



INDIA LABOUR REPORT 2009

The Geographic Mismatch
&
A Ranking of Indian States
by their
Labour Ecosystem
(Labour Demand, Labour Supply, Labour Laws)

A
Report
By
TeamLease and IIJT

Summary

Background

- India's demographic dividend will increase our population from 1 billion in 2001 to 1.4 billion in 2026. 83% of this increase will be in the 15-59 age group.
- If we harness this dividend by 2025, India will not only have 25% of the world's total workforce but our per capita income will be \$ 4100. This will rise to \$9802 in 2040 and \$20,836 in 2050. This will finally put poverty in the museum, it belongs.
- But a demographic dividend does not mean people, but productive people. Converting our people into productive people requires radical reform of our labour market ecosystem that includes labour demand, labour supply, and labour laws.

India's Three Mismatches

- **THE GEOGRAPHIC MISMATCH:** Much of India's demographic dividend will occur in states with backward labour market ecosystems. Between 2010 and 2020, the states of UP, Bihar and MP will account for 40% of the increase in 15-59 year olds but only 10% of the increase in income. During the same period, Maharashtra, Gujarat, TN and Andhra will account for 45% of the increase in GDP but less than 20% of the addition to the total workforce.
- **THE SKILLS / EDUCATION MISMATCH:** About 89% of the 15-59 year olds have had no vocational training. Of the 11% who received vocational training, only 1.3% received formal vocational training. The current training capacity is a fraction of the 12.8 million new entrants into the workforce every year.
- **THE SECTORAL MISMATCH:** Most employment opportunities will arise in sectors where people have little experience. The largest component of labour force growth is in rural areas but the most growth in employment is in areas that require greater human capital. Wage inflation projection till 2026 flag skill shortages.

India's Failed Matching Ecosystem

- Our employment exchanges are dysfunctional; they gave about 2 lac jobs to the 4 crore people registered.
- The best performing employment exchanges were in Gujarat, Tamil Nadu, and Maharashtra but the most new registration are in UP and West Bengal.
- The Delhi Government budget shows that it costs the government Rs 228,381 for a single placement.
- The employment exchange at Chitradurga in Karnataka has been unable to provide even a single job in the last four years.
- India has only 0.25 million apprentices while Germany has 0.6 million, Japan has 2 million.

State Ranking of Labour Ecosystem

- **OVERALL LABOUR ECOSYSTEM RANKING:** Andhra Pradesh tops followed by Karnataka and Maharashtra. States that made significant improvements since 2005 include Bihar, Assam and J&K (though the last two continue to be below their levels of performance in 1995).
- **EMPLOYMENT ECOSYSTEM RANKING:** Delhi tops followed by Andhra Pradesh and Rajasthan. Their ranking is mostly driven by all around infrastructure improvement e.g. the performance of Delhi and Gujarat is driven by power supply, high teledensity and low taxation, relative to the size of economy.
- **EMPLOYABILITY ECOSYSTEM RANKING:** Karnataka tops followed by Delhi and Andhra Pradesh. The large infrastructure in education and professional education is one of the primary causes of Karnataka's high ranking, which it has further improved on since the 2005 ranking.
- **LABOUR LAW ECOSYSTEM RANKING:** Maharashtra tops followed by Andhra Pradesh and Karnataka. Maharashtra not only tops but has improved its performance since 2005 because of better performance in labour relations and average wages relative to minimum wages.

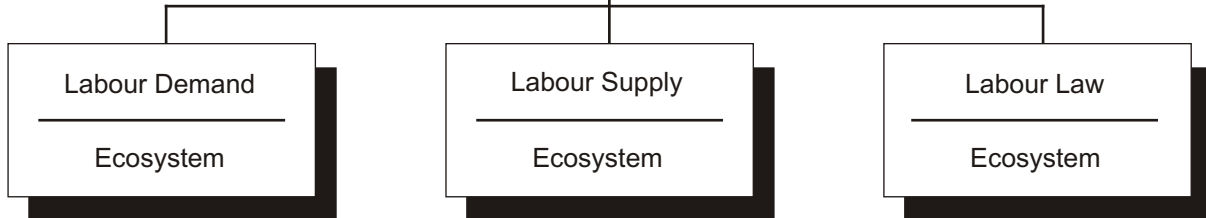
WayForward

- State governments are losing an important opportunity to differentiate themselves with specific reforms to their labour ecosystems. Over the next twenty years, this will be the difference between growth and poverty reduction.
- States can take the lead in improving matching infrastructure by reforming employment exchanges, apprenticeship programs, assessment and certification capabilities, etc. This is the lowest hanging fruit and an area with huge immediate impact.
- We must consider moving labour out of the concurrent list of the constitution and make it a state subject, so that Chief Ministers are free to craft fertile job creation habitats, by focusing on all the variables in the labour ecosystem index.

Labour Ecosystem
Ranking

Year 2009	Year 2006
Andhra Pradesh	Delhi
Karnataka	Gujarat
Maharashtra	Karnataka
Delhi	Tamil Nadu
Gujarat	Maharashtra
Kerala	Andhra Pradesh
Tamil Nadu	Goa
Haryana	Punjab
Rajasthan	Rajasthan
Goa	Himachal Pradesh

Labour Ecosystem
Index



Year 2009	Year 2006
Delhi	Gujarat
Andhra Pradesh	Goa
Rajasthan	Himachal Pradesh
Himachal Pradesh	Delhi
Kerala	Rajasthan
Gujarat	Kerala
Tamil Nadu	Andhra Pradesh
West Bengal	Tamil Nadu
Punjab	West Bengal
Karnataka	Orissa

Year 2009	Year 2006
Karnataka	Goa
Delhi	Karnataka
Andhra Pradesh	Tamil Nadu
Gujarat	Delhi
Goa	Andhra Pradesh
Kerala	Gujarat
Maharashtra	Kerala
Tamil Nadu	Maharashtra
Bihar	Himachal Pradesh
West Bengal	Madhya Pradesh

Year 2009	Year 2006
Maharashtra	Maharashtra
Andhra Pradesh	Karnataka
Karnataka	Punjab
Gujarat	Gujarat
Madhya Pradesh	Delhi
Tamil Nadu	Haryana
Haryana	Tamil Nadu
Delhi	Andhra Pradesh
Goa	Madhya Pradesh
Kerala	Bihar



Table of Contents

Summary	3
Background and Motivation	13
The Demographic Dividend	15
Addressing the Mismatches	15
The Matching Ecosystem	16
Rating and Ranking the State-level Labour Ecosystems	17
Section 1: Introduction	21
Section 2: The Great Mismatch	25
2A. Growth in the Indian Economy and the Labour Force	25
2B. The Education/Skills Mismatch	27
2C. The Sectoral Mismatch	31
2D. The Geographical Mismatch	38
Section 3: Employment for All – A Systemic Approach	43
3A. The Legal Ecosystem	44
3B. The Employability Ecosystem	44
3C. The Employment Ecosystem	45
3D. The Need for Matching Institutions	45
Section 4: The Matching Ecosystem	47
Section 5: Ranking States on their Labour Ecosystem	51
5A. Methodology of the Labour Ecosystem Index	51
5B. Categories and Sub-indices	53
5C. Conclusion	67
Annexsure - I Data on Labour Issues	63
Annexsure - II State Data	104

Preface

One of India's saddest realities is that the most important decision a child can make today is to choose his or her parents wisely. This Ovarian lottery – a child's financial, social, physical opening balance – is compounded by India's painful World of Work. India's rapid economic growth brings to the forefront many mismatches between availability of human skills. The skills may be available in one geographical area but not available in another, the skill sets themselves may be of one type, whereas requirements are for another that may or may not be closely related. At the same time, we find that matching institutions are limited in their coverage. Matching institutions such as placement firms typically focus on the high end of the market and have limited scope while employment exchanges have the right focus but are dysfunctional. So those individuals with limited skills and blue collar workers have to depend upon informal networks that operate only selectively. The market mechanism may eventually create such matching institutions, however there will be significant time lag in this process. But, the need for matching is now, because of our demographic dividend.

Fixing these three mismatches requires a radical overhaul of our 3E ecosystem (education, employability and employment). Education reform is an idea whose time has come, employability reform is work in process and employment reform is an idea whose time has not come. But, the only way to sustainably sabotage the ovarian lottery is by fixing the regulatory cholesterol - mindset, structure and incentives - that currently views the 3Es as unconnected silos. The 3Es are much more closely connected than most people believe and truly impacting outcomes in any one of them requires working with the other. We need a mindset shift similar to when classical physics (discrete and unconnected systems) shifted to quantum physics (everything is interconnected and interrelated).

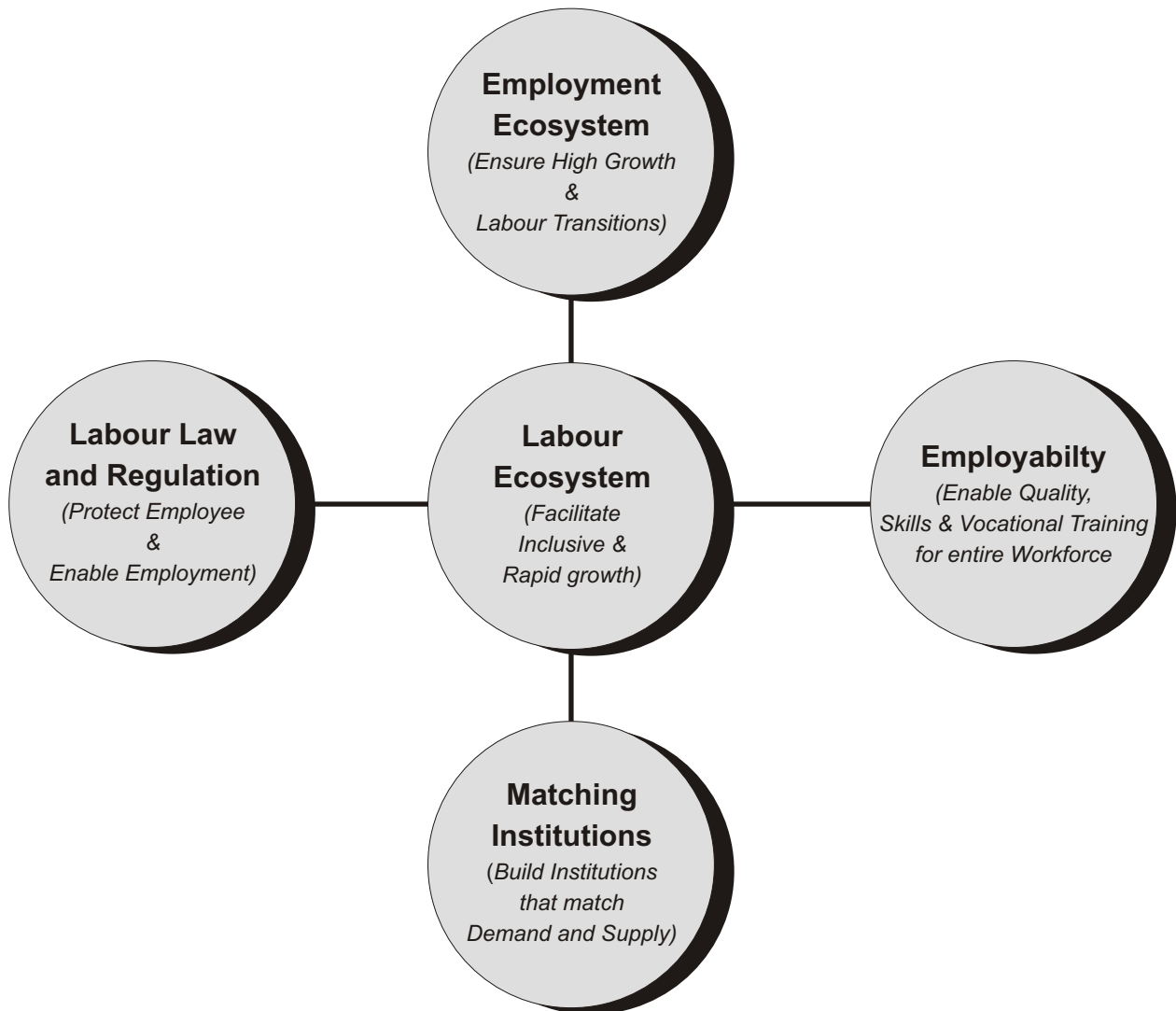
This report is our second ranking of Indian States – the first one was done in 2006 - based on a labour ecosystem index, crafted to reflect the three variables of labour supply, labour demand and labour laws. Just like politics, all labour markets are local. We continue to make the case that State Governments are losing an important opportunity to create an immediate impact to their job creation capacity by not creating visible differentiation between their 3E ecosystems. We clearly find that States that invest in creating a good labour ecosystem are those that grow more rapidly in the long run. In other words, greater employment will not merely come about through greater investment, or through greater education, or only through labour reform. Everything matters, if we want to make sure that demographics or choosing parents wisely is not destiny.

