also give states a stronger role in defining the specific institutional arrangements of schemes. Finally, the proposed phased expansion of programmes takes into account fiscal realities. These features increase the chances of a scheme being implemented.

At the same time, there will be a need for a massive implementation agenda to make the draft Bill workable, including strong outreach efforts, building capacity of states and partner intermediaries such as micro-finance institutions, NGOs, and others to help workers access programmes, and working with insurers and health providers to put in place workable systems for service provision and claims processing. There will also be a need for coordination by the Centre to develop the elements of common platforms such as beneficiary identification systems.

frequent rollover of Central insurance schemes is problematic, especially when trust in the whole notion of insurance is low and information dissemination is weak. This 'start-stop' approach is likely to discourage future participation. Second, there have also been design problems which have limited their usefulness. Most of these schemes take up health insurance first. While the need for this is clearly high, this is one of the most challenging areas of social insurance even in developed countries. Starting coverage with life insurance may be more feasible. Third, as with welfare funds, it is not apparent that the contributions for various schemes are based on an informed assessment of claims information from existing insurance products. Last, most Central schemes, to date, have failed to address the fundamental issue of high transaction costs and the need for establishing decentralized distribution networks. The government is seeking to take into

account these lessons in its new initiative for social security for unorganized workers, which it has recently submitted to Parliament for consideration (Box 6.4).

#### **NGO and Community-based Social Insurance Initiatives**

Given the very low coverage rates achieved to date by the Central government initiatives outlined earlier, community-based micro-insurance (CBMI) initiatives assume greater significance as a potential channel for the expansion of social security in the unorganized sector. Estimates of the scale of social insurance provision by NGOs and other community-based actors (for example, MFIs and health facilities) vary from a coverage figure of around 3 million to around 5 million. Most of the schemes are small, though the largest have achieved significant memberships. The Yeshasvini scheme in Karnataka, for example, had

enrolled 2 million farmers in 2004–5 after only one year of operation.

The primary focus of most schemes has been health insurance, though some schemes also cover associated costs such as loss of income and life and accident insurance. Most work on a voluntary participation basis. In terms of financing, all CBMI schemes require contributions. However, there is a range—both of the level of contribution required and the extent to which it is subsidized. In the best cases, contributions cover the bulk of medical claims under the schemes and administration costs are covered by donor support. At the other end of the spectrum, contributions are covered for many of the members by the NGOs'/funders' own resources. An additional innovation in some schemes is the provision for deposit of a lump sum by the participant, from which the interest generated covers the annual premium. Although community/NGO involvement controls administrative costs, most schemes rely on external subsidies. The subsidies may come from the government, the NGOs or donors, cooperatives, or other sources. This is very typical of rural health insurance initiatives in developing countries, virtually none of which cover services from contributions alone (O'Keefe 2006).

There are a few basic models of community-based social insurance.<sup>11</sup> The first is the insurer-agent model, where the NGO/MFI or other founders act as intermediaries between members and the insurers. This model has been relied on by large organizations such as Self Employed Women's Association (SEWA) and Buldhana, and much smaller ones such as Navsarjan in Gujarat and Bharatiya Agro Industries Foundation (BAIF) in Maharashtra (Acharya and Ranson 2005). The second model is where the founding organization itself acts as the direct insurer but is not the provider of the insured services. This applies both to some NGO schemes (Yeshasvini in

Karnataka and Dhan in Tamil Nadu) and more occupationally based programmes (for example, Tribhuvandas Foundation).<sup>12</sup> The last model is one where the founding organization is both the direct insurer as well as the main provider of the insured services. Examples include Action for Community Organization, Rehabilitation and Development (ACCORD) in Tamil Nadu, Kasturba Hospital Scheme in Maharashtra, and Students' Health Home in West Bengal. Of these, the insurer-agent model appears to have the most potential for broadening coverage. It appears to combine the benefits of large-scale pooling of risks (both within the membership group when group insurance is purchased, and beyond through the risk pool of the end-insurer) and the cost-reducing benefits of an intermediary organization close to the client. At the same time, the Yeshasvini experience cautions against being very prescriptive on a preferred model.

The experience to date is mixed, with serious questions remaining on the capacity to go to scale, given the reliance on subsidies from funding institutions and donors. In addition, community-based initiatives to date have focused primarily on health insurance and not yet addressed other types of social insurance, particularly those related to old age. There are also legal issues with respect to CBMIs as the Insurance Regulatory and Development Authority (IRDA) Act does not provide for such schemes as part of the broader insurance market. Recent IRDA guidelines aim to address this issue though.

### **The Way Forward**

While the case for public intervention in providing social insurance for unorganized sector workers in India is clear, it is by no means axiomatic that more is better. Badly designed schemes can have negative impacts on the poor (for example, they contribute to health cost escalation which harms the uninsured and dilutes impact even for the

insured). It is important for public policy to be framed with realistic expectations of the scope and timeframe for coverage and expansion, and by taking into account India's income levels, high degree of labour market informality, current informal support mechanisms, and their likely impact on demand, administrative and institutional capacities, demographics, and other factors.

Evidence suggests that inadequate design of many public and quasi-public initiatives, combined with high ambitions, has failed to take these constraints into account in the past. Future initiatives should be based on a serious analysis of previous public, welfare fund, and CBMI initiatives, to understand the factors driving more and less successful schemes. The experience to date suggests serious scepticism about overly-defined top-down schemes. It would seem sensible to place more explicit emphasis on group-based insurance for schemes where a public subsidy is involved.

What might be some elements of a strategy for gradual expansion of social insurance coverage in the unorganized sector? The experience of middle-income countries in expansion suggests that achieving wide-scale coverage at India's current income levels and degree of labour market informality is very challenging. Some portions of the unorganized sector (for example, urban workers with a strong organizational structure, members of cooperatives) can more feasibly be included in social insurance in the short to medium term than others. This points to the critical role that intermediary organizations need to play between the government/insurers and the unorganized worker population if schemes are to be both effective and affordable. Being aware of the 'low hanging fruit' is important in developing a sequenced and more focused expansion strategy. Similarly, based on prior experience and insurance principles, policies should focus on exploring

what appear to be the easier wins in terms of specific types of social insurance that are less subject to moral hazards and administrative problems. Two types of insurance that stand out as somewhat more easy to expand are life insurance (for which demand in the commercial market already appears high among unorganized sector workers) and disability insurance, which acts in one sense as the most extreme form of ex post health insurance. These points suggest a cautious and gradual approach to expansion of social insurance coverage. Such a strategy may not be consistent with the political desire for broad-based schemes with high announcement value. However, it is a strategy which lessens the risks of doing harm and also extends coverage sustainably and as rapidly as feasible.

### **EMPLOYMENT EXCHANGES<sup>13</sup>**

Employment exchanges were established under the Employment Exchanges (Compulsory Notification of Vacancies) Act of 1959 which made it compulsory for public establishments and private sector establishments engaged in non-agricultural activities and employing 25 workers or more, to send notices about specified types of vacancies to the nearest employment exchanges. The administration of employment exchanges rests with state and Union Territory (UT) governments.<sup>14</sup> As of end-2004, there were 947 regular employment exchanges in India, concentrated in urban areas. There are different types of employment exchanges. Most employment exchanges cater to all types of jobseekers but some (totalling an additional 76 in 2001, with a further 82 bureaus for universities) specialize in particular types of jobs. The special exchanges include those for colliery workers, exchanges for professionals and executives only, and special employment exchanges for the physically handicapped.

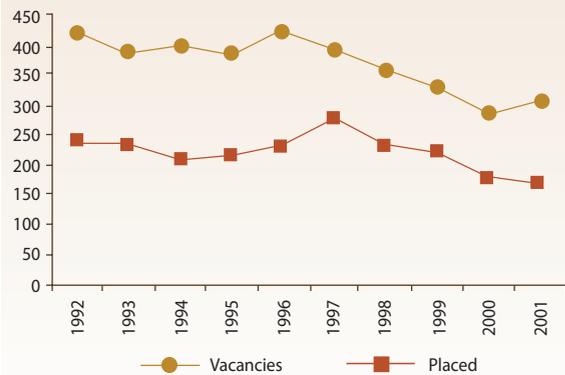
The main function of exchanges is to register and place jobseekers. The officer in charge

of an exchange meets individual jobseekers at the time of registration where evidence of educational levels, and medical certificates in the case of special exchanges for the handicapped, is collected. Vocational guidance is provided at the time of registration. Persons interested in self-employment and those needing further training are guided towards relevant public programmes. The exchange receives vacancies and then shortlists the names of jobseekers who meet the requirements of the vacancies, based on seniority of registration on the live register. The shortlists are sent to potential employers. In practice, placements are overwhelmingly in the public sector.

Apart from their placement function, exchanges are tasked with job counselling, training, labour market information collection and dissemination, aptitude testing of jobseekers, and promotion of self-employment through special cells. The limited availability of assessments and fieldwork indicate that in the large majority of exchanges, these functions are performed poorly, often by staff who do not have the skills and knowledge of local labour markets to allow for effective service. While the challenges in public provision of such services are not restricted to India,<sup>15</sup> the problems in India have been unusually acute.

Nationally, the performance of exchanges is poor and has been declining over recent years. The 'placement to registration ratio' at the all-India level, never more than 5 per cent, declined to almost 3 per cent in the 1990s. Figure 6.2 confirms the substantial decline in both registered vacancies and placements between 1991 and 2001, with a fall of over a quarter in both cases (though accompanied with rising expenditures on the exchanges). This can be attributed to several factors, the dominant one being the combination of flat public sector hiring demands and failure by the majority of exchanges to develop new markets in the formal and unorganized private sectors. This

**Figure 6.2 Vacancies and Placements by Employment Exchanges, 1991–2001 (in thousands)**



Source: Ministry of Labour and Employment (MoLE), Government of India (Gol), 2004.

was reinforced by a Supreme Court judgement in 1996 which allowed employers to meet their staff requirements from sources other than employment exchanges, and the growing role of private sector placement agencies. The link between employment exchanges and establishments in the private sector is weak, though there are exceptions. Gujarat, Andhra Pradesh, Haryana, and Tamil Nadu are notable in this respect. Even in more effective systems, however, rural outreach remains a major shortcoming, though states like Tamil Nadu are making greater outreach efforts.

At the same time, commercial private placement organizations have been increasing their presence. Consolidated information on private placement agencies is not available but the Director General of Employment and Training (DGE&T) estimates that at least 800 existed as of the early 2000s (for example, it is estimated that there are more than 100 private placement agencies in Gurgaon [Haryana] alone).<sup>16</sup> Like the government-run employment exchanges, these focus primarily on urban areas and the formal sector, often with specific sectoral focus. Fees are charged either to the jobseekers who are placed or to the employer upon placement. Even less is known about organizations in the unorganized sector

that intermediate between employers and more casual labourers, though there are concerns in industries like construction that business practices are often less than ethical.

There is a fundamental need to reorient the National Employment Service if it is to regain relevance in the current labour market. The problems are well-understood by the government, having first been reviewed by the 1978 Matthew Committee and subsequently by a Working Group on Employment of the Planning Commission in 2001. The increasing role of the private sector in providing employment placement services points to the need for focusing public intervention where it is most needed to address market failures. It may also be useful to discontinue some functions of the exchanges altogether. For example, some exchanges have been operating small credit schemes for jobseekers looking to pursue self-employment. Results to date have been poor. Given the range of public and private credit channels available in India, the more logical function for exchanges in this regard would be to provide information—pointing entrepreneurial jobseekers in the direction of existing credit facilities rather than the exchange itself being the provider. Similarly, best practices suggest that training should not be provided by the employment exchanges themselves. Instead, exchanges should focus on referring workers to the appropriate public or private training providers.

Exchanges could play a more important role if they develop a greater service orientation and fill gaps unlikely to be met by the private sector. Both official and ILO analyses point towards some key areas where reinvigorated employment exchanges might focus. They include: developing a service orientation by more active engagement with trade associations, workers associations, and employers, including those in the unorganized sector; and assessing needs which cannot be met by private sector providers. In many countries,

employment exchanges are moving in the direction of establishing partnerships with private placement agencies. The exchanges serve as the contact points from where workers get linked and referred to networks of services. The partnerships work best when the government sets the appropriate regulatory framework and oversight mechanisms. In general, this requires intensive use of information technology (IT).