The India Labour Report is part of our broader campaign to increase information around the current labour regime that hinders job creation and the expansion of non-traditional employment. This Annual Report complements our research series that includes our Annual Temp Salary Primer, quarterly Employment Outlook Index, and quarterly changes to India's world of work series. All these and more are available for download at www.teamlease.com

This report obviously would not exist without the Indicus Analytics team, led by Bibek Debroy and Laveesh Bhandari. We thank them profusely for their efforts because they have helped TeamLease become what it is and rightfully share part of the *duas* we have received from hiring somebody every five minutes for the last five years.

The TeamLease/IIJT Team

Background and Motivations



The previous India Labour Reports have dealt with how a good labour ecosystem can be ensured. This requires an appraisal of how labour supply, labour demand and labour laws are operating in different parts of the country. This in turn involves a measurement of the employment ecosystem (demand), employability issues (supply) and the legal and regulatory regime governing the labour markets. To this, we add a fourth dimension – *the problem of matching* of skills and jobs. Together, a holistic view of the labour and employment ecosystem enables us to pinpoint precise interventions required to ensure that market mechanisms facilitate the high and inclusive growth objectives that India has chosen for itself.

The first component is related to ensuring that good regulatory and legal regime govern the labour and employment markets in India. In other words, a desirable **legal and regulatory ecosystem is one that** smooth, employment related transactions/contracting (see *India Labour Report 2006*) broadly a two pronged effort is required. First, for markets to work properly employees need to be protected against exploitation and poor working conditions. And second, generating greater employment options requires that the legal-regulatory regime does not impinge on regular organized wage employment by businesses. This in turn, required that for economic efficiency the laws should be harmonious with each other, easy to implement, be implemented, and ensure low cost transactions in the labour market.

The second component is one that focuses on issues of employability, or the **employability ecosystem**. New entrants in the job market need to be employable for the new opportunities that growth will throw up. This requires the creation and sustainability of not only a good educational and vocational training system but one that is accessible for all. The critical issue here is that appropriate quality of training facilities needs to be ensured while addressing issues of adequate quantity (or seats). Supply side issues therefore become critical in this respect (See *India Labour Report 2007*). It is well known that currently both the educational and vocational training institutions are incapable of addressing the supply imbalance – both in terms of quantity and quality. A range of action points on policy, regulatory and implementation fronts, and by both central and state governments to address the problem of employability by bringing in greater private sector participation in this space.

The third component is one that ensures that growth is sustained and spread across the country, thereby generating employment opportunities for all; we refer to this as the **employment ecosystem** that is rooted in respect for life and property and robust institutions. The *India Labour Report 2008* addressed the issue of a good employment ecosystem that would facilitate, if not accelerate four transitions: (a) Rural to urban migration, (b) Farm to non-farm switching, (c) Movement from unorganized to organized sector and (d) transfer from subsistence self-employment to quality wage employment.

However, the process of rapid economic growth brings about many mismatches between availability of human skills and requirement. The skills may be available in one geographical area but not available in another, the skill sets themselves may be of one type, whereas requirements are for another that may or may not be closely related. At the same time we find that matching institutions are limited in their coverage. This *India Labour Report 2009* focuses at addressing this fourth problem – the sparse-ness of matching institutions. Matching institutions such as human resource placement firms in the private domain typically focus on the high end of the market and have limited scope, employment exchanges have the right focus but are dysfunctional, and those with limited skills and blue collar workers have to depend upon informal networks that operate only selectively. The market mechanism may eventually create such matching institutions, however there will be a significant time lag in this process. But the need for matching is now, when India is in the middle of its demographic dividend. Consequently policies that can accelerate the development of matching institutions are crucial for inclusive growth.

The Demographic Dividend

As per the governments own estimates between 2001 and 2026, India's population will increase from 1.029 billion to about 1.4 billion; the total population is expected to increase by about 371 million. But the overall population is not the issue - the proportion of population in the working age-group of 15-59 years will increase from 57.7% to 64.3%. To put it another way, those in the 15-59 age-group would have increased by about 308 million during the period. The large numbers of the 15-59 year olds would also reflect in the workforce. It is estimated that by about 2025 India will have 25% of the worlds total workforce.

But beyond 2025 the numbers of the aged will begin to increase even more dramatically, and consequently the window of opportunity is between now and 2025. To tap the demographic dividend, India needs better mortality and morbidity indicators. India needs better education and skills indicators. And India needs a much better labour ecosystem.

Addressing the Mismatches

On the one hand high economic growth will create productive employment options, and on the other its sustenance will be determined by the ability of the demographic dividend to benefit from the opportunities. For ensuring this, India needs to address several mismatches. There is the employment requirement - the skills available mismatch; the sectoral mismatch; and the geographical mismatch. Solutions to address the mismatch problems need to be implemented rapidly, for the window of opportunity is temporary.

Growth in the Indian Economy and the Labour Force

India's nominal per capita GDP is expected to increase from about 1,061 US dollars in 2010 to 2,091 US dollars in 2020, 4,360 US dollars in 2030, 9,802 US dollars in 2040 and 20,836 US dollars in 2050. Of course these are 'most likely' projections and incomes could be even better (or for that matter worse). Education and training related reforms are among the most critical in improving incomes in an inclusive manner, underscored by the fact that India's performance on education-related indicators is quite poor. This is reflected in the Human Development Index (HDI) where India, with all its potential, ranks 134th out of 180 countries in this ranking.

The Education / Skills Mismatch

The government has been attempting to improve basic education through a host of measures in recent decades and achieving some success. But, vocational education and imparting skills remains a critical area of concern. While there are 12.8 million new entrants into the work force every year, the existing training capacity is a small proportion of that. The 15-29 age-group can be used as an illustration. Since post-educational institution training opportunities are limited, 87.8% of the population in this bracket has had no vocational training. Of the 11.3% who received vocational training, only 1.3% received formal vocational training.

Admittedly, the government has been coming up with various initiatives, and more so in the past few years. However, there are several reasons for dissatisfaction with the government's road-map. First, government ministries and departments work in silos; the result is a multiplicity of schemes and ventures with little coordination and a systematic framework for achieving what would be a difficult task. Second, much implementation of such initiatives will need to be done by state governments who have well known constraints in delivering specialized services of this type. Third, though the road-map incorporates possible private sector provisioning too, it is fundamentally based on expansions in the formal public training system. Fourth, quite a bit hinges on improving vocational

education in secondary schools. The increase in enrollment rates at the primary level will no doubt create eventual pressures to improve the secondary school system. But, at the moment, there is no particular reason for optimism.

The Sectoral Mismatch

The bulk of the employment opportunities will occur in sectors where the people have little experience. Rapid growth in employment has been observed in a host of sectors that require greater human capital. However, a large component of the growth in labour force is in rural areas, with low education and skill base, and largely dependent upon the unorganized sector. The kind of occupations that are expected to see increase in employment opportunities are not the same which the current labour force has much experience in; nor do the future entrants have the opportunities to adequately learn such skills.

The Geographical Mismatch

At the same time, a few States account for a large proportion of India's new workforce. But, the bulk of the addition to value added and incomes is expected to be in other States. These disparities in inter-State performance need to be considered against the backdrop of future disparities in growth across States and disparities in accretion to the labour force. Much of the demographic dividend will accrue in States that are backward in terms of any indicator. Between 2010 and 2020, for instance, UP, Bihar and MP will account for 40 percent of the increase in the 15-59 year olds in the country. But they will account for only 10 percent of the total increase in income. During the same period, Maharashtra, Gujarat, TN and Andhra are expected to account for about 45% of the increase in GDP, but will have less than 20% of the addition to the total workforce.

The only way to address the problem of these mismatches is by ensuring that market-based mechanisms function smoothly. This leads us to address four different labour ecosystems and their smooth functioning – employment, employability, legal and matching. And the matching ecosystem has to be in place for efficient functioning of labour markets. Objectives of inclusive growth further necessitate such focus.

The Matching Ecosystem

Broadly the different types of the currently existing matching institutions can be divided into the following types.

- Executive Search Firms (Headhunters)
- Global Recruitment Solution Majors
- Stand-alone National Players
- Local Niche Operators
- Employment Exchanges
- Others

All these channels (barring employment exchanges) tend to be focused toward the high-end of the market. The matching function for the low-end and unorganized segment of the market is still done by unorganized and small-time players. The 968 employment exchanges are largely dysfunctional. The need for efficient clearing houses that match supply and demand is there and is not being met. In 2007, 263,540 people got jobs through employment exchanges and 7.3 million registered themselves at these exchanges in 2006. Most placements were in Gujarat (178,346), Tamil Nadu (23,757), Kerala (10,962), Maharashtra (8,207), West Bengal (5,304) and Rajasthan (4,544). But most new registrations are in Uttar Pradesh (with most of the backlog in West Bengal). A computation with the Delhi government's budget suggests that it costs the government (and,

therefore, citizens) Rs 228,381 for a single placement. And examples of inefficiency abound, an employment exchange exists at Chitradurga in Karnataka that has been unable to provide even a single job in the last four years. The point is that, employment exchanges simply aren't efficient as clearing houses in the matching function, and not up to the task at hand.

The time has come for the Government to outsource the functioning of employment exchanges, incentivize the partners with performance linked payments, and eliminate rules and procedures that come in the way of such a function.

Rating and Ranking the State-Level Labor Ecosystems

The India Labour Report 2006 introduced a method of rating and ranking States on the basis of their overall labour ecosystem. The rating covered performance of States related to education and training, infrastructure, governance, not to mention the legal/regulatory structure - areas that are mostly determined by State-level efforts. The index that resulted from this rating was referred to as the *State Labour Ecosystem Index*. The index was created for the year 1995 and 2005, and has been updated for 2009. The index comprised three sub-indices, Employment Ecosystem Index, Labour Law Environment Index, and Labour Ecosystem Index. Each index consists of a host of variables that reflect conditions in the states and are normalized to correct for differing size and population of the states.

Employment Ecosystem Index

The employment ecosystem index includes variables that reflect the ability of the state to create an environment that aids the generation of jobs. Investment, creation of superior economic conditions such as infrastructure availability, relatively low levels of taxation, action taken against the corrupt and criminals, are measures taken to judge the progress of states.

Delhi followed by Andhra and Rajasthan are the top ranked states under this index. All have improved their positions over their values for 2005. This is mostly due to all round infrastructure improvement.

States	Values 2005	Rank 2005	Values 2009	Rank 2009
Delhi	450	4	694	1
Andhra Pradesh	439	7	668	2
Rajasthan	337	5	633	3

Employability Ecosystem Index

This index consists of variables that reflect the employability levels of the labour force – their education, skills, and vocational training as well as the infrastructure that creates such assets. The role of the public sector is judged to be a negative as it draws human and capital resources away from the private economy and markets.

Karnataka ranks as the topmost State in terms of employability followed by Delhi and Andhra. The large educational and professional education infrastructure is one of the primary causes of Karnataka's high ranking, which has further improved upon during the four year period.

States	Values 2005	Rank 2005	Values 2009	Rank 2009
Karnataka	478	2	607	1
Delhi	450	4	500	2
Andhra Pradesh	439	5	476	3

The Labour Law Environment Index

This index measures the legal, regulatory and procedural regime at the state level and how it facilitates the smooth functioning of labour markets. Variables such as labour relations environment, stringency of laws such as Shops and Establishments Act, Industrial Disputes Act, etc. are included. Maharashtra is not only the topmost among the States' law and regulatory index but has also improved its performance significantly over the period; the improvement has largely been due to relatively better performance on labour relations, and also better performance related to average wages relative to minimum wages. Generally, the southern and western States perform better in generating employment opportunities.

States	Values 2005	Rank 2005	Values 2009	Rank 2009
Maharashtra	449	1	690	1
Andhra Pradesh	348	8	573	2
Karnataka	427	2	501	3

Overall: The Labour Ecosystem Index

The aggregate labour ecosystem index shows that the topmost performers are Andhra, Karnataka and Maharashtra – each has had significant improvements in its index values and ranks. We find that almost all the states have made significant improvement in the 2000s including Bihar (J&K and Assam being the two states that have made some progress in the period 2005-09 but continue to be below their performance levels in 1995. Another state that has not shown any improvement in the post reform period has been Orissa. In fact, it has been worsening in a secular manner.

States	Rank 2009	Rank 2005	Rank 1995	Overall Index Values 2009	Overall Index Values 2005	Overall Index Values 1995
Andhra Pradesh	1	6	8	1288	746	608
Karnataka	2	3	2	1165	765	937
Maharashtra	3	5	4	1131	757	808

Finally, on correlating with future growth, we find that the States that invest in creating a good labour ecosystem are those that grow more rapidly in the long run. In other words, greater employment will not merely come about through greater investment, or only through greater education, or only through labour law reform. All have to play a role.

Authors

Bibek Debroy

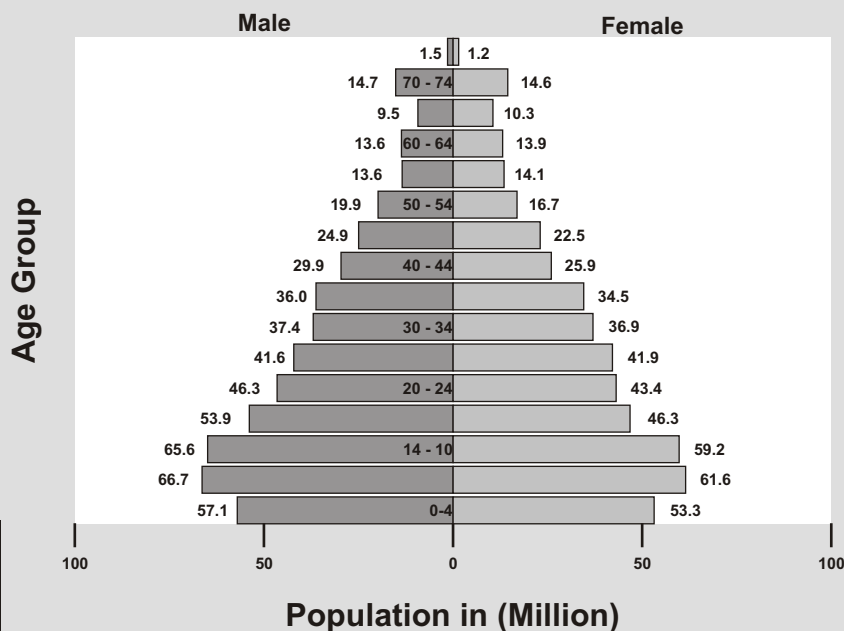
Laveesh Bhandari

Section I : Introduction

Every one talks about India's demographic dividend. On the face of it, the idea of the demographic dividend is a plausible proposition. In the process of demographic transition, the fertility rate falls and there is an increase in the share of population in working ages. This fuels economic growth in diverse ways. The theoretical arguments can be spelled out, as can the empirical, since the contribution of the demographic dividend to accelerated growth has been econometrically established in East Asia and Ireland.

Depending on the mode and assumptions, population projections differ. Here are some points from what can be called the Indian official projection, based on the Report of the Technical Group on Population Projections constituted by the National Commission on Population in 2006. Between 2001 (the last Census) and 2026, India's population will increase from 1.029 billion to 1.4 billion. The proportion of population in the working age-group of 15-59 years will increase from 57.7% to 64.3%. Of the 371 million increase in population between 2001 and 2026, 83% will be in the 15-59 age-group. Since those projections were done, India's population has increased (2009 figure) to 1.17 billion and India accounts for 17.5% of the world population.

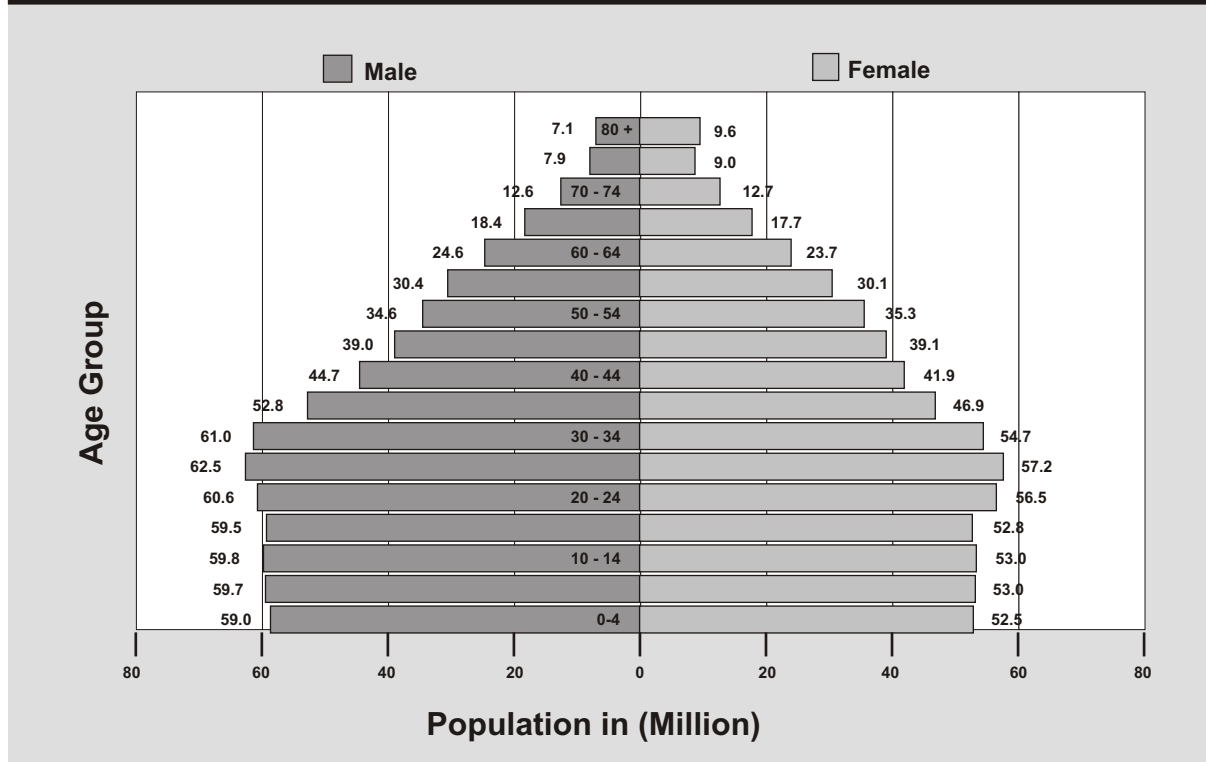
Population of India by Age Distribution in the Year 2001



The proportion of population in aged 15-59 years will rise from 57.7% to 64.3%.

¹ http://nrhm-mis.nic.in/UI/Public%20Periodic/Population_Projection_Report_2006.pdf

Population of India by Age Distribution in the Year 2021



In 2025 India will have 25% of the world's workforce

The world population is aging. The Population Division of the UN did a report on the implications of this aging.² The implications of that aging don't directly concern us here. However, in 2050, for the first time in history, the number of old people (more than 60 years of age) will for the first time exceed the number of young (less than 15 years of age) people. It is not that the Indian population will not age. The proportion of the population in the working age-group of 15-59 years will decline to 59.7% in 2050. The median age will increase to 31.3 years in 2025 and 38.0 years in 2050.

Country	2010	2050	Addition b/w 2010 & 2050	Growth b/w 2010 & 2050
China	166,493	440,439	273,946	165%
India	91,652	315,637	223,985	244%
U.S.A	57,782	110,508	52,726	91%
U.K	14,040	20,869	6,829	49%
France	14,040	22,034	7,516	52%
Germany	14,518	27,873	6,556	31%
Japan	21,317	44,914	6,207	16%
Russia	38,707	36,844	11,466	45%
Brazil	25,378	64,025	44,185	223%

² World Population Aging: 1950 to 2050, <http://www.un.org/esa/population/publications/worldageing19502050/>

As with many other developing countries, India will have to adjust to an aging phenomenon that is markedly faster than what was witnessed by today's developed countries and that raises its own set of problems. India may become the most populous country in the world by 2050. But the point is that the window of opportunity that the demographic dividend presents, with populations aging world over, including in China, is a limited one. Beyond 2030, India will begin to age too. That window of opportunity is between now and 2025. In 2025, 25% of the world's work-force will be in India. But to tap the demographic dividend, India needs better mortality and morbidity indicators. India needs better education and skills indicators.