Another important function for employment exchanges can be providing timely and more localized labour market information. This function has been generally neglected till now. Timely information on trends in local labour markets is a product which can provide value addition for both employers and jobseekers. This will require innovation in information gathering in local labour markets, ranging from regular (at least annual, and preferably more regular) and quick assessments of labour market developments in both urban and rural areas to analysing emerging/declining labour demands and skills gaps. This will, in turn, require linking with a broader range of partners, including public and private sector training providers, other departments of government that are engaged with productive sectors of the economy, local employer organizations in the formal and unorganized sectors, and labour researchers. Given the current skill base of employment exchanges, it may be necessary in many states to explore the contracting out of surveys and other investigations. At the national and state levels, another important role could be developing much more effective rural outreach strategies.

The future role of employment exchanges could draw from emerging good practices in two Indian states: Gujarat and Tamil Nadu. Both have expanded the role of IT in increasing outreach to jobseekers and employers. In particular, they are able to offer detailed information on jobseekers,

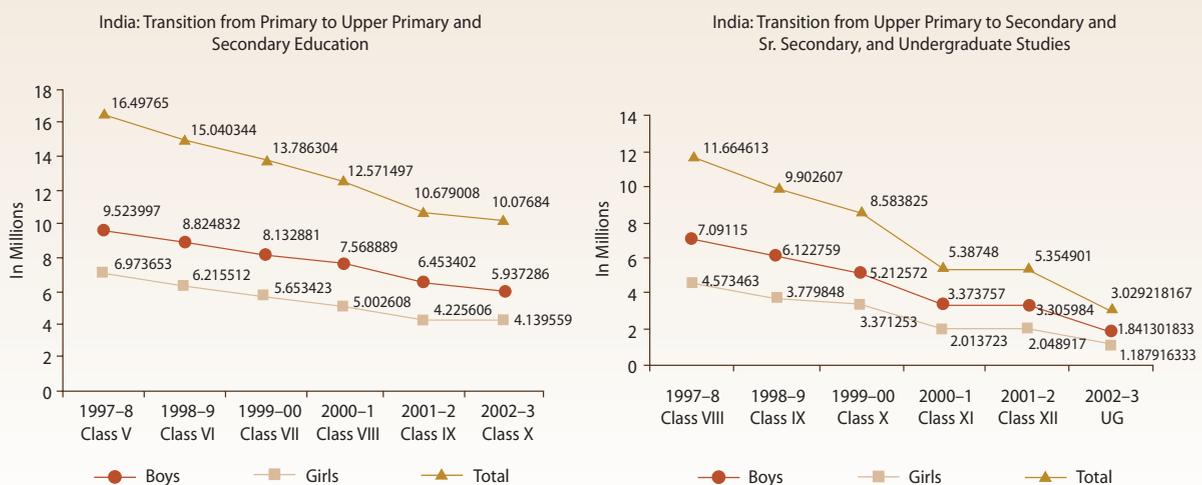
which employers can sort through according to their needs. This addresses a fundamental weakness in the typical exchange system where the exchange itself proposes jobseekers to prospective employers, largely on the basis of the seniority on the jobseeker roll and not on the suitability for the specific vacancy. Both have also been active in arranging job fairs where jobseekers and employers engage directly. These practices have proven more effective than regular procedures. For example, Gujarat placed over 50,000 jobseekers with employers in 2003–4 alone (that is, around one-sixth of total national placements in 2001) through 32 industrial recruitment rallies. Both states have also attempted to strengthen vocational guidance functions which, in most exchanges, remain desultory. This has included jobseeker groups, initiatives like ‘career corners’, and greater availability of resource material on specific sectors and job openings. A particularly interesting initiative in Gujarat has been the Rojgar Sahay Kendra that linked a group of NGOs, which had knowledge of local job opportunities, with the jobseeker database and intermediated between employers and appropriate jobseekers.

## VOCATIONAL EDUCATION AND TRAINING

Another element of the government’s active labour market policies has been providing support to the vocational education and training (VET) system in the country. Not only does providing skills training to workers enhance the efficiency and flexibility of the labour market and reduce skills bottlenecks, skilled workers are also more easily absorbed into the economy and their job mobility is improved. This is important in a country like India where a large part of the workforce remains stuck in agriculture and does not possess the skills to transit to more productive employment in other sectors. Further, close to 5 million school children drop out of school between Classes VI and X (Figure 6.3); another 3 million drop out between Classes X and XII. For these student groups, access to secondary education and VET can potentially facilitate an effective school-to-work transition and improve their employment prospects and lifetime earnings.

The vocational education stream is quite small, enrolling less than 3 per cent of students at the upper secondary level. Currently, vocational skills

**Figure 6.3 Secondary School Dropout Rates in India**



Source: Wu (2005).

are provided either within the schooling system in Classes XI or XII (vocational education) or through separate institutions for students who leave school after completing Class X (vocational training). Aimed at students who want to enter the labour market, 6,800 schools, almost all in the public sector, currently provide vocational education. These schools offer a total of over 100 courses in various areas—agriculture, business and commerce, humanities, engineering and technology, home science and health, paramedical skills, etc.

The vocational education programme has, however, not met with much success to date. This stream has not been very popular; just about 40 per cent of the available student capacity in the schools is filled. Even students who opt for

vocational education appear to be more intent on entering higher education than in entering the labour market. International experience suggests that employers, too, look for young workers with the basic skills taught in primary and general secondary education, and not for workers trained in narrow vocational skills (see Box 6.5). In India, there have been very few evaluations of the performance of vocational education. However, a study by the Operational Research Group in 1998 reported that only 28 per cent of graduates of vocational education were, in fact, gainfully employed.

It is more appropriate for the government to focus its efforts on strengthening secondary education. India's enrolment ratio for secondary education is lower than what its country income

#### Box 6.5 International Experience of Vocational Education Programmes

The international experience of vocational education points to a few key things.

- Vocational subjects are desirable on general education grounds, as part of a well-rounded education intended for everyone, but they should not detract from efforts to improve the quality of core subjects. No study has shown that vocational courses offered as a minor part of a student's total curriculum give an advantage in finding work (let alone self-employment) within the first few years after leaving school. This is particularly so when the labour market conditions for youth are severely depressed. Vocational subjects may foster an interest in the types of work for which the subjects are broadly intended, and the skills learnt may have private uses. However, tracer studies have found that they have no positive impact on access to work after students leave school and no strong effect on access to further relevant technical training.
- Providing vocational education is costly. Most variants are more costly per student class period than general education subjects, primarily because of smaller classes and the greater cost of facilities, equipment, and consumables. Unless a course can be taught to a full class of students (few can), operating costs will be more than twice that of non-laboratory academic subjects.
- Enrolment in some types of vocational courses is often strongly gender-biased. Many skills taught are culturally identified with one gender only—for example, domestic science and secretarial skills with girls, industrial arts skills with boys.
- Vocational education is hard to implement well. It requires specially trained instructors, preferably with work experience in the types of skills taught. Teachers with these qualifications are hard to recruit and retain. Time spent on vocational skills training can detract from the teaching of basic academic skills which are badly in need of improvement and also essential for labour market purposes.

Source: Johanson and van Adams (2004).

level would predict. Access by gender and social groups, by rural and urban locations, and by expenditure quintiles also remains more unequal for the secondary school age group relative to the elementary school age group. This is worrisome because the positive effects of secondary education on health, gender equality, and poverty alleviation are even stronger than those of primary education (Wu 2005). Through its impact on delayed marriage, reduced fertility, and safer birth practices, secondary education of girls can also lead to significantly reduced maternal and child mortality, and slower population growth, both of which are important goals of the government. In achieving

the goal of expanding secondary education, the government faces two challenges. One, creating opportunities for all to attend secondary education and securing that everyone takes advantage of the opportunities created. Two, the even greater challenge of improving student learning. This entails strengthening existing institutions; implementing reforms in curriculum, textbooks, examinations, and teacher training; and improving accountability and monitoring, and evaluation of outcomes (see Box 6.6).

Another government intervention is the running of certificate-level crafts institutes. Programmes

#### Box 6.6 Secondary Education in India

In India, the average number of years of schooling among people over the age of 25 is just over four. Forty-four per cent have never even been to school. In this respect, India lags behind most East Asian countries. Over the past decade, thanks to the government's drive to universalize elementary education, access to schooling for children aged 6–14 rose rapidly. The enrolment rate in elementary schools for this age group has reached 94 per cent. No such rapid increase has, however, taken place at the secondary level where the enrolment rate still stands at only 38 per cent. This is low, relative to what international experience suggests it should be at India's income level. At the same time, improving the skills of future workers requires expanding secondary education and improving the quality of both elementary and secondary education. Worldwide, in response to globalization and the emergence of the knowledge economy, the role of secondary education is now changing to prepare young people for lifelong learning, and the boundaries between general and vocational education are rapidly blurring.

Both demand-side and supply-side factors have contributed to India's poor educational outcomes. Demand-side constraints include the inability of poor households to bear the direct and opportunity costs of schooling, a parental bias against girls' secondary education, and poor quality of education and high dropout rates in elementary schools, which limit the number of students ready for secondary education. Policies to improve the efficiency and quality of elementary education, information campaigns to change parental attitudes towards schooling and delayed marriages, and financial assistance targeted at disadvantaged students have the potential to raise the demand for secondary education.

The limiting factors on the supply side include distances from homes to schools and the reluctance of teachers (particularly of mathematics, science, and English) to serve in rural areas and urban slums. Correcting the imbalances in supply requires: improving policies regarding teacher recruitment, deployment, transfer, and evaluation; more effective utilization of private school capacities for expansion; the use of vouchers to encourage private schools to serve disadvantaged students; and building government schools in under-served and remote communities.

However, beyond enrolment, quality is also an issue. A 2005 World Bank survey (see World Bank 2009a) of secondary schools in Rajasthan and Orissa administered separate mathematics tests, drawn from a sample of published test items in mathematics from the Third International Mathematics and Science Study (TIMSS), to a sample of IX and XI graders in order to benchmark Indian student performance with some international measures. The Rajasthan and Orissa mean scores for many items were below the international mean of the same items. What is the reason behind this? A comparison of the curricula in mathematics and science prescribed by India's Central Board of Secondary Education and the respective state education boards, with the Geneva-based International Baccalaureate and Britain's International General Certificate of Secondary Education (IGCSE), found that the coverage was similar but the emphasis of both systems was very different. India's school system remains oriented towards examination and rote memorization at the expense of conceptual understanding and application. This weakness in foundation in elementary education also contributed to low achievements at the secondary level. Improving quality requires strengthening the basic skills and promoting deeper understanding in order to enable students to tackle new materials and devise solutions.

India developed a progressive national curriculum framework in 2005 which aims to prepare children and youth with higher order thinking and flexible skills. However, syllabi, examinations, textbooks, teacher education, and in-service training have yet to be revised to align with the new framework. Since every state has its own system and standards, setting national standards regarding the basic skills students need to master in each subject and in each grade would be helpful in raising standards for all and facilitating labour mobility.

*Source: Wu (2005).*

are operated by the Industrial Training Institutes (ITIs) and Industrial Training Centres (ITCs). These are open to 5 million or so students a year who leave school after completing Class X. About 80 per cent of the students take admission in engineering courses, and the remaining in non-engineering courses. In addition, there are about 150,000 apprentices employed in various industries. Students who complete crafts training are certified when they pass an All-India Trades Test, conducted under the aegis of the National Council for Vocational Training (NCVT) but administered by the states. Individual states also administer tests for state-approved trades that are not affiliated with the NCVT.

The crafts certificate courses have, however, met with only limited success. A comprehensive study of vocational training programmes was conducted by the ILO in 2002–3 (ILO 2003).

The study found that employment of ITI/ITC graduates in the organized sector was very low. In none of the states did more than 50 per cent of the graduates find wage employment, or become self-employed, or even work in a family business. There were significant inter-state differences: in Andhra Pradesh, unemployment ranged from 33 per cent for ITI graduates to more than 70 per cent for ITC graduates; while in Maharashtra it was around 23 and 27 per cent respectively. At the same time, employers in the same states reported experiencing problems finding employees with the right skills, implying that graduates did not meet employers' needs. A survey by the Federation of Indian Chambers of Commerce and Industry (FICCI) in late 2001 also reported that close to 60 per cent of industry respondents felt that these institutions were not geared to meet the challenges of the global economy, and over 43 per cent felt that academic institutions were not

aligned to the needs of industry (FICCI 2002). Eighty-seven per cent felt that institutions should have greater exposure to industrial practices.

The poor outcomes may reflect the many constraints the public vocational training system faces. Management of the system is shared between Central and state authorities. While on paper the functions of each are clearly specified, there is little coordination between them, leading to poor accountability and duplication of efforts. Furthermore, a preoccupation with providing and financing training has resulted in the government neglecting a key role—providing information about the availability and effectiveness of training programmes. There are few incentives to institutes to improve their performance and little industry inputs in defining training policies and developing courses. This is now changing, and industry associations and individual employers are showing considerable interest in involving themselves in developing and managing ITIs.

A bigger failing of the system is that the current programmes are quite inadequate to meet the training needs of the large workforce in rural areas, arguably the group which should have been its main target. The formal training system, because of its entry requirements and geographical mapping, is not designed to offer skills to low-educated people, and particularly not to those in the rural non-farm sectors.<sup>17</sup> But there are also no other providers to fill this gap. Most workers continue to learn trades on the job and through informal apprenticeships at their places of work from other low-skilled crafts people. These apprenticeships are based on traditional technologies and ideas from previous generations. The quality of training is thus only as good as the skills of the master and his/her willingness and ability to pass them on. The theoretical aspect of learning is weak or absent; only the simplest skills are learnt, resulting in low-quality products. However, re-orienting public training institutions to meet the needs

of rural workers would not seem to be the solution. Public institutions would find it difficult to make the changes to serve both the formal and informal sectors with the same skills and experience. Innovative solutions are thus needed (see Box 6.8).

In-service training in India is also much lower on average than international levels, though there are wide variations among states. Provision of in-service training is another area which has not received much attention by policymakers. No more than 17 per cent of manufacturing establishments in India provide in-service formal training. This is less than half the average for Europe, East Asia, and Latin America. On average, Indian firms are less likely to train than even firms in Bangladesh (27 per cent) and Sri Lanka (38 per cent). Within India, too, there is a wide variation in the incidence of formal in-service training among the states. Only 11 per cent of firms provide training in West Bengal, Punjab, and Uttar Pradesh, compared to 27 per cent in Andhra Pradesh and Karnataka. From the point of view of coverage, only about 7 per cent of employees receive training in a given year. The proportion of workers in India receiving in-service training is especially low among micro and small firms, where fewer than 4 per cent of employees receive training. In medium and large firms, the figures are around 17 per cent for managers and professionals, and about 11 per cent for less-skilled groups. These estimates again appear low compared to countries in South Asia or East Asia. For example, the level of employees receiving in-service training in Sri Lanka is twice as high. Generally, the incidence of in-service training in states with good 'investment climates' and those receiving more foreign direct investment (FDI) was strikingly higher (21 and 25 per cent respectively) than in the other states (10 per cent and 8 per cent respectively).<sup>18</sup>

There are distinct differences between industry sectors and firms of different kinds in their

propensity to offer formal in-service training. A survey of 1,827 industries in India showed that industries where training levels were below average included textiles, garments, leather products, food processing, automobile parts, and metal products (World Bank 2004a). Industries where training levels were above average included chemicals, pharmaceuticals, machine tools, electrical white goods, electronic products, and software. The second list can be considered to be more technologically sophisticated than the first one of low-training industries. Firms that have no research and development (R&D) capacity and are not involved in export have a poor track record of providing in-service training. The incidence of formal in-service training also rises with firm size, from 6 per cent for micro enterprises to 56 per cent for large enterprises. This is a common finding in all countries for which data are available, and probably reflects size-related differences with respect to access to finance, scale economies in the provision of training, education levels of workers, managerial capabilities, and use of new technologies.

Indian employers do not appear to rate the skills of their workforce as an especially important constraint. This may explain why, for all types of Indian firms, the employers' pay policies reward formal *pre*-employment education and training but not the later acquisition of skills. Information from an Investment Climate Study done by the World Bank (2004a) indicated that in-service training actually had very little, if any, impact on wages. At the same time, external training appeared to have a positive and statistically significant effect on productivity, especially for firms that either exported or conducted R&D, indicating the importance of such training.

Strengthening the in-house training capabilities of Indian firms should thus be a priority for policymakers. Public institutions have typically focused on pre-employment training in basic skills and may have little capacity to provide,

on demand, the kinds of tailored training programmes that firms want and private providers can deliver. Given the limited capacity of public institutions, private providers—firms themselves, industry associations, buyers and equipment suppliers, and private training institutes—are important for expanding the resources available for workforce skills development. International experience suggests that there are three market failures that constrain training, particularly among small firms: (i) the high cost of training; (ii) lack of adequate information; and (iii) high turnover of skilled workers. The first failure can be addressed by financial sector reforms that improve access to funding for all kinds of investments, including training. The appropriate policy response to the second failure would be to disseminate widely the evidence of the productivity benefits of training, best practices in training know-how, and information about the availability, offerings, and costs of services from different public and private sector training providers. The problem of high turnover (or 'poaching' of skilled workers by other employers) requires collective action. In this respect, the Human Resource Development Fund of Malaysia is an example that has successfully increased training among firms.

Consideration could be given to employer-targeted training policies to remedy the under-investment in in-service training. Programmes used elsewhere include: (i) training levy rebate schemes where firms are partially reimbursed for approved training out of payroll levies; (ii) levy exemption schemes where employers are exempt from levy payments, provided they spend a given percentage of their payrolls on training; and (iii) tax incentives for approved training, paid out of general revenues.

Going forward, rather than only expanding vocational education, policymakers should focus on strengthening general secondary education and reforming the vocational education system,

including promoting private sector participation in VET. Such reforms would include improving the management of the system. This would require creating a clear demarcation between the functions of various levels of government and developing an effective coordination mechanism between them. Significant involvement of employers in the decision-making process of these bodies would also be critical to ensure that the system is responsive to market demands. Another way to incentivize the system would be to give institutions greater autonomy in terms of deciding

on training programmes, hiring and firing of teachers, and generating revenues by selling goods and services.

Finding the right role for the public sector in training is critical. State-provided training can be used to address market failures (for example, externalities from training, in general) and equity issues (for example, provision of training for the informal sector) but may be less needed in an environment where private capacity exists (Box 6.7 presents some general principles for the role of

#### Box 6.7 The Appropriate Role for the Public Sector in Training

There has always been an extensive debate regarding the appropriate role of the government in providing and financing training. While the debate is by no means resolved, international experience points towards some guiding principles:

- No government today can afford to provide and finance all the skills needed by a modern economy. Finding the appropriate balance between government and non-government provision and financing of skills is essential. The highest priority for a government in this context is to formulate the right policies which facilitate skills development and encourage both the public and private sectors to pursue their comparative advantages in a market context. The balance in the partnership may vary from country to country given the economic context, and will need to be informed by analysis of this context.
- Some rather clear roles for government emerge where ensuring equity of access to training is concerned, and where markets fail to provide the right signals to guide training decisions. Encouraging the cost recovery of training can improve the efficiency with which training resources are used, but reduce access to training for those without a capacity to pay. The state has a clear role in promoting equity in access and can use its financing in a targeted fashion to achieve this goal in state-sponsored and non-government sources of skills training. Where markets fail to send the right signals to guide training decisions, governments can also justify financing interventions. The presence of social benefits to training that are not captured in increased earnings for the trainees or higher profits for the enterprises, will lead to lower levels of private investment in skills development than those needed from a social perspective. Targeting public financing at those who will invest in these skills can improve the performance of the market.
- State-sponsored provision of training can also be used to address equity and market failures, but it is not a necessary condition in an environment where non-government capacity for skills development exists. Determining the role of the public sector in the provision of training therefore requires carefully assessing what the non-government sector is willing to do and whether, with appropriate incentives, it can be encouraged to fill training gaps.
- There are many things the non-government sector does not or cannot do. These include overall policy development and guidance, standards setting, the provision of information about the benefits and locations of training, preparing teaching materials, training instructors, and running standardized examinations of graduates. Here, the state's role is clear and positive.

Source: Johanson and van Adams (2004).

the public sector in training). As a rule, unplanned public provisions should not crowd out private supply. It is also not necessary that the government intervene solely through providing training. Indeed, it may have a more important role to play in things that the non-government sector cannot do, such as developing policies and standards, preparing teaching materials, training instructors, and even contracting training to the private sector. A key function could be providing information on the nature and quality of training and facilitating regular and independent evaluations of the impact of these training programmes. The GoI is keen to undertake reforms to move towards a system where it plays a key role in policy development, standards setting, financing, and monitoring and evaluation, while engendering greater competitiveness and accountability among institutions. A key ingredient of the reform agenda is to move the private sector into a lead role at all levels of decision making—from policy-making at the Central and state levels to managing institutions through Institutional Management Committees (IMCs) which are led by employers. The Ministry of Labour and Employment (MoLE) is working closely with the private sector to transform this vision into reality. In terms of public investment, the GoI aims to

upgrade 500 public sector ITIs, out of a total of 1,863 institutions (there are 3,500 additional ITIs that are fully private), between 2005 and 2010. It has already used its own funds to upgrade 100 ITIs and is in the process of selecting another 100 for upgrading.

In the informal sector, instead of delivering training, the government can act as facilitator by creating an environment that is supportive of non-public providers of training. In India, as in many other countries, non-government providers are much more active in providing training in the informal sector. Non-public providers pick up innovative training approaches much more quickly and need less support. Instead of delivering training itself, the government can focus on creating an environment to support non-public providers through: (i) supporting curriculum development, training of trainers, and development of competency-based skills testing; (ii) stimulating investment through tax incentives or financial support so as to increase the capacity and quality of training; and (iii) revising apprenticeship Acts that are outdated and contain regulations which hamper enterprise-based training. One successful approach in this regard is Kenya's Jua Kali project (see Box 6.8).

#### **Box 6.8 Training for the Informal Sector—The Jua Kali Experience**

The *Jua Kali* (informal sector) project in Kenya, funded by the International Development Association, is aimed at providing skills and technology upgradation to about 25,000 informal sector manufacturing workers; increasing the access of informal sector entrepreneurs to services; and improving the policy and institutional environment by removing restrictive laws and policies.

A key feature of the project is a voucher programme intended to introduce consumer choice, enabling informal sector operators to purchase the training they want, wherever they want. Intermediaries—allocation agencies—are selected by competitive tender to market, allocate, and redeem vouchers in a decentralized way throughout Kenya. Allocation agencies receive a fee equal to 3 per cent of the value of vouchers issued. Vouchers can be used for any kind of training from any registered training provider.

Over the course of the project, about 700 training providers have become pre-qualified to provide training. By early 2001, some 18,000 training vouchers had been issued. The impact of the project, evaluated through two tracer studies, has been highly positive for the beneficiaries. Employment among the graduates has

## Box 6.8 (continued)

increased by 50 per cent compared with employment before training, and the income of enterprises has also increased by 50 per cent. According to anecdotal evidence, some participants who received vouchers for basic training have paid the full costs of more advanced training.

One unexpected outcome of the voucher training programme is the emergence of a new kind of training provider—the skilled master craftsman. The strong preference of Jua Kali workers for appropriate, accessible training by master craftsmen was revealed in the first phase of the project: 85 per cent of all vouchers went to pay for the services of master craftsmen, and only 15 per cent went to private and public training institutions.

Some important lessons include: (i) the use of a voucher mechanism enabled the project to stimulate demand for training, technology, and management and marketing consultation among micro and small enterprises. A supply response was generated and a training market established to address the needs of micro enterprises; (ii) an unexpected impact of the voucher training programme was the emergence of skilled craftsmen as the leading providers of training. Entrepreneurs preferred the training services of master craftsmen in the informal sector to training in formal institutions. The training by master craftsmen was usually well adapted to entrepreneurs' needs for short, practical training. These training providers were previously invisible to agencies that wished to pay for training directly; and (iii) the implementation experience underscored the importance of appropriate management arrangements—a project for the private sector is best managed by the private sector, with the government at best playing a facilitating role.