India doesn't do well on any of these. As one indicator of how badly India performs, consider the Global Competitiveness Index (GCI) of the World Economic Forum. In the 2009-2010 rankings, India is 49th out of 133 countries ranked.³

The GCI is based on twelve pillars of (1) institutions; (2) infrastructure; (3) macroeconomic stability; (4) health and primary education; (5) higher education and training; (6) goods market efficiency; (7) labour market efficiency; (8) financial market sophistication; (9) technological readiness; (10) market size; (11) business sophistication; and (12) innovation. As a country develops, competitive strengths move up the pillars. The earlier pillars are the simpler building blocks of competitiveness. Take for instance, the health and primary education pillar. To all intents and purposes, given India's strengths in labour force, India should rank high on this pillar. Instead, India ranks 101st. And India also ranks 66th in higher education. It is the other pillars that pull India up to a rank of 49th.

Stated differently, India doesn't score well on the pillars it is supposed to. It doesn't draw on its labour advantage. It doesn't tap its demographic dividend. The demographic dividend tends to become a demographic deficit. For this to change, the broader issues of education and health need to be addressed. Each India Labour Report since 2005 has been highlighting this aspect of the so-called demographic dividend. Namely, it is only realized provided the labour ecosystem is facilitative of creating the right conditions.

These conditions cannot be highlighted enough, and will also be replayed in later sections. Broadly we can divide them into ensuring high growth such that employment opportunities are created, ensuring that the supply of human capital is in line with the requirements and aspirations of the masses, and creating an

enabling legal, regulatory and institutional mechanism for a proper matching of supply and demand in India's labour markets.

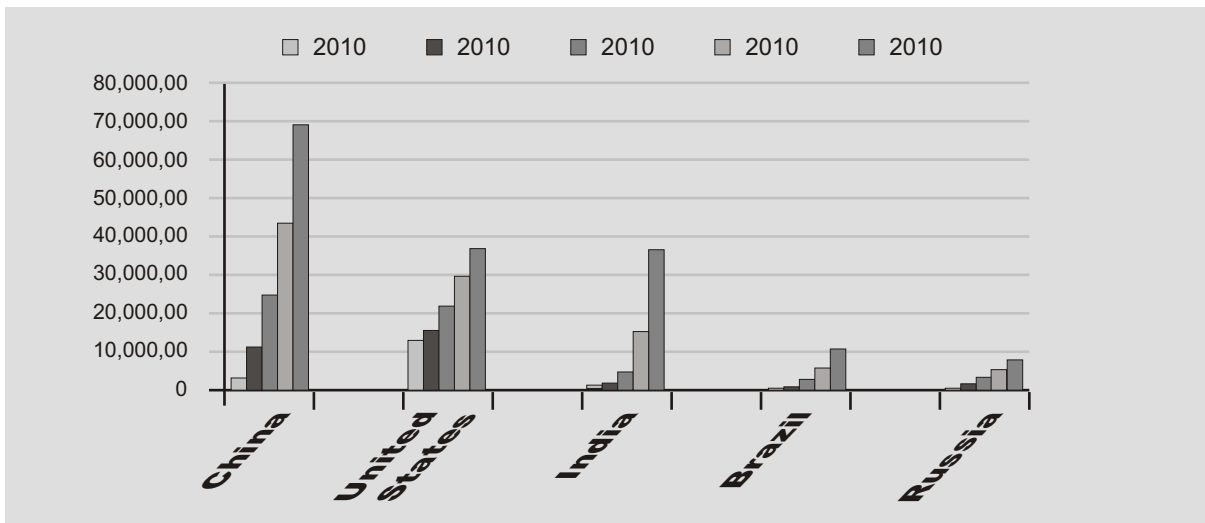
This year's India Labour Report focuses on precisely this element of the labour market jigsaw – the matching problem.

³ <http://www.weforum.org/pdf/GCR09/GCR20092010fullrankings.pdf>

Section II : The Great mismatch

Section 2A: Growth in the Indian Economy and the Labour Force _____

The world will be a vastly different place in 2040 or 2050. Measured in nominal GDP and millions of US dollars, the chart shows the five largest economies in the world in 2050.⁴ These countries are China, United States, India, Brazil and Russia.



Other than the United States, the other four are the BRIC (Brazil, Russia, India, China) countries. Ever since Goldman Sachs produced its first BRIC report⁵, the expression BRIC has become a buzzword, though the explosive growth potential is more for India and China than for Brazil and Russia. In any event, India and China were expected to drive growth on the basis of manufacturing and services, whereas for Brazil and Russia, it was more of a natural resources story. There have been several more BRIC reports since, including the incorporation of Mexico and South Korea. The Indian nominal GDP today is 1.256 trillion US dollars, 12th largest in the world. By 2020, it will increase to 2.848 trillion US dollars. By 2030, it will increase to 6.683 trillion US dollars and by 2040, it will increase to 16.510 trillion US dollars. By 2050, it will become 37.668 trillion US dollars. The nominal per capita GDP will increase from 1,061 US dollars in 2010 to 2,091 US dollars in 2020, 4,360 US dollars in 2030, 9,802 US dollars in 2040 and 20,836 US dollars in 2050. This will mean a complete transformation of the Indian economy.

There is no reason why such numbers are not possible. And by this, one doesn't mean the dislodging from the growth trajectory after the global financial crisis in September 2008. One means slightly longer-term trends and the signs of recovery from the crisis are evident, though more so

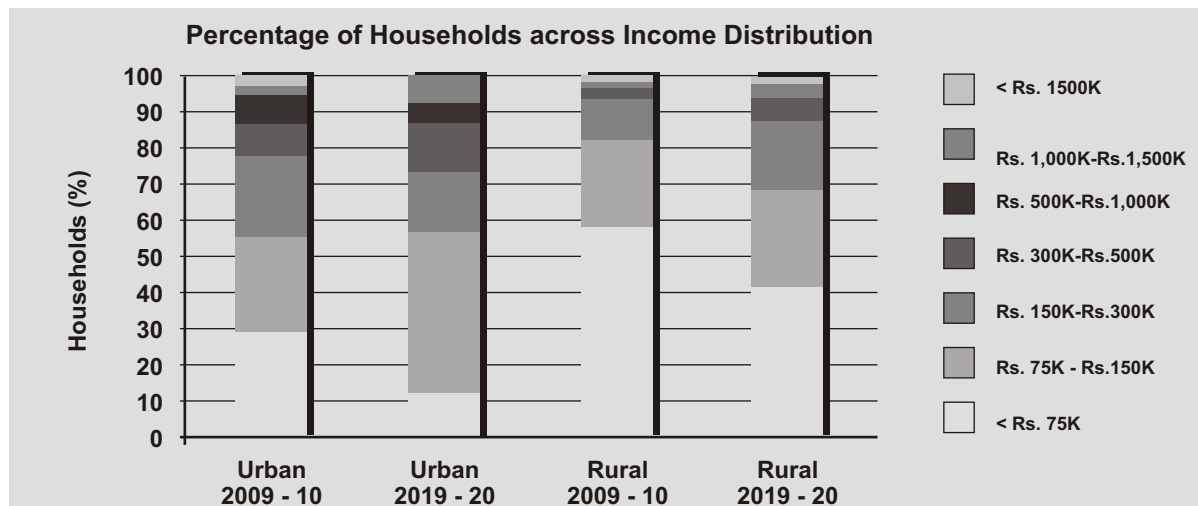
⁴ The chart is reproduced from *The N-11: More Than an Acronym*, Dominic Wilson and Anna Stupnytska, Goldman Sachs, Global Economics Paper No. 153, March 2007, <http://www.chicagobooth.edu/alumni/clubs/pakistan/docs/next11dream-march%20'07-goldmansachs.pdf>

⁵ *Dreaming With BRICs: The Path to 2050*, Dominic Wilson and Roopa Purushothaman, Goldman Sachs, Global Economics Paper No. 99, October 2003, <http://www2.goldmansachs.com/ideas/brics/book/99-dreaming.pdf>

internally, rather than globally. Earlier arguments about high Indian growth rates being unsustainable were sometimes based on relatively lower savings rates in India, as compared to East Asia. However, savings rates in India have inched up to around 38% of GDP. This is comparable to East Asia, though not to China yet. There is thus convergence and the Indian growth is no longer “consumption-driven”, contrasted with “investment-driven” growth in East Asia.

Forces like income growth and shifts in income distribution, which have fueled the increase in the Indian savings rate, aren't going to disappear. They will only be reinforced in the next few decades. The investment rate has also increased and is approaching 40% of GDP. There is no reason why foreign savings shouldn't continue to come into the country. Competition and efficiency have driven down the incremental capital/output ratio and that also facilitates growth. For example, an incremental capital/output ratio of 4 and an investment rate of 40% mean 10% GDP growth. Indian firms, especially in manufacturing, have become globally competitive and there are signs of India becoming integrated into global supply chains in sectors like automobiles, pharmaceuticals and garments.

Some of the regional trade agreements (RTAs) India has signed, particularly with East Asia, has aided this process. Exports of goods and services contribute to incremental GDP growth. The sectoral composition of national income has also been changing. As the share of agriculture and allied activities in national income declines, since industry and services have grown faster, that too improves the growth performance. The infrastructure performance has also improved, not just for telecom, but also roads. Infrastructure expenditure has now increased to 6.5% of GDP.



Finally, there is the demographic dividend and the labour input. While the demographic dividend and India's demographic transition is recognized, its impact on GDP growth is not always factored in. Growth projections are often based on capital inputs alone, ignoring the labour component and the Indian labour force is expected to grow at just below 2.5% a year between now and 2020. This labour contribution should itself add a clear percentage point to GDP growth, problems of education, skills and morbidity notwithstanding. The population is young, with a median age of 24. This does things to entrepreneurship that we imperfectly understand. Population is widely regarded as a problem in India. But consider this. Between 2005 and 2010, the average annual rate of population growth in India has been 1.46%. That gives India a rank of 90th in the world. However, the growth in the labour force is much higher.

This is not to say that India cannot and should not do better. Agendas for pending reform invariably mention education. This is understandable, given India's performance on education-related indicators. This comes out in the Human Development Index (HDI), which is based on three indicators of PPP (purchasing power parity) per capita income, education (adult literacy, gross enrollment ratio) and health (life expectancy). India, with all its potential, ranks 134th out of 180 countries in this ranking.