Source: Johanson and van Adams (2004).

## CONCLUSION

The GoI already has in place a range of active market policies to help improve labour market outcomes. It has also committed to a major expansion of two important components of this programme: public works and social insurance. This significant expansion is in line with the government's objective of protecting vulnerable sections of the workforce and also with the country's rising income levels. Improvements in the social protection system are also a prerequisite if the GoI is to undertake any reform of labour regulations.

Prior experience, however, suggests that significant changes and improvements are required to make such programmes more effective. In public works programmes, poor implementation remains an issue. For these to be more effective, programme

designs need to be improved and reinforced through the development of better monitoring and evaluation mechanisms. Similarly, previous experience on social insurance provision suggests a cautious and gradual approach to expansion which may not be consistent with the political desire for broad-based schemes with high 'announcement value'. The vocational training system in India suffers from a lack of proper targeting and an overly bureaucratic approach which stresses delivery over quality. If this is to be made more relevant, the system needs to become more flexible and responsive to market needs. There is also a need to reassess where public interventions are most needed, and the form these interventions should take.

These policies involve substantial fiscal expenditure and may come at the cost of other

possible welfare-enhancing interventions. Experimentation is also not without cost. Thus, it is essential to fully learn the lessons from previous experiences and incorporate them going forward. While such policies have considerable potential, moving from the big picture of policy initiatives to the ‘nuts and bolts’ of effective implementation will remain the biggest challenge in realizing the full labour market potential of the policies and the benefits they may hold for the poor.

## NOTES

1. See World Bank (2009b) regarding health shocks regarding old age security.
2. See World Bank (2006), and Munshi and Rosenzweig (2005) for empirical evidence of credit and insurance market failures leading to limited mobility in rural areas.
3. For summaries of international experience, see Ravallion (1991), and Subbarao (2003).
4. Estimates of employment generation are based on ‘arithmetic calculation’, assuming a 60:40 split in expenditure between wages and materials, a condition which is not met for most major categories of public works. The average share of wages in total expenditure, across all states and all activities, was found to be about 47.5 per cent.
5. See, for example, Comptroller and Auditor General (CAG) Reports (1997 and 2000).
6. See Papola (2005) for a positive view on the feasibility of rolling out the NREG in its full dimension.
7. CBGA (Chhattisgarh, Madhya Pradesh, Andhra Pradesh, and Jharkhand); IHD (Bihar); Hirway (Gujarat), all dated 2006.
8. See Peters et al. (2002), Dulfo (2005), and World Bank report (2009b).
9. It is important to note though that administrative costs in the *beedi* (a type of low-cost Indian cigarette) workers’ fund have been historically much more reasonable, with data for 1993–2000 indicating an average administrative share of 6–7 per cent.
10. See Ramaswami, Ravi and Chopra (2003) regarding the Comprehensive Crop Insurance Scheme and the National Agricultural Insurance Scheme. See also Kalavakonda and Mahul (2005) regarding Karnataka.
11. Devadasan et al. (2004) gives a useful typology and overview, noting around 20 community-based health insurance schemes. See also Ahuja and Narang (2005).
12. See Kuruvilla et al. (2005) for a detailed discussion of Yeshasvini, and also ILO (2005).
13. This note draws extensively on Chandra et al. (2006).
14. In practice, enforcement of the Employment Exchanges Act has been limited, with only few private establishments reporting their vacancies to the exchanges.
15. See Betcherman et al. (2004) for a review of developing and transition country experience with various active labour market policies. They find generally that informational and job brokerage services have been far more cost effective typically than training, credit, and other interventions in public employment services.
16. India is not a signatory to the ILO Convention of 1996 on private employment agencies.
17. While one of the mandates of ITIs is to train workers in the informal sector, evidence shows this is rarely the case (Dar 2006).
18. A World Bank study (2004b) categorized 12 Indian states according to their investment climates.



# APPENDICES



**Appendix 1.1 Panel A: Number of Persons in Labour Force (in thousands) and Rates of Growth of Labour Force (per cent per annum)**

Population Segment	1983		1993-4		1999-2000		2004-5		1983/1993-4		1993-4/1999-2000		1993-4/2004-5	
	USPS	SS	UPS	UPSS	SS	UPSS	UPS	UPSS	SS	UPSS	UPS	UPSS	UPS	UPSS
Rural Males	154,676	4,244	185,113	189,104	200,800	203,382	214,112	3,535	217,647	1.73	1.67	1.36	1.22	1.47
Rural Females	66,986	23,956	73,089	101,942	82,010	105,435	90,077	30,303	120,380	0.83	1.09	1.94	0.56	2.11
Rural Persons	221,662	28,200	258,202	291,046	282,810	308,817	304,189	33,839	338,027	1.46	1.46	1.52	0.99	1.65
Urban Males	49,632	768	66,582	67,210	80,051	80,544	90,602	759	91,361	2.84	2.78	3.12	3.06	3.13
Urban Females	10,330	2,340	14,199	17,745	16,658	19,477	21,191	4,314	25,505	3.08	3.26	2.7	1.56	4.09
Urban persons	59,962	3,108	80,781	84,955	96,709	100,021	111,793	5,073	116,866	2.88	2.88	3.04	2.76	3.30
Males	204,308	5,012	209,320	256,314	280,851	283,926	304,714	4,294	309,008	2.01	1.95	1.84	1.72	1.93
Females	77,316	26,296	87,288	119,687	98,668	124,912	111,267	34,617	145,885	1.16	1.38	2.06	0.71	2.46
Persons	281,624	31,308	338,983	376,001	379,519	408,838	415,982	38,911	454,893	1.78	1.76	1.9	1.41	2.07

**Panel B: Average Annual Increments to Labour Force (in thousands)**

Population Segments	1983/1993-4		1993-4/1999-2000		1993-4/2004-5	
	UPS	SS	UPS	SS	UPS	SS
Rural Males	2,899	-24	2,875	-235	2,636	-41
Rural Females	581	466	1,047	-905	1,544	132
Rural Persons	3,480	442	3,922	-1,140	4,181	90
Urban Males	1,614	-13	1,601	-23	2,184	12
Urban Females	369	114	483	-121	636	70
Urban Persons	1,983	101	2,084	-144	2,819	82
Total Males	4,513	-37	4,476	-257	4,820	-30
Total Females	950	581	1,531	-1,026	2,180	202
Total Persons	5,463	544	6,007	-1,283	7,000	172

Source: Sundaram and Tendulkar (2006a)

Note: UPS=Usual Principal Status; SS=Subsidiary Status; UPSS=Usual Principal-cum-Subsidiary Status

**Appendix 1.2 Estimates of Children (0–14 years of age) in Labour Force on Usual Principal and Usual Principal plus Subsidiary Status: All India, 1983 to 1999–2000 (in thousands)**

Population Segment	Persons in Labour Force										Labour Force Rate Percent Per Annum							
	1983			1993–4			1999–2000			2004–5			1983/1993–4		1993–4/1999–2000		1993–4/2004–5	
	UPS	SS	UPSS	UPS	UPSS	UPS	SS	UPSS	UPS	UPSS	SS	UPSS	UPS	UPSS	UPS	UPSS	UPS	UPSS
Rural Males	9,091	1,733	10,824	5,120	1,177	6,297	4,277	507	4,784	2,995	745	3,740	-5.32	-5.03	-2.95	-4.48	-5.22	-5.08
Rural Femals	6,477	2,609	9,086	4,378	1,496	5,874	3,480	988	4,468	2,406	1,170	3,576	-3.66	-4.07	-3.75	-4.46	-5.81	-4.84
Rural Persons	15,568	4,342	19,910	9,498	2,673	12,171	7,757	1,495	9,295	5,401	1,915	7,316	-4.6	-4.58	-3.32	-4.47	-5.49	-4.96
Urban Males	1,226	233	1,459	938	121	1,059	865	48	913	961	79	1,040	-2.52	-3.01	-1.34	-2.44	0.24	-0.18
Urban Females	612	170	782	501	161	662	455	125	580	456	180	636	-1.89	-1.57	-1.59	-2.18	-0.94	-0.40
Urban Persons	1,838	403	2,241	1,439	282	1,721	1,320	173	1,493	1,417	260	1,676	-2.3	-2.48	-1.43	-2.34	-0.16	-0.26
Males	10,317	1,966	12,283	6,058	1,298	7,356	5,142	555	5,697	3,956	824	4,780	-4.94	-4.77	-2.7	-4.17	-4.17	-4.22
Females	7,089	2,779	9,868	4,879	1,657	6,536	3,935	1,113	5,048	2,862	1,350	4,212	-3.5	-3.85	-3.52	-4.21	-5.20	-4.30
Persons	17,406	4,745	22,151	10,937	2,955	13,892	9,077	1,668	10,745	6,817	2,175	8,922	-4.33	-4.35	-3.06	-4.19	-4.62	-4.26

Source: Sundaram and Tendulkar (2006a).

**Appendix 1.3 Age Group-Specific Student-Population Ratios by Gender and Rural/Urban Location: All India, 1993 to 1999–2000**

Panel A: Rural India

Age-Group	Males				Females			
	1983	1993–4	1999–2000	2004–5	1983	1993–4	1999–2000	2004–5
5–9	479	670	707	808	341	561	631	776
10–14	572	743	777	870	320	546	635	771
15–19	276	368	414	476	94	190	258	340
20–24	52	80	86	121	11	20	30	54
25–29	6	8	9	25	1	2	2	30

Panel B : Urban India

Age-group	Males				Females			
	1983	1993–4	1999–2000	2004–5	1983	1993–4	1999–2000	2004–5
5–9	705	841	838	886	652	801	810	880
10–14	771	866	873	899	663	812	821	883
15–19	481	559	585	595	347	490	517	573
20–24	151	205	218	235	65	121	158	168
25–29	24	28	30	46	6	8	11	33

Sources: Sundaram and Tendulkar (2006a); Staff Estimates using NSS.

Note: Computed from NSS Unit Record Data.

Appendix 1.4 Usual Status Worker–Population Ratios (WPRs), per 1,000, by Age, Gender, and Rural/Urban Location: All India, 1983–2000

Panel A: Rural India

S.no.	Age-group	Rural Males						Rural Females							
		1983		1999–2000		2004–5		1983		1993–4		1999–2000		2004–5	
		ps	ps+ss	ps	ps+ss	ps	ps+ss	ps	ps+ss	ps	ps+ss	ps	ps+ss	ps	ps+ss
1	0–9	10	13	5	6	1	4	1	1	6	7	3	4	1	1
2	14–Oct.	213	253	112	138	54	91	170	240	104	141	74	96	49	74
3	15–19	604	666	524	578	453	503	333	452	264	364	234	304	223	319
4	20–24	864	897	824	859	823	844	353	488	318	456	310	410	284	410
5	25–29	956	968	947	958	942	950	404	557	354	525	373	491	367	513
6	30–44	981	985	984	986	979	982	457	614	425	598	444	571	458	614
7	45–59	950	955	963	968	958	958	407	552	401	543	407	518	445	569
8	60–64	812	830	848	860	807	800	239	342	256	357	260	324	296	381
9	65 & above	518	551	564	583	527	541	103	155	117	165	117	148	135	173
10	60 & above	643	670	679	695	630	644	160	233	172	242	169	211	197	253
11	All Ages (1)	528	547	538	553	535	546	248	340	234	328	231	299	242	327
12	All Ages (2)	538	557	534	549	525	534	248	339	226	317	228	295	242	327

Panel B: Urban India

S.no.	Age-group	Urban Males						Urban Females							
		1983		1999–2000		2004–5		1983		1993–4		1999–2000		2004–5	
		ps	ps+ss	ps	ps+ss	ps	ps+ss	ps	ps+ss	ps	ps+ss	ps	ps+ss	ps	ps+ss
1	0–9	3	4	2	3	1	2	3	3	2	3	1	1	1	2
2	10–14	94	113	59	66	44	49	54	70	34	45	28	36	24	33
3	15–19	375	414	337	356	314	335	121	155	94	123	87	105	92	128
4	20–24	698	727	654	675	644	658	138	182	137	180	130	155	155	201
5	25–29	915	921	892	904	879	883	183	229	175	224	161	194	186	229
6	30–44	972	975	974	975	972	975	234	291	230	295	233	266	253	309
7	45–59	921	926	931	935	917	923	226	276	230	283	218	251	217	252
8	60–64	620	635	557	570	465	476	172	202	133	172	117	137	125	146
9	65 & above	389	407	346	359	288	299	80	97	66	78	63	70	64	74
10	60 & above	488	505	431	444	355	366	118	140	92	114	82	94	86	100
11	All Ages (1)	500	512	514	521	541	549	120	151	121	155	117	139	135	166
12	All Ages (2)	512	525	512	520	522	527	119	150	117	149	118	140	135	166

Source: Sundaram and Tendulkar (2006a).