Section 2B: The Education / Skill Mismatch

Education is important. However, education is not the same thing as skills. And this is the first mismatch we want to flag. Skills require some form of vocational education (VE). Education does not necessarily lead to the development of marketable skills. At best, education does provide a general template and makes it easier to access both formal and informal VE. Despite this, most of the reform discourse is based on education, not skills, though the skills deficit is recognized. The 1964-66 Kothari Commission on Educational Reforms recommended that 25% of students from the secondary level should opt for vocational education. The Eleventh Five Year Plan document says that only 5% of Indian youth between the ages of 19 and 24 have some skills through some form of vocational education, and cites a comparable figure of 96% for South Korea.⁶ Elsewhere, the Plan document quotes the 61st Round of the NSS (National Sample Survey) for the age-group of 15-29 years.⁷ Only 2% are reported to have received formal vocational training and another 8% reported receiving non-formal vocational training.

The table that follows shows our own estimates from the 61st Round of the NSS. In 2002, the S.P. Gupta Special Group⁸ was constituted by the Planning Commission and said that only 6-8% of India's labour force possessed skills, compared to 60% in developed and emerging developing economies. In 2001, the Montek Singh Ahluwalia Task Force⁹, again constituted by the Planning Commission, said that only 5% of the Indian labour force in the age-group of 20-24 possessed vocational skills, compared to between 60 and 80% in industrial countries. While South Korea at 96% may be a bit of an exception, Mexico's figures are 28% and those of Peru 17%. If more numbers are needed, the following drive home the point.¹⁰ 80% of new entrants into the work force have no opportunities for development of skills.

While there are 12.8 million new entrants into the work force every year, the existing training capacity is 3.1 million per year. In both rural and urban India, and for both males and females, attendance rates in educational institutions drop by around 50% in the age group of 15-19 years.¹¹ Simultaneously, labour force participation rates begin to increase in the age group of 15-19 years and by the time it comes to the age group of 25-29 years, it is 95.0% for rural males and 94.4% for urban males. The figures for females are lower at 36.5% in rural India and 22.1% in urban India. The 15-29 age-group can be used as an illustration. Since post-educational institution training opportunities are limited, 87.8% of the population in this bracket has had no vocational training.¹² Of the 11.3% who received vocational training, only 1.3% received formal vocational training.¹³

Vocational Training Status	% of all individuals
Currently receiving formal vocational training	1.30
Received formal vocational training	2.35
Received non-formal and hereditary vocational training	3.93
Others	3.75
Did not receive any vocational training	87.81

⁶ *Eleventh Five Year Plan, 2007-2012, Vol. II, Social Sector*, Planning Commission, Government of India and Oxford University Press, 2008.

⁷ *Eleventh Five Year Plan, 2007-2012, Vol. I, Inclusive Growth*, Planning Commission, Government of India and Oxford University Press, 2008.

⁸ Report of the Special Group on Targeting Ten Million Employment Opportunities per year over the Tenth Plan Period, Planning Commission, May 2002, http://planningcommission.nic.in/aboutus/committee/tsk_sg10m.pdf

⁹ Report of the Task Force on Employment Opportunities, Planning Commission, July 2001, http://planningcommission.nic.in/aboutus/taskforce/tk_empopp.pdf

¹⁰ Ibid. These numbers are based on the 61st round (2004-05) of the NSS.

¹¹ The drop is sharper for rural females and is higher in rural than in urban India.

¹² 85.5% for males and 90.2% for females. Understandably, the numbers without training are higher in rural areas.

¹³ The number is higher for males and higher in urban than in rural areas.

This is despite an apparently impressive delivery system of vocational education. Within the formal system, higher technical education is imparted through professional colleges and lower technical education through vocational education in post-secondary schools. In addition, there can be specialized training through technical institutes and apprenticeship training. The Ministry of Human Resource Development has 1244 polytechnics.¹⁴ There are 5114 Industrial Training Institutes (ITIs)¹⁵ and 6 Advanced Training Institutes (ATIs) run by the Centre. 20,800 public and private sector establishments are covered under the Apprentices Act. There are 17 Ministries and departments of the government of India that impart vocational education in one form or other.¹⁶

Each ministry/department sets up training establishments in its own field of specialization – labour, handlooms, handicrafts, small industry, education, health, women and child development, social welfare and tourism. Of course, this largely caters to the organized sector of the labour force and the unorganized sector, 93% of the labour force, is outside this ambit. But for these people, we have training through the Swarnjayanti Gram Swarajgar Yojana (SGSY), PMRY, KVIC, Krishi Vigyan Kendra (KVK) and Jan Shiksha Sansthan (JSS). Given the numbers cited earlier, this impressive sounding system has clearly not delivered.

If one considers the government's road-map for delivering these skills, such as the one stated in the Eleventh Plan document¹⁷, it has the following components.

- Implement a Skill Development Mission, with Skill Development Programmes involving the private sector, so that placement is also ensured.
- The Skill Development Mission will be supported by the Prime Minister's National Council on Skill Development, the National Skill Development Coordination Board and the National Skill Development Corporation.
- Provide one-time capital grants to private institutions and stipends and subsidies towards fees for SC/ST/OBC/minorities and other BPL (below the poverty line) candidates.
- Enlarge the 50,000 Skill Development Centres.
- Expand the public sector skill development infrastructure by a factor of five. Once expanded, this can be handed over to the private sector for management.
- Complete the up-gradation of 500 industrial training institutes (ITIs).
- Upgrade another 1396 ITIs in PPP mode.
- Establish another 1000 ITIs in PPP mode in under-served regions and if there is demand, set up another 500 ITIs in industrial clusters and special economic zones (SEZs).
- Upgrade 400 government polytechnics and set up another 125 new polytechnics in PPP mode in under-served regions.
- Expand the capacity for vocational education in schools, with a focus on capturing Class VII and Class IX drop-outs.
- Assess skill deficits sector-wise and region-wise.
- Establish a National Skill Inventory and a National Database for Skill Deficiency Mapping.
- Establish a trainee placement and tracking system.
- Draw a distinction between structural, interventional and last-mile unemployability.
- Realign and reposition existing public sector training infrastructure, such as industrial training institutes, polytechnics and revamp vocational education systems in schools.
- Grant these institutions autonomy and if necessary, provide for private sector management through PPP (public private partnerships).

There is much that is laudable in the proposed reforms of the National Skill Development Policy

¹⁴ These offer three-year diploma courses. These figures are from Eleventh Five Year Plan, 2007-2012, Vol. I, Inclusive Growth, Planning Commission, Government of India and Oxford University Press, 2008.

¹⁵ 1896 are run by State governments and 3218 are private. Since 2004-05, 100 ITIs have been identified for up-gradation as centres of excellence.

¹⁶ *Ibid.*

¹⁷ *Ibid.*

- Reposition the employment exchanges for career counseling.
- Establish a national qualifications framework, to establish equivalence and vertical mobility across various forms of vocational education.
- Set up third party accreditation systems, de-linked from the regulator.
- Encourage third party ratings of institutions, on the basis of outcomes.
- Encourage the private sector to formulate skill development plans.

The Prime Minister's National Council on Skill Development, the National Skill Development Coordination Board and the National Skill Development Corporation (NKDC) have since been set up. Beyond the signal that skill development is important and has been recognized as such, it is too early to speculate what will come out of these efforts. Much the same can be said of the "National Skill Development Policy", formulated by Ministry of Labour in March 2009.¹⁸

In terms of reform initiatives proposed, there is much that is laudable:

- First, standardization of affiliation and accreditation and sector-specific Labour Market Information Systems (LMIS). If this is done, if nothing else, there should be better quality of information on skill deficits, sector-wise and region-wise. And there should also be movement on affiliation, accreditation, examination and certification. Much of this is sought to be done through the National Council on Vocational Training (NCVT).
- Second, the Apprentices Act of 1961 will be revamped and the coverage of establishments under the Apprenticeship Training Scheme expanded.
- Third, employment exchanges will be strengthened and upgraded.
- Fourth, all Ministries will devise skill development plans.

Before reacting to the government's road-map, it is worth bearing in mind that globally, there are no clear answers as to the superiority, or otherwise, of public-delivery vis-à-vis private delivery.¹⁹ There are public-private partnership models in several countries in Europe. In Japan, training is essentially provided through the enterprise, whereas in East Asia, delivery is fundamentally public. At the other end, in Britain and USA, delivery is primarily private. Vocational education through schools works well in USA, Sweden, France, South Korea and Taiwan. The apprentice system works well in Germany.

There are no clear answers as to the superiority of public-private partnerships vis-à-vis private delivery

There are four systems for skill-development that exist in India today – the formal public (government) training system, public training that caters to the informal sector, the non-government (both private and NGO) network of formal training institutions and the non-government (primarily NGO-driven) system of informal training.

In the first category one has vocational education through schools²⁰, polytechnics through the Ministry of Human Resource Development, the Craftsmen Training Scheme and the Apprenticeship Training Scheme through the Directorate General for Employment and Training under the Ministry of Labour and Employment. The plans to expand public capacity under the "National Skill Development Policy" are essentially under this segment. In these projections, the present capacity is estimated at 9.9 million and by 2022, it is estimated to increase to 53 million. Of the 53 million capacity in 2022, 15 million will be through the National Skill Development Corporation and 10 million through the Ministry of Labour and Employment.

¹⁹ See the discussion in, Improving Technical Education and Vocational Training, Strategies for Asia, Asian Development Bank, 2004.

²⁰ Especially +2 in secondary schools. A centrally sponsored scheme has existed since 1988. Such training is followed by apprentice training under the Apprenticeship Act.

In the second segment of public training that caters to the informal sector, one has community polytechnics run by the Ministry of Human Resource Development, the Jan Shikshan Sansthan (JSS) for disadvantaged adults²¹, the National Institute of Open Schooling (NIOS), Ministry of Labour and Employment's Skill Development Initiative²², Ministry of Micro, Small and Medium Enterprises' entrepreneurship development programmes and entrepreneurship skill development programmes, Prime Minister's Rozgar Yojana (PMRY)²³, the Swarna Jayanti Shahari Rojgar Yojana (SJSRY)²⁴, the Swarnajayanti Gram Swarozgar Yojana (SGSY)²⁵ and Department of Rural Development's RUDSETIs (Rural Development and Self-Employment Training Institutes)²⁵. Ministry of Textiles, Development Commissioner (Handicrafts), Ministry of Youth Affairs and Sports, Ministry of Women and Child Development, Department of Science and Technology, Ministry of Agriculture, Ministry of Health and Family Welfare, Ministry of Tourism, Ministry of Food Processing, Ministry of Social Justice and Empowerment and Ministry of Minority Affairs also have small programmes with some skill development components. Some programmes introduced by States like Andhra Pradesh, Rajasthan, Tripura, Maharashtra, Orissa and Jammu and Kashmir can also be included in the second segment of public training that caters to the informal sector.

There are several different categories that fit into the third segment of private networks of formal training institutions – for-profit training centres or institutes, training for employment within one's own enterprise, training delivery and finance in partnership with public agencies and foundations with a developmental agenda, as part of corporate social responsibility (CSR). There are several examples in each category.

While NGO initiatives are often informal, some have involved offering of formal Industrial Training Institutes. It is unnecessary to give specific instances.

There are several reasons for dissatisfaction with the government's road-map.