Notes:

1. Estimates of worker–population ratios in all columns labelled 'ps' relate to Usual Principal Status and those labelled 'ps+ss' relate to Usual Principal Status workers plus workers on the Subsidiary Status among those classified as 'non working' on the Usual Principal Status.
2. The overall WPRs for all ages in this row represent, for each population segment, the weighted average of survey-based WPRs with the survey-based share of each age group in the total population in that segment as weights.
3. The overall WPRs for all ages in this row have also been derived as weighted averages of survey-based age-specific WPRs but with the population census-based share of each age group in the total population in a given population segment as weights.

### Appendix 1.5 Industrial Distribution of Total Prime-age Workforce

Industry	No (in 000)				Share (%)				Average Annual Increment (in 000)				Share of Average Annual Increment (%)			
	1983	1993-4	1999-2000	2004-5	1983	1993-4	1999-2000	2004-5	83/93-4	93-4/99-00	93-4/04-05	83/93-4	93-4/99-00	93-4/04-05		
Agriculture & Allied	178,201	208,767	219,323	238,556	67.0	63.3	60.4	57.0	2,911	1,759	2,708	47.9	31.7	33.6		
Mining & Quarrying	1,862	2,638	2,179	2,511	0.7	0.8	0.6	0.6	74	-77	-12	1.2	-1.4	-0.1		
Manufacturing	29,257	35,289	39,217	50,222	11.0	10.7	10.8	12.0	574	655	1,358	9.4	11.8	16.8		
Utilities	798	1,319	1,089	1,256	0.3	0.4	0.3	0.3	50	-38	-6	0.8	-0.7	-0.1		
Construction	6,383	11,213	16,340	24,693	2.4	3.4	4.5	5.9	460	854	1,225	7.6	15.4	15.2		
Trade, Hotel & Restaurants	17,022	24,735	36,312	43,526	6.4	7.5	10.0	10.4	735	1,929	1,708	12.1	34.8	21.2		
Transport, Storage & Communication	7,447	9,894	13,798	17,159	2.8	3.0	3.8	4.1	233	651	660	3.8	11.7	8.2		
Fin. Intermediaries, Real Estate, Business, etc.	1,862	3,298	4,357	6,696	0.7	1.0	1.2	1.6	137	177	309	2.3	3.2	3.8		
Pub Admn., Edu., Health, other	23,140	32,651	30,502	33,900	8.7	9.9	8.4	8.1	906	-358	114	14.9	-6.5	1.4		
Community & Personal Services	265,972	329,805	363,118	418,520	100.0	100.0	100.0	100.0	6,079	5,552	8,065	100.0	100.0	100.0		
ALL																

Source: Authors' estimates based on Sundaram (2007).

## Appendix 1.6 Distribution of Workers, by Employment Status

Status	(in thousands)				Increments (in thousands)			Growth Rate (% p.a.)		
	1983	1993-4	1999-2000	2004-5	I	II	III	I	II	III
RWS	38,964 (14.7)	48,647 (14.81)	57,377 (15.9)	59,111 (15.53)	922 (15.27)	1,455 (33.08)	10,464 (20.1)	2.14	2.79	1.79
CL	79,279 (29.91)	106,786 (32.51)	120,599 (33.42)	115,444 (30.34)	2,620 (43.38)	2,302 (52.34)	8,658 (16.63)	2.88	2.05	0.71
SE	146,817 (55.39)	173,038 (52.68)	182,884 (50.68)	205,987 (54.13)	2,497 (41.35)	1,641 (37.31)	32,949 (63.28)	1.58	0.93	1.60
ALL	265,060 (100)	328,471 (100)	360,860 (100)	380,542 (100)	6,039 (100)	5,398 (100)	52,071 (100)	2.06	1.58	1.35

Source: Sundaram and Tendulkar (2006b) and authors' estimates.

Notes:

RWS: Regular wage/salary

CL: Casual Labour

SE: Self-employed

Periods: I, II, III-

I: 1983 to 1993-4 (10.5 years)

II: 1993-4 to 1999-2000 (6 years)

III: 1993-4 to 2004-5 (11 years)

Percentage shares in bracket

## Appendix 1.7 Educational Composition of the Indian Workforce (in thousands)

S. No.	Education Category	All workers				Avg. Annual Additions			Share of Male Workers in Each Education Category			
		1983	1993-4	1999-2000	2004-5	I	II	III	1983	1993-4	1999-2000	2004-5
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Illiterate	149,043 (56.23)	156,812 (47.73)	154,448 (42.8)	146,745 (40.56)	740 (12.22)	-394 (-7.30)	-915 (-30.24)	51.7	50.3	50.49	46.08
2	Literate upto Primary	63,137 (23.82)	78,800 (23.99)	82,060 (22.74)	95,346 (26.36)	1,492 (24.71)	543 (10.06)	1,504 (49.7)	83.16	79.77	78.27	73.53
3	Primary upto Middle	25,923 (9.78)	39,646 (12.07)	52,144 (14.45)	61,522 (17)	1,307 (21.64)	2,083 (38.59)	1,989 (65.71)	90.125	87.03	85.23	79.59
4	Middle upto Graduate	19,588 (7.39)	37,906 (11.54)	50,773 (14.07)	58,149 (16.07)	1,744 (28.88)	2,145 (39.74)	1,840 (60.81)	91.18	89.31	88.47	83.40
5	Graduate & above	7,369 (2.78)	15,307 (4.66)	21,435 (5.94)	23,410 (6.47)	756 (12.52)	1,021 (18.91)	737 (24.34)	89.06	87.3	86.46	82.91
6	Total	265,060 (100)	328,471 (100)	360,860 (100)	361,762 (100)	6,039 (100)	5,398 (100)	3,026 (100)	66.92	68.03	69.31	65.01

Source: Sundaram and Tendulkar (2006b) and Authors' estimates.

Notes: Figures in parentheses are percentages of totals.

I: Period from 1983 to 1993-4

II: Period from 1993-4 to 1999-2000

III: Period from 1993-4 to 2004-5

**Appendix 1.8 Average Annual Increment to Adult (15–59 years of age) Workforce by Gender, Rural/Urban Location, and Poverty Status: All India, 1983/93–4 and 1993–4/1999–2000**

Panel A: Rural India

Category	1983/1993–4			1993–4/1999–2000		
	Rural Males	Rural Females	Rural Persons	Rural Males	Rural Females	Rural Persons
Self-employed						
All Households	1,220	497	1,717	521	96	617
APL Households	1,655	864	2,519	1,017	420	1,437
RWS Workers						
All Households	69	27	96	325	103	428
APL Households	271	52	323	344	102	446
Casual Labourers						
All Households	1,558	695	2,253	1,563	469	2,032
APL Households	1,224	375	1,799	1,688	750	2,438
All Workers						
All Households	2,847	1,219	4,066	2,409	668	3,077
APL Households	3,150	1,491	4,641	3,049	1,272	4,321

Panel B: Urban India

Category	1983–94			1993–4/1999–2000		
	Urban Males	Urban Females	Urban Persons	Urban Males	Urban Females	Urban Persons
Self-employed						
All Households	664	179	843	792	123	915
APL Households	465	90	555	739	53	792
RWS Workers						
All Households	586	163	749	773	220	993
APL Households	497	135	632	789	234	1,023
Casual Labourers						
All Households	294	89	383	437	(–) 38	399
APL Households	100	19	119	343	17	360
All Workers						
All Households	1,544	431	1,975	2,002	305	2,307
APL Households	1,062	244	1,306	1,871	368	2,239

Panel C: All Areas (Rural + Urban)

Category	1983–94			1993–4/1999–2000		
	Males	Females	Persons	Males	Females	Persons
Self-employed						
All Households	1,884	676	2,560	1,313	219	1,532
APL Households	2,120	954	3,074	1,756	537	2,293
RWS Workers						
All Households	655	190	845	1,098	323	1,421
APL Households	768	187	955	1,133	336	1,469
Casual Labourers						
All Households	1,852	784	2,636	2,004	431	2,431
APL Households	1,324	594	1,918	2,031	767	2,798
All Workers						
All Households	4,391	1,650	6,041	4,411	973	5,084
APL Households	4,212	1,735	5,947	4,920	1,640	6,560

Source: Sundaram and Tendulkar (2006b).

Notes: APL Households are Above Poverty Line Households. RWS workers are 'regular wage salaried' workers.

Appendix 1.9 Rural Average Daily Earnings of Adult (15–59 years of age) Male and Female Casual Wage Labourers: All India (in Rs at 1993–4 prices)

S.No.	Operation Codes	1983	Males			Females					
			1993–4	1999–2000	I	II	1993–4	1999–2000	I	II	
1	1–6	16.08	21.06	25.10	2.60	2.97	11.09	15.08	18.23	2.97	3.21
2	7–11	18.75	24.88	30.02	2.73	3.18	11.05	16.48	20.03	3.88	3.30
3	1–11	16.42	21.87	25.85	2.77	2.83	11.09	15.31	18.44	3.12	3.15
4	13–14	22.84	30.42	35.43	2.77	2.57	11.54	17.32	23.84	3.94	5.47
5	1–11,13–14	16.64	22.37	26.82	2.86	3.07	11.12	15.37	18.64	3.13	3.27
6	12	23.27	30.07	38.71	2.47	4.30	11.63	17.93	24.05	4.21	5.02
7	14	24.48	30.98	35.64	2.27	2.36	12.13	17.62	24.07	3.62	5.34
8	12–14	23.22	30.14	37.69	2.52	3.80	11.63	17.80	23.98	4.14	5.09
9	All Ag.	16.39	21.96	26.03	2.83	2.87	11.05	15.26	18.25	3.12	3.03
10	All Non-ag.	23.78	30.46	38.32	2.39	3.90	11.66	17.91	23.88	4.17	4.91
11	All Activities	18.01	23.91	29.26	2.74	3.42	11.14	15.57	18.78	3.24	3.17
12	Public Works	19.51	24.65	31.47	2.25	4.15	11.92	18.54	25.91	4.30	5.74

Source: Sundaram and Tendulkar (2006b).

Notes: 1. Operation Codes:

- 1–6: Manual work in cultivation
- 7–11: Manual work in other agricultural activities
- 1–11: Manual work in agriculture
- 13–14: Non-manual work in cultivation
- 1–11 and 13–14: Casual work in agriculture, manual and non-manual
- 12: Manual work in non-agriculture
- 14: Activities other than cultivation
- 12–14: Casual work in non-agriculture

2. Columns (6), (7), (11), and (12) Growth Rate (per cent per annum), for Period I: 1983 to 1993–4 (10.5 years) and Period II: 1993–4 to 1999–2000 (6 years).

## Appendix 1.10 Number of Persons Unemployed, 1983 to 2004–5

Panel A: Persons (All Ages) Unemployed on UPS and UPSS  
Persons Unemployed on UPS & UPSS (000)

Population Segments	1983		1993–4		1999–2000		2004–5	
	UPS	UPSS	UPS	UPSS	UPS	UPSS	UPS	UPSS
Rural Males	3,260 (21)	2,225 (14)	3,647 (20)	2,709 (14)	4,275 (21)	3,556 (17)	4,430 (20)	3,345 (15)
Rural Females	940 (14)	593 (7)	1,040 (14)	816 (8)	1,228 (15)	1,096 (10)	2,923 (30)	2,218 (17)
Rural Persons	4,200 (19)	2,818 (11)	4,687 (18)	3,525 (12)	5,503 (19)	4,652 (15)	7,353 (23)	5,562 (15)
Urban Males	2,888 (58)	2,541 (50)	3,061 (46)	2,752 (41)	3,878 (48)	3,650 (45)	3,290 (35)	2,879 (30)
Urban Females	733 (71)	632 (50)	1,224 (86)	1,165 (66)	1,192 (72)	1,128 (58)	1,669 (75)	1,512 (57)
Urban Persons	3,621 (60)	3,173 (50)	4,285 (53)	3,917 (46)	5,070 (52)	4,778 (48)	4,958 (43)	4,391 (36)
Total Males	6,148 (30)	4,756 (23)	6,708 (27)	5,461 (21)	8,153 (29)	7,206 (25)	7,719 (24)	6,224 (19)
Total Females	1,673 (22)	1,225 (12)	2,264 (26)	1,981 (17)	2,420 (25)	2,224 (18)	4,592 (39)	3,729 (24)
Total Persons	7,821 (28)	5,991 (19)	8,972 (26)	7,442 (20)	10,573 (28)	9,430 (23)	12,312 (28)	9,953 (21)

Panel B: Youth (15–29)  
Persons Unemployed on UPS & UPSS

Population Segments	1983		1993–4		1999–2000		2004–5	
	UPS	UPSS	UPS	UPSS	UPS	UPSS	UPS	UPSS
Rural Males	2,776 (49)	1,851 (31)	3,291 (48)	2,463 (35)	3,724 (51)	3,157 (43)	3,852 (49)	3,002 (37)
Rural Females	690 (28)	498 (15)	869 (32)	724 (19)	1,057 (37)	978 (26)	2,251 (75)	1,852 (44)
Rural Persons	3,363 (41)	2,349 (25)	4,160 (44)	3,187 (29)	4,781 (47)	4,135 (37)	6,103 (56)	4,855 (40)
Urban Males	2,442 (122)	2,161 (106)	2,678 (108)	2,415 (96)	3,311 (115)	3,118 (107)	2,794 (85)	2,484 (74)
Urban Females	637 (156)	557 (112)	1,065 (193)	1,015 (149)	969 (168)	925 (138)	1,313 (170)	1,191 (126)
Urban Persons	3,079 (128)	2,718 (107)	3,743 (123)	3,430 (107)	4,280 (124)	4,043 (113)	4,107 (101)	3,675 (86)
Total Males	5,115 (66)	4,012 (151)	5,969 (64)	4,878 (51)	7,035 (69)	6,275 (61)	6,646 (60)	5,486 (48)
Total Females	1,327 (46)	1,055 (27)	1,934 (60)	1,739 (39)	2,026 (59)	1,903 (440)	3,564 (94)	3,043 (59)
Total Persons	6,442 (61)	5,067 (43)	7,903 (63)	6,617 (47)	9,061 (67)	8,178 (56)	10,210 (69)	8,529 (52)

Source: Authors' estimates.

Note: Figures parentheses relate to unemployment ratios defined as number of persons unemployed expressed per 1,000 persons in the labour force.

### Appendix 2.1 Correspondence between Regular and Wage Employment Data from NSS and Organized Sector Employment from the Director General of Employment and Training

Attempts have been made recently to explore the connection between the NSS-based RWS (regular wage salaried) workers and employment in the organized high productivity units. The most commonly used data source for organized employment is the number of employees on regular payrolls, as on 31 March each year, reported by the Directorate General of Employment and Training (DGE&T) and published in the annual Economic Surveys of the Ministry of Finance. The DGE&T collects this information under the Employment Exchanges (Notification of Vacancies) Act. Under this legislation, the reporting is mandatory for all public sector units, irrespective of size, as also for large private sector establishments with 25 or more employees. It is voluntary for private sector units with 10–24 employees. The data are known to suffer from under-reporting because of the voluntary nature of reporting from small units and lax enforcement of mandatory requirements from large units. The NSS 55th Round collected, for the first time, worker-reported information on the types of enterprises where workers were employed. This was confined only to workers engaged in non-agricultural activities. Three types of enterprises provide a reasonable approximation to organized sector employment: (i) public sector, (ii) semi-public, and (iii) other (including cooperative society, private limited company, and other units under the Annual Survey of Industries). A special tabulation of the self-reported affiliation of workers by type of enterprise, carried out by the Central Statistical Organisation (GOI-CSO 2004), brought out two results of interest in the present context. One, the aggregate employment in (i) to (iii) was 31.85 million, compared to 26.54 million as reported on 31 March 2000 by DGE&T, thus providing some support to the apprehension of under-reporting in DGE&T data. Two, the shortfall was almost entirely in organized services where the NSS-based estimate was 16.8 million compared with 11.5 million in DGE&T. Sundaram (2004) reported an alternative tabulation of the 55th Round data, in which he focused on activity-status categorization. He reported two findings that are relevant. One, close to 88 per cent of the workers in organized non-agricultural enterprises reported RWS status. Second, in every population segment (rural/urban x male/female), at least 50 per cent of the workers with RWS status were located in the organized segment, with this proportion being as high as 57 per cent for rural RWS female workers. These results suggest that RWS status would provide a good approximation of organized high-productivity employment and possibly be a good alternative source of information on employment in the sector so that it would not be necessary to rely solely on DGE&T data. Why can data on worker-reported affiliation by type of enterprise in non-agricultural activities not be used directly as a measure of employment in the organized sector? One reason is that this information is available so far only for the 55th Round and not for earlier periods. It was not collected in the earlier quinquennial Rounds. Second, self-reported affiliation by type of enterprise is yet to stabilize itself in the NSS reporting system. Consequently, data from the aforementioned two exercises may only be used to provide support to the suggestion of approximating organized sector employment by the number of RWS workers.

Source: Sundaram and Tendulkar (2006b).

**Appendix 2.2 Percentage of Employment in Formal and Informal Sectors, by Industrial Categories, 1999–2000**

Column Percentages			
Industry	Formal	Informal	Total
Primary	5.79	67.31	60.53
Secondary	28.31	14.14	15.71
Tertiary	65.90	18.54	23.77
Total	100	100	100

Row Percentages			
Industry	Formal	Informal	Total
Primary	1.05	98.95	100
Secondary	19.88	80.12	100
Tertiary	30.67	69.43	100
Total	11.03	88.91	100

Source: Sundaram and Tendulkar (2006b).

**Appendix 2.3 Relative Wages of Regular Salaried and Casual Labourers, All India, 1983–2000**

Industry	Urban Male				Urban Female			
	1983	1987–8	1993–4	1999–2000	1983	1987–8	1993–4	1999–2000
Agriculture (0)	1.47	2.11	2.02	3.10	1.95	2.50	2.83	2.00
Mining & Quarrying (1)	1.88	2.65	3.20	3.37	2.80	2.71	2.84	2.69
Manufacture (Organic) (2)	1.79	1.65	1.67	1.62	1.63	1.58	1.87	1.49
Manufacture(Inorganic) (3)	1.89	2.54	2.41	2.43	5.57	3.73	3.62	2.43
Electricity, Gas, Water (4)	2.65	2.97	2.56	3.35	–	4.16	3.86	–
Construction (5)	1.83	2.01	1.88	1.92	2.35	2.32	1.54	2.78
Trade and Hotels (6)	1.49	1.46	1.51	1.74	2.37	2.14	2.02	2.75
Transport (7)	2.11	2.34	2.14	2.50	2.71	3.12	3.86	3.80
Business, Financial Services (8)	3.41	3.55	4.37	3.96	5.50	2.89	3.35	5.54
Social, Personal Services (9)	2.73	2.71	3.11	3.92	3.29	3.87	3.27	5.80
Non-agriculture	2.11	2.35	2.34	2.71	3.27	3.61	3.22	3.94
All (0–9)	2.18	2.46	2.41	2.68	3.28	3.88	3.37	3.67

Industry	Rural Male				Rural Female			
	1983	1987–8	1993–4	1999–2000	1983	1987–8	1993–4	1999–2000
Agriculture	1.04	1.30	1.27	1.73	1.95	1.43	1.51	1.73
Non-agriculture	1.89	2.22	2.21	2.42	2.29	2.85	2.32	3.89
All	2.04	2.41	2.52	2.80	2.20	2.80	2.28	3.88

Source: Computed from Unni (2006: Table 8).

Note: Figures refer to regular wage earnings per worker/casual wage earnings per worker.

**Appendix 2.4 Skilled–Unskilled Workers, by Level of Education and Skill Premium (W), All, Regular, and Casual (1993–4 and 1999–2000)**

Industry	All Workers			
	Skilled/Unskilled		$W_H/W_L$	
	1993–4	1999–2000	1993–4	1999–2000
Agriculture, Forestry, & Fishing	0.03	0.04	1.56	1.72
Mining & Quarrying	0.19	0.20	2.27	2.33
Manufacturing	0.36	0.48	2.38	2.42
Electricity, Gas, & Water	1.00	1.42	1.67	1.55
Construction	0.08	0.11	2.20	1.69
Trade	0.46	0.59	1.79	1.79
Hotels & Restaurants	0.17	0.28	1.62	1.94
Transport, Storage, & Communications	0.43	0.57	1.85	1.94
Finance & Real Estate	–	–	2.87	2.41
Services	1.45	1.58	2.41	2.61
Total	0.22	0.25	3.50	3.37
	Regular Workers			
Agriculture, Forestry, & Fishing	0.08	0.16	2.92	2.37
Mining & Quarrying	0.53	0.61	1.30	1.33
Manufacturing	0.64	0.78	1.94	2.20
Electricity, Gas, & Water	1.14	1.52	1.56	1.48
Construction	0.59	0.58	2.26	1.94
Trade	0.63	0.84	1.74	1.73
Hotels & Restaurants	0.22	0.40	1.57	1.94
Transport, Storage, & Communications	0.67	0.91	1.57	1.66
Finance & Real Estate	–	–	2.54	2.24
Services	1.93	2.25	2.07	2.13
Total	0.99	1.17	2.10	2.16
	Casual Workers			
Agriculture, Forestry, & Fishing	0.02	0.04	1.22	1.28
Mining & Quarrying	0.02	0.05	0.96	1.19
Manufacturing	0.09	0.13	1.20	1.25
Electricity, Gas, & Water	0.21	0.58	0.99	1.22
Construction	0.05	0.09	1.12	1.19
Trade	0.15	0.21	1.10	1.16
Hotels & Restaurants	–	–	0.93	1.29
Transport, Storage, & Communications	0.09	0.13	1.06	1.09
Finance & Real Estate	–	–	1.22	0.94
Services	0.07	0.08	1.27	3.09
Total	0.03	0.06	1.25	1.37

Source: Unni (2006: Table 13).

Note: Skilled workers are those who completed education of secondary school and above.

$W_H$  - wages of skilled workers;  $W_L$  - wages of unskilled workers.

**Appendix 2.5 Estimating the Determinants of Labour Use in Cultivation by 2SLS Instrumental Variable Regression with Time Dummies**

**Model 1: Dependent: Labour Days in Cultivation per Hectare of Net Sown Area**

	Coefficient	t-value	p-value
Area under labour intensive crops (%)	7.03	7.93	0.00
Tractors per hectare	-1.69	-1.96	0.56
Total non-farm workers (%)	-5.97	-3.45	0.00
D for Year 1987-8	26.12	0.66	0.51
D for Year 1993-4	74.29	1.83	0.07
D for Year 1999-2000	116.06	2.64	0.01
Constant	311.76	4.85	0.00
	( $p > F = 0.000$ )	$R^2 = 0.63$	$R^2 = 0.59$
			$Df = 49$

Endogenous Variable: Area under Labour Intensive Crops (%)

**Model 2: Dependent: Growth of Labour Days in Cultivation per Hectare of Net Sown Area**

	Coefficient	t-value	p-value
Growth in gross irrigated area	0.40	1.92	0.069
Growth of rural non-farm workers	-0.59	-2.60	0.016
Annual % change in area of labour-intensive crops	2.57	3.80	0.001
Growth of NSDP in agriculture per 1,000 hectares	0.18	1.80	0.085
D for Period 1994-2000	-1.01	-1.65	0.113
Constant	1.10	1.12	0.276
	( $p > F = 0.000$ )	$R^2 = 0.49$	$\bar{R}^2 = 0.38$
			$Df = 22$

Source: Srivastava (2006).