- First, government ministries and departments work in silos. Notwithstanding the reform intentions, it is by no mean obvious that multiplicity is going to decline, with an improvement in coordination.
- Second, much implementation will remain a State subject and there is no guarantee that delivery will improve across all States. Attempts to incentivize reforms at State level have failed in other sectors too.
- Third, though the road-map incorporates possible private sector provisioning too, it is fundamentally based on expansions in the formal public training system. While the formal versus informal or organized versus unorganized dichotomy is often policy-induced, it is necessary to subsume successful examples of delivery in the second, third and fourth categories.
- Fourth, quite a bit hinges on improving vocational education in secondary schools. The increase in enrollment rates at the primary level will no doubt create eventual pressures to improve the secondary school system. But at the moment, there is no particular reason for optimism.

There is no reason for optimism vis-à-vis the current government initiatives

²¹ This can be implemented by NGOs.

²² This was started in 2007.

²³ This was started in 1993 and has an element of training for self-employed entrepreneurs

²⁴ This was started in 1997 and has an element of training in urban areas. It has two separate components for self-employment and wage employment.

²⁵ This also has a training component.

²⁶ The first RUDSETI was set up in Karnataka in 1982. Ministry of Rural Development also has pilots in partnership with IL&FS.

Section 2C: The Sectoral Mismatch

Since skills are not delivered through market-based systems, it shouldn't be surprising that there is a mismatch sectorally too. The supply of skills is not what the market demands. Part of the problem in addressing this question is that data on skills are typically not available, which is why data on educational outcomes are often used as a surrogate indicator of skill formation. Some national, but not disaggregated, data are available through Labour Ministry's Directorate General of Employment and Training (DGE&T). The only other data source is surveys by National Sample Survey Organization (NSSO), though skill surveys by NSSO across different rounds don't quite follow the same methodology.

NSS 1993-94 had a rudimentary question on skills. 30-odd skills were listed, showing a bias towards what can be called traditional skills and these were low-end skills, not skills associated with professional or high-end workers. The skills listed were stenographer, machine-man, fitter, die-maker, electrician, repairer of electronic goods, motor-vehicle driver, fisherman, miner, quarryman, spinner (including *charkha* operator), weaver, tailor, cutter, carpenter, mason, bricklayer, shoemaker, cobbler, moulder, blacksmith, goldsmith, silversmith, boatman, potter, nurse, midwife, basket-maker, wick-product maker, toy-maker, brick-maker, tile-maker, bidi-maker, book-binder, barber and mud-house builder and thatcher. Anyone who did not possess one of these 30-odd skills was classified in the "others" or unskilled category, so that there was a bias in the question asked. With these qualifications to the question asked, only 10% of the population (91.2 million) possessed any skills, with the share slightly higher in urban areas. For instance, in urban areas, 19.6% of men and 11.2% of women possessed skills, with figures of 10% for men and 6.3% for women in rural areas²⁷. The most important skills were tailoring (17.1%), followed by weaving (8.2%). Motor-vehicle drivers, stenographers and bidi-makers accounted for a little over 5%. Based on the 1993-94 data, we have a triple problem – low level of skills, unstructured skills obtained through informal channels and the wrong kind of skills.

We have a triple problem – low level of skills, unstructured skills obtained through informal channels and the wrong kind

In 1999-2000, NSSO sought information on the skill levels of the unemployed. This showed that in rural areas, 16.4% of male unemployed and 18.8% of female unemployed possessed marketable skills. In urban areas, the percentage of male unemployed who possessed marketable skills was almost identical to that in rural areas. However, for unemployed females in urban areas, 32% possessed marketable skills. Among rural male unemployed, 17% had skills of stenographer, 12% of drivers (both vehicles and tractors), 9% of mechanics and 8% of electricians. Among rural female unemployed, 37% had skills of tailoring/cutting and 22% of stenographer²⁸. Among urban male unemployed, 18% had skills of stenographers, 9% of mechanics, 8% of electricians and 7% of drivers. Among urban female unemployed, 30% had skills of stenographer and 22% of tailors. In each of the four categories, more than 5% had computer programming skills. Though these answers are on the basis of self-reporting, three questions arise. First, are these marketable skills for which a market no longer exists, such as for stenographers? This cannot be the answer for mechanics, electricians and drivers, perhaps even tailors. Second, is there a problem with the quality of skills and the lack of formal training and certification? Third, is there a geographical mismatch, with the demand for skills occurring in certain parts of the country and the supply in others?

Only 11.5% of those aged 15-29 years received any training – formal or informal

²⁷ There is a difference between skills of the population and skills of the labour force. But we are glossing over this difference, except where relevant.

²⁸ Since this is a rural figure, this ought to be a bit of a surprise.

In 2004-05, NSSO asked a question about the skill profile of the youth, defined as those between 15 and 29 years. Skills were defined as informal (both hereditary and others) and formal, formal vocational training interpreted as one where there was a structured training programme leading to a recognized certificate, diploma or degree. In 2005, the 15-29 age-group accounted for 27% of the total population, 289.5 million. Of these, only 11.5% (33.4 million) received any training, formal or informal. But within this 33.4 million, 11.1 million had received (or were receiving) formal training. Understandably, formal training was higher in urban than in rural areas. However, informal skill acquisition was evenly spread across urban and rural areas. Table shows the skill profile of the young (15-29), based on NSSO 2004-05, who have had some formal training.

Table 3: Percentage distribution of young (15-29) population with formal vocational training

Sector	Total	Male	Female
Mechanical engineering	7.9	12.32	1.0
Electrical & electronic engineering	12.5	18.2	3.5
Computer trades	30.0	29.9	30.0
Civil engineering & building construction	3.3	4.7	1.2
Chemical engineering	0.3	0.5	0.0
Leather	0.2	0.3	0.1
Textiles	9.8	1.9	22.2
Catering, nutrition, hotels, restaurants	0.9	1.1	0.6
Artisan/craftsman/handicrafts, cottage industries	1.9	1.5	2.5
Creative arts/artists	1.2	0.8	1.9
Agriculture, crop production, food preservation	0.6	0.7	0.4
Non-crop based agriculture	0.5	0.5	0.5
Health & para-medical	6.4	4.3	9.9
Office & business-related	4.8	5.1	5.8
Drivers, mechanics	5.9	9.4	0.5
Beauticians, hair-dressing	1.7	0.0	4.3
Tour operators, travel managers	0.1	0.0	0.0
Photography	0.1	0.2	0.1
Childcare, nutrition, pre-schools, creches	1.0	0.0	2.6
Journalism, mass communications, media	0.3	0.3	0.1
Printing technology	0.5	0.6	0.5
Others	9.1	7.9	10.9

The mismatch between what is delivered and what the market wants, is going to get worse in the future. There is also some tentative identification within the government of where the future skill needs are going to be. For instance, within the services category, Planning Commission²⁹ identifies the following for high growth and employment – IT-enabled services, telecom services, tourism, transport services, health-care, education and training, real estate and ownership of dwellings, banking and financial services, insurance, retail services and media and entertainment services. Other sectors mentioned are energy production, distribution and consumption, floriculture, construction of buildings and construction of infrastructure projects. Within industry groups are automotives, food, chemicals, basic metals, non-metallic minerals, plastic and plastic processing, leather, rubber, wood and bamboo, gems and jewellery and handicrafts, handlooms and khadi and village industries.

In a separate identification from the point of view of demand for skills, there is mention of 20 sectors – automobiles and auto-components, banking/insurance and financial services, building and construction, chemicals and pharmaceuticals, construction materials/building hardware, educational and skill development services, electronics hardware, food processing/cold chain/refrigeration, furniture and furnishings, gems and jewellery, health-care services, ITES or BPO, ITS or software services, leather and leather goods, media, entertainment, broadcasting, content creation and animation, organized retail, real estate services, textiles and garments, tourism, hospitality and travel trade and transportation, logistics, warehousing and packaging. There was also some analysis by the National Commission for Enterprises in the Unorganized Sector (NCEUS)³⁰. At the low end of the skills spectrum, NCEUS identified the following trades with supply/demand mismatches - Construction Workers, Stone Cutter; Salesmen, Shop Assistants; Transport Equipment Operators; Tailors, Dress-makers, Sewers, Upholsterers; Carpenters, Cabinet and Wood; Tobacco Preparers, Tobacco Product Makers; Hair Dresser, Barber, Beautician; House Keeper, Matron, Steward, Cooks, Waiters, Bartenders; Stationary Engine Operators, Equipment Operators, Material Handling, Loaders; Plumber, Welder, Sheet Metal, Structural, Metal Preparers, Erectors; Painting; Arts and Journalists, Maids, Related House keeping Service; Professional Workers; Building Caretaker, Sweeper, Cleaner. Quality issues apart, these are not necessarily the skills being imparted in a structured manner today.

To contrast with the above identifications and with the numbers of Table 3 and also to obtain a better idea of what is likely to happen in the future, we did our own projections, based on NSSO, and the results of these are ;

The mismatch between what is delivered and what the market wants, is going to get worse

²⁹ *Ibid.*

³⁰ *Skill Formation and Employment Assurance in the Unorganized Sector*, NCEUS, August 2008.

Table 4: Projected Employment

NCO1 Digit	Occupation	2004 - 05	2008 - 09	2015 - 16	2020 - 21	2025 - 26
0 - 1	Professional, Technical and Related Workers	13.9	15.5	18.7	21.4	24.7
2	Administrative, Executive and Managerial Workers	11.9	14.2	20.0	26.0	34.5
3	Clerical and Related Workers	10.3	10.3	10.6	11.2	12.4
4	Sales Workers	27.8	31.2	38.5	45.4	54.0
5	Service Workers	14.4	15.9	19.4	22.8	27.2
6	Farmers, Fishermen, Hunters, Loggers and Related Workers	183.6	212.5	278.7	341.3	427.7
7	Textiles, Garments, Food processing, Miners, etc Workers.	18.3	19.8	22.9	25.4	28.3
8	Metals, Wood, Stone, Glass, Plumbers and Toolmakers, etc Workers	15.6	17.1	20.4	23.4	27.4
9	Rubber, Paper, Transport, Construction, etc Workers	41.1	52.7	86.3	127.0	191.9
10	Not Classified	0.9	0.9	1.0	1.0	1.0
Total	Total	337.9	390.1	516.4	645.1	829.0

The total employment in 2008-09 is estimated at 390.15 million and is estimated to increase to 828.95 million, based on the sectoral employment elasticities. This shows that the substantial growth in employment will in two categories – farmers, fishermen, hunters, loggers and workers in rubber, paper, printing, painting, construction and equipment operators. However, the 1-digit NCO categorization of the Table is too aggregated. Hence, a disaggregated analysis at the 2-digit NCO level is shown in Table 5, ignoring workers who are employed in agriculture. This offers a much better understanding of what is likely to occur. This table is interesting because of several reasons. First, it is not invariably the case that demand for skills will increase uniformly across the board. For example, while there may be a remarkable increase in demand for brick-layers and construction workers, there will also be a significant drop in the demand for clerical workers. This reduced demand is something that is rarely flagged.