**Appendix 3.1 Distribution of Employment in the Tertiary Sector: Formal and Informal (percentage as indicated)**

Rural						
Category	Formal			Informal		
	Males	Females	Total	Males	Females	Total
Public	69.7	86.3	71.9	–	–	–
Private Regular Wage	7.8	8.1	7.9	12.6	12.2	12.6
Casual Wage	–	–	–	34.1	29.5	33.5
Self-Employed	22.5	5.6	20.2	53.3	58.4	53.9
Total	100.0	100.0	100.0	100.0	100.0	100.0
% of All Tertiary	21.3	3.4	24.6	65.5	9.9	75.4

Urban						
Category	Formal			Informal		
	Males	Females	Total	Males	Females	Total
Public	57.1	67.4	58.7	–	–	–
Private Regular Wage	12.5	19.7	13.6	24.6	31.0	25.6
Casual Wage	–	–	–	24.5	27.9	25.0
Self-Employed	30.4	12.9	27.7	50.9	41.1	49.4
Total	100.0	100.0	100.0	100.0	100.0	100.0
% of All Tertiary	31.7	5.8	37.5	53.1	9.5	62.5

Source: Mazumdar and Sarkar (2009b).

**Appendix 3.2A Labour Productivity, by Broad Sectors 1983–2000  
(Based on UPS estimates of employment)**

NIC	Labour Productivity (UPS)				Labour Productivity Index (UPS)			
	55th	50th	43rd	38th	55th	50th	43rd	38th
0	13,349	11,752	10,116	10,223	100	100	100	100
1	129,579	73,754	64,802	62,920	971	628	641	615
2&3	46,999	34,444	27,547	24,801	352	293	272	243
4	239,870	139,433	111,410	93,247	1,797	1,186	1,101	912
5	34,406	34,492	25,551	37,543	258	294	253	367
6	42,838	36,593	32,298	31,866	321	311	319	312
7	60,537	48,310	42,871	38,468	453	411	424	376
8	303,895	259,820	184,626	171,029	2,276	2,211	1,825	1,673
9	47,729	27,137	26,387	22,588	358	231	261	221
6+7+8+9	61,216	44,144	37,985	33,950	459	376	375	332

Source: Mazumdar and Sarkar (2008).

Note: NIC=National Industrial Classification.

**Appendix 3.2B Decile and Quartile Ratios for the Distribution of Expenditure per capita in the Tertiary Sector, Different Rounds**

Rural Areas						
Round	P90/P10	P90/P50	P10/P50	P75/P25	P75/P50	P25/P50
43rd	3.660	2.068	0.565	1.938	1.432	0.739
50th	3.442	1.989	0.578	1.883	1.401	0.744
55th	3.265	1.919	0.588	1.869	1.408	0.754
Urban Areas						
Round	P90/P10	P90/P50	P10/P50	P75/P25	P75/P50	P25/P50
43rd	4.054	2.174	0.536	2.090	1.482	0.709
50th	4.107	2.191	0.533	2.118	1.496	0.706
55th	4.067	2.116	0.520	2.118	1.476	0.797

Source: Mazumdar and Sarkar (2009b).

Note: NIC=National Industrial Classification.

Appendix 4.1 Instrumental Variable Estimates of the Effect of GSDP on Employment Levels for Male and Female Workers

	Without State Dummies						With State Dummies																	
	1		2		3		4		5		6		7		8		9		10		11		12	
	Male Rural	Male Urban	Male Rural	Male Urban	Male All	Male Rural	Male Urban	Male All	Male Rural	Male Urban	Male All	Female Rural	Female Urban	Female All	Female Rural	Female Urban	Female All	Female Rural	Female Urban	Female All	Female Rural	Female Urban	Female All	
GSDP	0.21 [1.73]+	0.817 [4.73]**	0.423 [4.99]**	-0.155 [0.22]	0.452 [1.05]	-0.453 [0.26]	0.515 [4.41]**	0.77 [3.63]**	0.677 [4.02]**	1.089 [1.20]	0.188 [0.14]	2.115 [1.28]												
Rural Casual Wage Male	0.146 [0.31]		0.242 [0.52]	-0.223 [0.26]		0.968 [0.67]																		
Urban Salaried Wage Male		-8.368 [2.90]**	-3.835 [2.15]*		-0.493 [0.54]	0.145 [0.08]																		
Rural Casual Wage Female							0.287 [0.83]																	
Urban Salaried Wage Female																								
1987-8 Dummy	0.054 [0.30]	1.095 [2.17]*	0.422 [1.25]	0.142 [1.51]	-0.105 [0.60]	-0.179 [0.55]	-0.052 [0.39]	-0.775 [1.15]	0.176 [0.43]	-0.123 [0.86]	-0.19 [0.62]	-0.554 [1.23]												
1993-4 Dummy	-0.03 [0.14]	2.913 [2.74]**	1.213 [1.67]+	0.295 [1.76]+	0.112 [0.24]	0.1 [0.09]	-0.225 [1.20]	-1.933 [1.25]	0.456 [0.45]	-0.386 [0.95]	-0.013 [0.01]	-1.287 [1.02]												
1999-2000 Dummy	-0.229 [0.72]	4.954 [2.65]**	2.023 [1.59]	0.326 [1.13]	0.038 [0.05]	-0.052 [0.03]	-0.648 [2.31]*	-4.137 [1.40]	0.368 [0.22]	-0.929 [1.35]	-0.407 [0.24]	-2.502 [1.17]												
Urban Dummy																								
Constant	11.311 [5.53]**	38.175 [3.21]**	24.39 [2.91]**	16.653 [3.26]**	10.058 [1.44]	15.326 [0.77]	7.554 [5.20]	-15.334 [1.05]	11.713 [1.48]	1.822 [0.20]	7.397 [0.46]	-12.847 [0.62]												
Observations	247	277**	492	270	253	492	235	253	462	233	251	462												
Test for Validity of Instruments																								
Overidentification Test of all instruments (p-val-)	0.29779	0.20501	0.22334	0.73552	0.1719	0.40246	0.50153	0.49159	0.18463	0.47135	0.40425	0.8337												
1st stage	0.341	0.2407	0.3395	0.9971	0.9968	0.9965	0.2838	0.4053	0.3121	0.9959	0.9968	0.9959												
Centred R2 for Instrumented Variables	0.3231	0.761	0.7736	0.8426	0.8426	0.8553	0.5792																	
Excluded Instruments	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Share of Industry in GSDP																								
Road density																								
Percentage of villages electrified																								
Industrial Credit Rs. Per Capita																								
Agricultural Credit Rs. Per Capita																								

Source: Ahsan and Pagés (2006).

Notes:

1. Absolute value of z statistics in brackets. Robust z is reported where heteroskedasticity exists.

2. + significant at 10%; \* significant at 5%; \*\* significant at 1%

3. x-excluded instruments used in the specification.

## Appendix 4.2 Effect of GSDP on Male Earnings GSDP (Instrumented)

		With State Dummies			
		Rural		Urban	
		Casual Non-Agriculture	Casual Agriculture	Casual	Salaried
GSDP		1.934 [2.23]*	1.381 [2.44]*	-0.368 [0.55]	-1.181 [2.17]*
Scheduled Tribe (share in 25 plus)		-0.048 [1.13]	-0.068 [1.70]+	0.026 [0.57]	0.063 [1.63]
Scheduled Caste		-0.153 [2.40]*	-0.141 [2.22]*	0.023 [0.51]	0.057 [1.50]
Primary Educated		0.172 [0.93]	0.221 [1.30]	0.068 [1.10]	0.07 [1.37]
Post-Primary Educated		-0.148 [0.80]	-0.177 [1.08]	0.08 [0.53]	0.027 [0.21]
1987–8 Round		0.301 [2.15]*	0.343 [3.73]**	0.436 [4.19]**	0.619 [7.46]**
1993–4 Round		0.256 [0.62]	0.533 [1.89]+	1.273 [4.03]**	1.903 [7.24]**
1999–00 Round		0.297 [0.41]	0.73 [1.51]	1.95 [3.60]**	2.951 [6.46]**
Constant		-16.377 [1.80]+	-10.934 [1.84]+	8.58 [1.22]	18.07 [3.16]**
Observations		245	243	246	248
Adj R-2		0.57	0.6	0.57	0.69
<b>Test for Validity of Instruments</b>					
Overidentification Test of all instruments (P-val=)		0.13694	0.26443	0.19339	0.15474
1st state centred R2 for instrumented Variables	GSDP	0.9963	0.9964	0.996	0.9963
Excluded Instruments	Road density	x	x	x	x
	Share of industry in the state economy	x	x	x	x
	Percentage of villages electrified	x	x	x	x
	credit to industry per capita	x	x	x	x
	credit to agriculture per capita	x	x	x	x

Source: Ahsan and Pagés (2006).

Notes:

1. State fixed effects is not reported in this table.
2. Robust z statistics in brackets.
3. + significant at 10%; \* significant at 5%; \*\* significant at 1%.
4. x - excluded instruments used in the specification.

## Appendix 4.3 Impact of GSDP Levels on Unemployment Rates

	OLS with State Dummies			GSDP and Wages Instrumented with State Dummies		
	1	2	3	4	5	6
Growth of GSDP	-1.014 (1.95)+	-0.317 (1.02)	-0.653 (1.78)+	-4.179 (1.56)	-2.698 (1.39)	-2.116 (1.94)+
Round 2 Dummy	0.083 (0.61)	0 (.)	0 (.)	-0.738 (1.25)	-0.379 (0.89)	0 (.)
Round 3 Dummy	0 (.)	-0.115 (1.45)	-0.105 (1.18)	0 (.)	0 (.)	0.384 (1.34)
Round 4 Dummy	0.233 (3.09)**	-0.022 (0.27)	0.06 (0.68)	0.17 (1.32)	0.026 (0.26)	0.521 (2.01)*
Urban Dummy			0.271 (4.19)**			0.235 (3.21)**
Urban Salaried Wages					-0.984 (0.85)	0.505 (0.48)
Rural Casual Wages				0.564 (1.32)		0.8 (1.0)
Constant	1.523 (6.10)**	1.718 (20.26)**	1.526 (12.08)**	0.87 (0.49)	6.638 (1.26)	-3.136 (1.04)
Observations	213	212	425	188	193	375
R-squared	0.7	0.56	0.58	0.59	0.28	0.31

Source: Ahsan and Pagés (2006).

Notes: Robust t statistics in parentheses.

+ significant at 10%; \* significant at 5%; \*\* significant at 1%.