Second, in identifying sectors where there will be a need for skill-upgradation, there is often a tendency to identify highly-visible and high-value segments. As the following Table shows, increased demand will result in many sectors that are relatively less-visible, low-value and low-wage, and typically characterized as belonging to the informal/unorganized sector, where formal training is rarely the norm. Third, a shortage of skills is associated with a demand/supply mismatch and wage inflation. The table also shows the annual increase in real incomes, assuming supply and demand both increase according to present trends. Sectors with high (such as jurists) and low wage (jewellery and precious metals) inflation are ones that one would have not identified a priori.

³¹ This follows the 1-digit NCO classification and the physical description doesn't show differences between Digits 7, 8 and 9. NCO stands for National Classification of Occupations.

Now we look at which occupations grew the most. Table A3 gives NSSO data for 1993-94 and 1999-2000 for occupations employing more than one million workers. The six-year overall employment growth was 14 per cent. Out of this, the topmost beneficiary was in the category of working proprietors, wholesale and retail trade. That is the number of self-employed grew the highest, by over one and a half times, to 2.6 million. This was followed by manufacturers and agents the number of whom also grew by 71 per cent to 1.2 million.

With construction activity getting a boost, the number of bricklayers and other construction workers shot up close to 10 million, registering a growth of 54 per cent. All other categories had less than 50 per cent job growth in this period, their pace ranging from 44 per cent for directors and manager to 23 per cent clerical and other supervisors.

Table 5A: The aggregated future scenerio, 2008-09 to 2025-26

Sector	Projected Employment in 2025 - 26 (Million)	Incremental Employment in 2008 - 09 to 2025 - 26 (Million)
Professional, technical & related workers	24.7	9.2
Administrative, executive & managerial workers	34.5	20.3
Clerical & related workers	12.4	2.1
Sales workers	54.0	22.8
Service workers	27.2	11.2
Farmers, fishermen, hunters, loggers	427.7	215.2
Workers in mines, metals, wood, chemicals, garments, tannery, food & tobacco	28.3	8.4
Workers in leather, wood, stone, iron, machinery, electrical, sound equipment, plumbers, jewelers, glass	27.4	10.3
Workers in rubber, paper, printing, painting, construction, equipment operators	191.9	139.2
Not classified	1.0	0.1

The sectoral, educational and vocational mismatch is compounded by a geographical mismatch

Table 5B: The aggregated future scenerio, 2008-09 to 2025-26

Incremental Employment in 2008 - 09 to 2025 - 26 (Million)	Sector	Incremental Employment from 2008-09 to 2025-26	% Annual Change in Real Incomes
95	Bricklayers & other construction	47,400,000	3.8
98	Transport equipment operators	11,600,000	3.7
43	Salesmen, shop assistants	8,600,000	6.9
94	Production & related	6,883,721	3.5
97	Material handling & related equipment operators	6,269,618	3.9
53	Maids, house-keeping	4,269,131	4.1
26	WPDM, other services	4,133,830	7.7
15	Teachers	3,193,507	10.6
40	Merchants & shop-keepers	3,100,000	6.9
25	WPDM, transport, storage & communication	3,006,952	6.1
79	Tailors, sewers, upholsterers	2,759,466	2.8
81	Carpenters, wood-workers	2,742,559	3.3
24	WPDM, mining, construction, manufacturing	2,477,991	7.7
93	Painters	2,226,366	3.0
44	Insurance, real estate, securities	2,218,171	7.2
34	Computing machine operators	1,420,988	6.5
64	Plantation labour	1,415,441	3.8
82	Stone-cutters, carvers	1,371,606	4.2
29	Administrative, executive, managerial	1,322,329	10.9
75	Spinners, weavers, knitters, dyers	1,239,584	3.6
78	Tobacco	1,206,283	4.4
19	Professional workers	1,060,857	8.3
56	Hair-dressers, beauticians	1,040,618	3.1
87	Plumbers, welders	898,159	3.0
52	Cooks, waiters, bar-tenders	609,019	3.6
8	Nursing, health technicians	464,436	6.1
22	WPDM, wholesale & retail trade	440,956	8.0
85	Electrical & electronic workers	424,890	7.2
92	Printing	400,347	3.3
71	Miners, quarry-men, well-drillers	377,516	4.0
88	Jewellery, precious metals	343,805	2.8
54	Building caretakers, sweepers	334,980	3.7
50	Hotels, restaurants	323,180	3.0
89	Glass formers, potters	320,226	4.2
23	WPDM, financial institutions	315,683	8.8
33	Book-keepers, cashiers	303,784	6.8
80	Shoe makers, leather goods	294,418	3.4

Table 5B: The aggregated future scenerio, 2008-09 to 2025-26

Incremental Employment in 2008 - 09 to 2025 - 26 (Million)	Sector	Incremental Employment from 2008-09 to 2025-26	% Annual Change in Real Incomes
7	Physicians, surgeons	247,869	7.6
17	Sculptors, painters, photographers	242,278	8.2
55	Launderers, dry cleaners	231,830	4.2
91	Paper & paper board	156,313	2.9
12	Accountants, auditors	149,563	5.1
57	Protective service workers	148,467	3.1
3	Engineering technicians	141,159	6.9
2	Architects, engineers, surveyors	134,923	7.2
74	Chemical processors	117,132	3.6
10	Mathematicians, statisticians	115,706	5.9
45	Money lenders, pawn brokers	108,328	6.9
18	Composers, performing artists	92,669	6.6
73	Wood preparation, paper	86,746	3.8
42	Technical salesmen	79,901	8.2
	Miscellaneous	72,615	-
37	Transport conductors, guards	58,574	5.8
13	Social scientists	54,799	8.8
49	Sales workers	48,944	6.5
20	Elected & legislative officials	48,287	8.3
76	Tanners, pelt dressers	47,196	3.6
21	Administrative & executive officials	44,224	6.9
60	Farm plantation, dairy supervisors	40,516	3.0
86	Broadcasting, sound equipment	29,212	3.4
14	Jurists	27,018	11.4
51	Housekeepers, matrons, stewards	23,430	3.5
16	Poets, authors, journalists	23,333	9.9
39	Telephone & telegraph operators	- 22,634	6.5
36	Transport & communication supervisors	- 23,049	6.6
83	Blacksmiths, tool-makers, machine tool operators	- 52,438	3.4
90	Rubber & plastic	- 73,666	3.0
72	Metal processors	- 101,601	3.7
59	Service workers, n.e.c.	- 102,757	3.3
77	Food & beverage processors	- 165,311	3.7
30	Clerical, supervisors	- 360,995	6.4
35	Clerical, workers	- 371,049	5.8
99	Labourers	- 526,006	4.0

Section 2D: The Geographical Mismatch

These mismatches are compounded by a geographical mismatch. This goes beyond the urban/rural difference mentioned earlier and is even greater at the level of the States. Inter-State variations in performance have increased post-1991 and have also been commented on, the issue of convergence vis-à-vis divergence between States being a contentious issue. There are different ways to look at the economic geography of a country, depending on the administrative division one has in mind. State administrative boundaries are natural dividing lines to use. Academic work and popular impression have often used the BIMARU (Bihar, Madhya Pradesh, Rajasthan, Uttar Pradesh) nomenclature, with a pun on the word *bimar*, meaning ill or sick. While this is still useful as a starting-off point, the States of Bihar, Madhya Pradesh and Uttar Pradesh have now been sub-divided and Orissa is often worse than some of these four traditional BIMARU States. BIMARU thus becomes BIMAROU, not to speak of deprivation, according to some indicators, in Jammu & Kashmir and the North-East. Although undivided Madhya Pradesh and Rajasthan are no longer as deprived and backward as Bihar and the eastern parts of Uttar Pradesh, and Uttarakhand is better off than Uttar Pradesh, many of these traditionally backward areas tend to be concentrated in the North, more specifically the Hindi heartland, where female work participation rates are also low. There have been several studies on inter-State differential performance, especially after 1991. Some of these focus on human development (per capita income, poverty ratios, others on growth rates and still others on investment attractiveness of States.

Table 6 shows a ranking done by us. This has been done for ten years now, following the same methodology.³² If one wants to rank States, there are two broad roads to follow. First, one can administer questionnaires and respondents' reply to specific questions. However, this route presumes that respondents know about all the States one wishes to rank. Typically, that doesn't happen. Respondents know about States they operate in (or are located in). Second, one can use objective data. (There's a third alternative of splicing subjective and objective, but that's neither here nor there.) This ranking uses the objective route, relying solely on data from Central sources, so that non-comparability of data across States is not an issue. The next step is to identify the parameters to rank States.

This study uses eight heads. Prosperity and budget (percentage of population above poverty line, percentage of urban population, per capita capital expenditure, inflation, per capita debt, per capita GSDP (gross State domestic product), per capita revenue of SEBs (State Electricity Boards); law and order (number of policemen per lakh people, ratio of cases filed to pending cases in district and lower courts, share of murders, kidnappings, rapes and molestations to total cognizable crimes); health (infant mortality ratio or IMR, ratio of male IMR to female IMR, percentage of births assisted by trained personnel, percentage of homes having tap water as principal source of water, registered doctors per million population, sex ratio and per capita expenditure on health and family welfare by state Government); education (literacy rate, proportion of 10-plus children having completed primary education, ratio of boys to girls in elementary school, teacher-pupil ratio and expenditure on elementary education per 6 to 14-year-old); consumer market (households owning TVs, number of affluent households in urban and rural areas, per capita deposits in banks and per capita ownership of two-wheelers); agriculture (percentage of cultivated area under cash crops, agriculture GSDP per rural population, agriculture electricity consumption per rural population, food-grain yield, loans extended to farmers and net irrigated area); infrastructure (percentage of homes with electricity, percentage of villages connected with *pucca* roads, per capita road length, bank branches, LPG connections, post offices and telephones); and investment environment (per capita capital expenditure, commercial bank credit and gross capital formation in manufacturing, ratio of factories to number of disputes, ratio of industrial workers to urban 15-59 population, and percentage of sick

SSIs (small-scale industries). Data on all the parameters is normalized. Different variables move in different directions. So to obtain a state's performance under any one head, variables have to be aggregated. We use principal components analysis, which churns out weights in the estimation process itself. Accordingly, for each head, we have scores for each State. Using these scores, States are ranked for each head. That not only gives an inter-state comparison, but also tells us how a state performed in 2009 compared with earlier years. But one should not read too much into ranks. It is the scores that are crucial. There may be little difference in scores for two States, although one is ranked above the other. In such cases, the ranking is not robust. If the difference in scores is large, one can read much more into ranks. But the overall score is also important. Hence, the eight heads are aggregated into an overall performance index for each state. For this aggregation, we report equal weight aggregation, since in this case, there is little difference between equal weights and principal component weights. With these preliminaries, the

Between 2000-01 and 2007-08 Gujarat's economy grew at 10% and Madhya Pradesh's at 4.8%

Table 6: Inner-State Rankings, 2009

	Overall Rank	Primary Health Rank	Primary Education Rank	Prosperity & Budget Rank	Law & Order Rank	Consumer Markets Rank	Infrastructure Rank	Investment Environment Rank	Agriculture Rank
Punjab	1	7	9	2	14	1	1	3	1
Himachal	2	1	1	1	7	3	3	1	15
Tamil Nadu	3	4	5	6	2	8	6	5	3
Kerala	4	3	2	9	1	4	2	13	9
Gujarat	5	10	10	3	3	6	8	2	6
Haryana	6	12	13	4	12	7	5	8	2
Karnataka	7	6	8	8	4	9	7	6	5
Maharashtra	8	8	7	7	9	2	4	4	7
Jammu & Kashmir	9	2	4	5	11	5	9	9	14
Andhra	10	9	12	10	8	11	10	10	4
Uttarakhand	11	5	3	11	13	10	16	7	10
Rajasthan	12	13	17	14	6	12	11	16	12
Madhya Pradesh	13	14	15	17	5	18	12	15	13
West Bengal	14	11	11	13	20	14	13	18	11
Assam	15	15	6	16	17	13	17	19	20
Chhattisgarh	16	19	16	12	10	17	19	11	18
Orissa	17	17	14	18	16	19	15	14	17
Uttar Pradesh	18	18	19	19	18	16	14	17	8
Jharkhand	19	16	18	15	15	15	20	12	19
Bihar	20	20	20	20	19	20	18	20	16

³³ Large States are defined as those that have an area more than 35,000 sq km and a population more than 5 million. Rankings for small States and UTs (Union Territories) are given in *India Today*.