**Appendix 4.4A Estimates of Determinants of Female Participation Rates: Female and Male Wages, Household Earnings and Unemployment Rates**

Dependent Variable: Female Participation Rates	OLS			Female Wages and Unemployment Rate Instrumented			Household Per Capita Expenditures, Unemployment Instrumented		
	1 Rural	2 Urban	3 All	4 Rural	5 Urban	6 All	7 Rural	8 Urban	9 All
Rate of Unemployment	-0.098 [3.68]**	0.001 [0.05]	-0.05 [2.74]**	-0.778 [2.70]**	0.092 [0.22]	-0.338 [3.91]**	-0.475 [2.72]**	-0.235 [0.40]	-0.325 [1.45]
Real Household per Capita Expenditure							-1.812 [0.93]	3.381 [0.47]	1.685 [0.52]
Rural (non-agr) Casual Wages, Female	0.133 [2.20]		0.119 [3.35]**	0.734 [1.06]		1.491 [2.59]**	1.547 [1.69]+		1.359 [1.50]
Urban Casual Wages, Female		-0.019 [0.29]			-2.069 [0.94]	0.155 [0.19]		2.855 [0.53]	-1.596 [0.68]
Urban Salaried Wages, Female		-0.114 [1.10]	-0.126 [1.44]		5.651 [0.97]				
Urban Casual Wages, Male		0.211 [1.92]+							
Rural Casual Wages, Male	-0.187 [2.01]*		-0.051 [0.79]	0.046 [0.10]		-0.617 [1.57]			
Urban Salaried Wages, Male		-0.169 [0.77]	-0.071 [0.40]		-4.35 [0.98]	-1.412 [1.91]+			
Urban Dummy			-0.573 [10.85]**			-0.182 [1.18]			-0.71 [0.57]
1987–8 Round	0.217 [2.16]*	0.016 [0.20]	0.097 [1.40]	0.624 [2.16]*	0.199 [0.49]	0.405 [2.42]*	0.889 [1.29]	-2.226 [0.49]	-0.229 [0.24]
1993–4 Round	-0.012 [0.11]	0.162 [1.70]+	0.105 [1.28]	-0.486 [1.44]	-0.026 [0.05]	0.144 [0.77]	1.072 [0.67]	-4.339 [0.48]	-1.636 [0.63]
1999–2000 Round	-0.032 [0.26]	0.122 [0.89]	0.066 [0.56]	-0.724 [1.48]	-0.112 [0.13]	0.152 [0.56]	1.217 [0.57]	-6.719 [0.50]	-2.494 [0.70]
Constant	-0.946 [2.48]*	-0.87 [1.14]	-0.316 [0.48]	-6.757 [2.55]*	0.668 [0.12]	1.034 [0.53]	2.006 [0.26]	-27.422 [0.53]	-9.869 [1.03]
heteroskedasticity test (P-val=)	0.0981	0.8393	0.0459	0.9498	1	0.9828	0.999	1	0.9995
R-squared	0.14	0.04	0.45						
Observations	177	210	371	159	170	322	161	177	324
<b>Test for Validity of Instruments</b>									
Overidentification Test of all instruments (P-val=)				0.81588	0.88074	0.15068	0.543	0.84699	0.3997
1st state centred Partial R2 for Instrumented Variables	Rate of Unemployment			0.1884	0.1247	0.4474	0.3931	0.236	0.4387
	Rural (non-agr) Casual Wages, Female			0.2983		0.3332	0.292		0.2699
	Urban Salaried Wages, Female				0.6647				
	Urban Casual Wages, Female				0.4212	0.3408		0.2027	0.267
	Real Household Per Capita Expenditure						0.4962	0.5121	0.5342
Excluded Instruments	Share of industry in GSDP			x	x	x	x	x	x
	share of sch tribe 25–59; Female			x	x	x	x	x	x
	Share of sch caste 25–59; Female			x	x	x	x	x	x
	Share of primary educated female 25–59					x	x	x	x
	Share of secondary educated female 25–59					x	x		x
	Industrial Credit Rs. Per Capita				x				
	Agriculture Credit Rs Per Capita				x	x	x	x	x
	Gini-real daily wage count no-salaried-15–59				x				

Source: Ahsan and Pagés (2006).

Notes:

1. t statistics in brackets. Robust is reported where heteroskedasticity exists.
2. + significant at 10%; \* significant at 5%; \*\* significant at 1%.
3. x - excluded instruments used in the specification.

## Appendix 4.4B Determinants of Female Participation Rates: Expected Earnings of Males and Females

Female Participation Rate	OLS without State Dummies			OLS with State Dummies			Expected Earnings Instrumented with State Dummies		
	1 Rural	2 Urban	3 All	4 Rural	5 Urban	6 All	7 Rural	8 Urban	9 All
Expected Earnings for Females in Rural Casual Work	0.083 [1.68] <sup>+</sup>		0.045 [1.31]	0.1 [3.96]**		0.074 [3.47]*	0.926 [3.26]**		0.352 [2.19]*
Expected Earnings for Females in Urban Casual Work		-0.06 [1.03]	-0.045 [0.94]		-0.069 [1.50]	-0.055 [1.62]		-0.021 [0.10]	-0.649 [3.43]**
Expected Earnings for Males in Rural Casual Work	-0.318 [3.40]		-0.228 [3.19]**	-0.183 [2.13]*		-0.149 [2.28]*	0.685 [3.24]**		
Expected Earnings for Males in Urban Casual Work		0.222 [2.43]*	0.233 [2.55]*		0 [0.00]	-0.075 [0.75]		-0.086 [0.78]	-0.128 [0.71]
Expected Earnings for Males in Urban Salaried Work									0.19 [0.85]
Urban Dummy			-0.708 [20.59]**			-0.716 [29.08]**			-0.749 [23.21]**
1987–8 Round	0.05 [0.66]	0.003 [0.04]	-0.003 [0.07]	0.051 [1.14]	0.026 [0.55]	0.046 [1.26]	0.106 [1.24]	0.033 [0.51]	0.11 [1.67] <sup>+</sup>
1993–4 Round	0.042 [0.54]	0.053 [0.80]	0.009 [0.17]	0.041 [0.88]	0.094 [1.57]	0.083 [1.87] <sup>†</sup>	-0.093 [0.96]	0.083 [1.14]	0.076 [0.80]
1999–2000 Round	0.042 [0.51]	-0.06 [0.85]	-0.047 [0.82]	-0.01 [0.17]	0.006 [0.10]	0.028 [0.54]	-0.248 [1.98]*	-0.01 [0.10]	0.022 [0.15]
Constant	0.214 [0.78]	-1.911 [6.69]**	-0.624 [2.56]*	-0.809 [3.10]**	-1.314 [3.32]**	-0.298 [0.99]	-1.235 [2.86]**	-1.167 [3.11]**	-0.546 [0.63]
heteroskedasticity test (P-val=)	0.7878	0.4838	0.1421	0	0		1	0	0.006
Observations	263	277	498	263	277	498	258	232	432
R-squared	0.05	0.03	0.48	0.71	0.55	0.74			
Adj R-2	0.03	0.01	0.47	0.67	0.48	0.71			
<b>Test for Validity of Instruments</b>									
Overidentification Test of all instruments (P-val=)							0.21917	0.3455	0.60499
1st stage centered R2 for Instrumented Variables	Expected Earnings for Females in Rural Casual Work						0.4564	0.4703	0.429
	Expected Earnings for Females in Urban Casual Work								0.5021
Excluded Instruments	Female Share of sch tribe 25–59; Female Share of primary educated female 25–59; Share of secondary educated female 25–59						x	x	x
	Gini-real daily wage						x		
	Industrial Credit Rs. Per Capita								x
	Agricultural Credit. Rs. Per Capita							x	x
	Share of industry in GSDP							x	x
	count no salaried 15–59								x

Source: Ahsan and Pagés (2006).

Notes:

1. State fixed effects is not reported in this table.

2. Absolute value of statistics in brackets. Robust is reported where heteroskedasticity exists;

3. <sup>+</sup>signification at 10%; \* signification at 5%;\*\* significant at 1%.

4. x-excluded instruments used in the specification.

#### Appendix 4.5 Effect of GSDP on Unemployment Rates for Males and Females

	OLS			Instrumental Variables		
	Rural 1	Urban 2	All 3	Rural 4	Urban 5	All 6
GSDP	-1.036 (2.58)*	-0.966 (3.00)**	-1.01 (3.61)**	-2.028 (-1.45)	-1.225 (1.85)+	-1.26 (-1.42)
Rural Casual Wage	0.051 (0.48)		0.116 (1.49)	0.896 (1.99)+		1.002 (1.42)
Urban Salaried Wages		-0.042 (-0.46)	-0.129 (-1.28)		-0.663 (-0.87)	0.08 (0.08)
Round 2 Dummy	0.169 (1.42)	0.172 (2.16)*	0.164 (2.17)*	-0.582 (-1.05)	0 (.)	0 (.)
Round 3 Dummy	0.224 (0.99)	0.334 (1.95)+	0.301 (2.07)*	0 (.)	0.217 (0.9)	0.379 (0.99)
Round 4 Dummy	0.863 (2.46)*	0.784 (2.72)**	0.829 (3.43)**	0.917 (1.79)+	0.718 (1.56)	0.955 (1.47)
Urban Dummy			0.263 (4.51)**			0.236 (3.26)**
Constant	12.094 (2.85)**	11.871 (3.53)**	12.1 (4.14)**	20.37 (1.39)	17.435 (1.87)+	10.968 (1.05)
Number of Observations	280	285	556	188	193	375
R Square	0.68	0.56	0.58	0.57	0.46	0.37

Source: Ahsan and Pagés (2006).

Note: + significant at 10%.

\* significant at 5%.

\*\* significant at 1%.

### Appendix 6.1 Selected Welfare/Provident Funds: Membership, Contribution Structure, and Benefits

Fund and Year of Establishment	Member Estimate (2002)	Contribution (Annual, unless stated)	Main Services
Beedi workers (Central – 1976)	4 million	Cess	Health/education
TN Construction Workers (1994 in 3 cities; 1997 state-wide)	380,000	Rs 25 registration + Rs 10 every two years for workers. 0.3% of estimated cost of construction for employer	Accident/death/education/maternity
West Bengal US Provident Fund	650,000	Rs 240 for worker Rs 240 – GoWB	DC pension/lump sum death payout
AP Labour Welfare fund (1988)	1 million	Rs 2 – employee Rs 5 – employer Govt subsidy	Education/emergency relief/health and funeral
Karnataka Labour Welfare Fund (1965)	675,000	Rs 3 – employee Rs 6 – employer Rs 3 – GoK	Medical/accident/self-employment
Kerala Agricultural Workers' Fund (1974)	1,050,000	Rs 24 – worker Rs 10–15 per hectare for landowners	Superannuation/medical/education/insurance/maternity
Kerala Labour Welfare Fund (1975)	453,000	Rs 8 – employee Rs 16 – employer	Education and training/medical assistance/compassionate relief
Kerala Cashew Workers' Welfare Fund (1988)	135,000	Rs 0.5 per day for worker Re 1 per day – employer Re 1 per day – GoK	Medical/maternity/death and accident/unemployment/education
Maharashtra Mathadi Boards (1969)	150,000	26–46% of employee wage	Provident fund/medical/paid leave and holidays/education/injury and death

Source: O'Keefe (2006).

### Appendix 6.2 Coverage Rates in Selected Voluntary Rural Health Insurance Schemes

	Coverage Rate among Eligible Population (late 1990s)	Target Eligible Population
Health card (Thailand)	25%	Non-poor villagers
Rural voluntary HI (Vietnam)	9%, but higher among school children and very low among adults.	(i) school children; (ii) households below poverty line; (iii) self-employed (around 75% of population)
Dana sehat schemes (Indonesia)	13%	Primarily rural population
ORT (Philippines)	11%	Local community
Grameen (Bangladesh)	66%	Poor banking with Grameen
National HI—Category II (Korea)	100%	Urban and rural self-employed, including farmers

Source: O'Keefe (2006).

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# India's **Employment Challenge**

## CREATING JOBS, HELPING WORKERS

As the Indian economy looks to grow further in the coming decades, it faces the key challenge of increasing the earnings of millions of workers who live in poverty, and also meeting the demand for jobs by new entrants to the labour force. Analysing trends and developments in the Indian labour market over the past two decades, this report finds that though labour market outcomes have been improving since the 1990s and job growth has been on the rise since 2000, unemployment and underemployment continue to be areas of concern. Examining detailed National Sample Survey and Census data, it identifies three trends:

- increase in employment growth has been accompanied by a deceleration in the growth of wages and earnings;
- around 90 per cent of prime-aged persons remain employed in low productivity, informal sector jobs; and
- the share of formal sector and manufacturing in total employment has remained low and strikingly unchanged.

Thus the need of the hour is to raise productivity and job quality in the informal sector; stimulate formal sector employment growth; and address persistent regional, gender, and social disparities in labour market outcomes. The report also recommends regulatory reforms in order to remove barriers to the growth of both formal sector jobs and labour intensive manufacturing. These reforms must be complemented with effective and active labour market policies that can help workers, especially those in the informal sector, become more productive, obtain more protection against unemployment, and enhance skills.

*India's Employment Challenge* will be useful for policymakers and administrators, practitioners in the area of economic reforms and public policy, and institutions and research organizations working on labour and development issues. Students, scholars, and researchers in economics and development studies, and those studying the Indian economy in particular will also find it informative.



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