Table 6 shows why one has to be a bit careful when using expressions like convergence or divergence across States. To a large extent, the answer is a function of the variable used to measure differentiation. However, the variability across States is enormous. For instance, between 2000-01 and 2007-08, the annual average real rate of GSDP growth was 7.8% for India, masking disaggregated growth of 10.22% in Gujarat and 4.84% in Madhya Pradesh. 99% of households in Punjab have electricity connections, while the figure for Bihar is 22%. Goa's per capita income is almost ten times that of Bihar. 39.9% of Orissa's population is below the poverty line, while the figure is 4.2% in Jammu and Kashmir. 72.6% of Himachal's households possess television sets, while the figure is 18.2% in Bihar. To dramatize what is happening, let us consider the following.³⁴ Let us assume an all-India real GDP growth rate of 8% till 2020 and let us assume this growth (in income and in population) is distributed among the States in the ratio that it is distributed in today.

Let us now project the per capita income of Indian States in the year 2020, using PPP (purchasing power parity) US dollars, assuming that the exchange rate continues to be what it is today. This gives the following list of PPP per capita dollar income figures in 2020 – Chandigarh (36,926), Puducherry (34,583), Goa (29,074), Delhi (26,702), Karnataka (13,127), Maharashtra (12,075), Gujarat (11,782), Tamil Nadu (11,641), Haryana (10,297), Punjab (10,205), Himachal Pradesh (9,534), West Bengal (8,873), Andaman & Nicobar Islands (8,229), Kerala (8,007), Andhra Pradesh (7,351), Tripura (7,301), Meghalaya (7,122), Manipur (6,246), Rajasthan (6,048), Nagaland (4,908), Jammu & Kashmir (4,212), Arunachal Pradesh (3,837), Jharkhand (3,437), Chhattisgarh (2,928), Madhya Pradesh (2,864), Uttar Pradesh (2,750), Orissa (2,658), Assam (2,559), Bihar (1,698) and all-India (7,587).

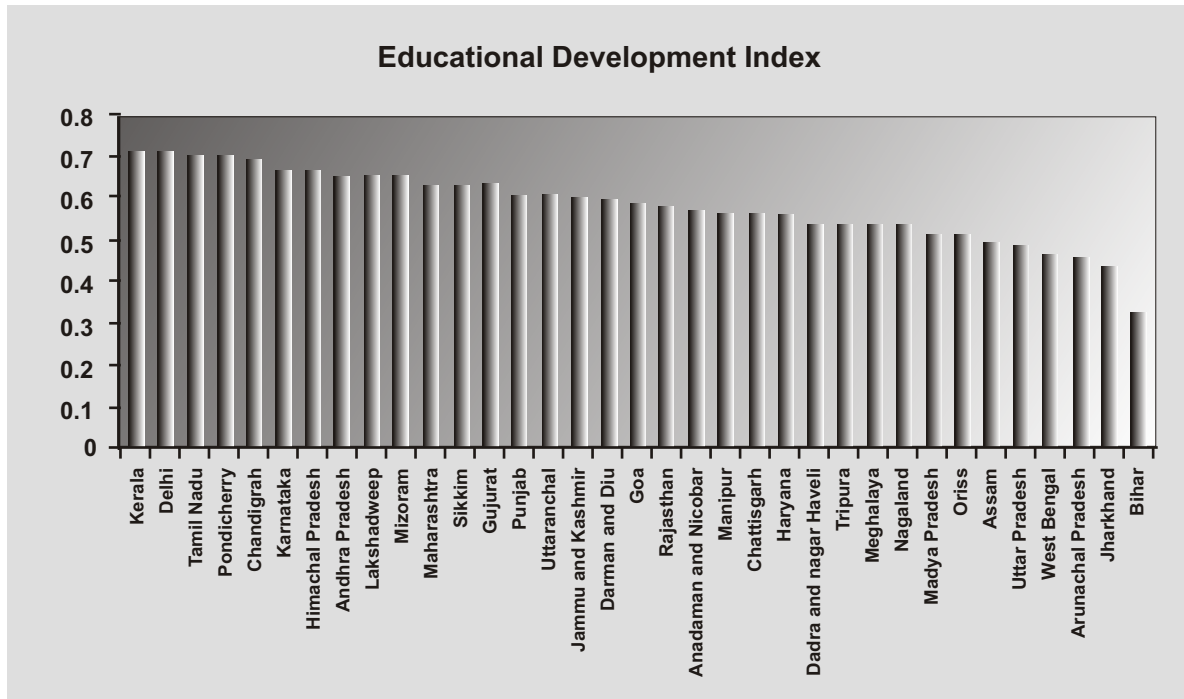
Table 6 also shows the variation that exists across States in educational outcomes, though the focus of Table 6 is on education and not on skills proper. Perhaps one should mention that National University of Educational Planning and Administration (NUEPA) brings out an educational development index that uses its District Information System for Education (DISE) and tracks inter-State performance.³⁵ The graph that follows shows the kinds of disparities that are thrown up. Admittedly, this graph is based on school education alone, with a large focus on elementary education. Nevertheless, it underlines the disparity in performance and the better records of some States as compared to others. Consider the following factoids, derived from the 2004-05 round of the NSS. In a State like Bihar, the unorganized sector share in the labour force is as high as 96.2%. Conversely, in a State like Goa, it is as low as 62.2%. Amongst the youth, as shown in Table 7, most of those with formal training are in Kerala, Maharashtra, Tamil Nadu, Himachal Pradesh and Gujarat.

The unorganized sector share in the labour force of Bihar is 96%

Not surprisingly, Bihar's share is the lowest. A better indicator of the State's performance is the share of the young population that has some variety of formal training. In this, Maharashtra, Kerala, Tamil Nadu, Gujarat and Andhra Pradesh perform well. Is this because there is better training capacity and infrastructure? Is it because industrial activity exists in these States? Is it because there is a positive correlation between some minimum level of educational attainment and acquisition of formal training? The answer is probably a combination of various factors.

³⁴ These computations are based on "The North Versus the Rest, Where Do We Stand Today? And Where Will We Go Tomorrow?" Bibek Debroy and Laveesh Bhandari, *PHD Policy Paper-V*, August 2006.

³⁵ <http://www.nuepa.org/orism.html>



Source : Educational Development Index 2006 - 07, NUEPA

Table 7: Inter-State variations in skill formation among youth, 15-24

State	Share of State in those with formal training (%)	% youth in State with formal training
Jammu & Kashmir	0.4	2.0
Himachal Pradesh	1.0	5.6
Punjab	2.8	4.1
Uttarakhand	0.8	3.9
Haryana	2.8	4.5
Delhi	1.7	4.1
Rajasthan	2.5	1.7
Uttar Pradesh	6.9	1.7
Bihar	0.8	0.5
Assam	0.8	1.4
West Bengal	6.9	3.2
Jharkhand	0.8	1.3
Orissa	1.9	1.9
Chhattisgarh	2.0	3.5
Madhya Pradesh	3.4	2.2
Gujarat	6.6	4.7
Maharashtra	21.7	8.3
Andhra Pradesh	6.6	3.2
Karnataka	4.6	3.1
Kerala	12.2	15.5
Tamil Nadu	11.3	7.6
North-East States	0.4	1.3
Union Territories	1.3	12.6

These disparities in inter-State performance need to be considered against the backdrop of future disparities in growth across States and disparities in accretion to the labour force. Much of the demographic dividend will accrue in States that are backward in terms of any indicator. “Five states with 44% of India's population in 1996 will contribute 55% of population growth in the period 1996 to 2016. Performance of these states will determine the year and size of population at which India achieves the replacement level of fertility and later population stabilization.” These five States are Bihar, Uttar Pradesh, Madhya Pradesh, Rajasthan and Orissa, the first three representing the States in undivided form. Population growth is not the same thing as new entrants into the labour force. But because historical birth rates have been higher in these States, new entrants into the labour force will also be concentrated in these States. Projecting from 2001 to 2020, the India Labour Report for 2006-07 gave annualized labour force growth rates across States and this is shown in Table 8. 2.5%-plus growth rates are expected in Assam, Bihar, Delhi, Haryana, Madhya Pradesh, Rajasthan and Uttar Pradesh. Delhi is different because of in-migration. But other than Delhi, the demographic dividend will accrue in States that are backward. And hence the danger of the demographic dividend turning into a demographic deficit.

Table 8: Annualized growth rate of 20-60 year working group

State	2001	2020	Annual Growth Rate(%)
Andhra Pradesh	38,102,741	56,417,221	2.1
Assam	11,412,148	19,400,971	2.8
Bihar	30,169,003	53,822,566	3.1
Delhi	5,039,401	8,983,655	3.1
Goa	654,786	909,612	1.7
Gujarat	22,771,163	34,416,807	2.2
Haryana	8,932,962	15,382,997	2.9
Himachal Pradesh	3,199,012	4,488,962	1.8
Jammu & Kashmir	4,411,475	6,210,975	1.8
Karnataka	25,038,718	37,314,000	2.1
Kerala	14,428,065	19,557,239	1.6
Madhya Pradesh	27,269,963	45,391,721	2.7
Maharashtra	43,957,491	67,376,836	2.3
Orissa	16,414,670	24,549,272	2.1
Punjab	10,215,242	15,688,885	2.3
Rajasthan	24,956,024	44,588,194	3.1
Tamil Nadu	31,779,407	42,056,781	1.5
Uttar Pradesh	59,067,525	104,231,898	3
West Bengal	37,774,343	58,455,932	2.3
All India	447,392,620	715,946,966	2.5

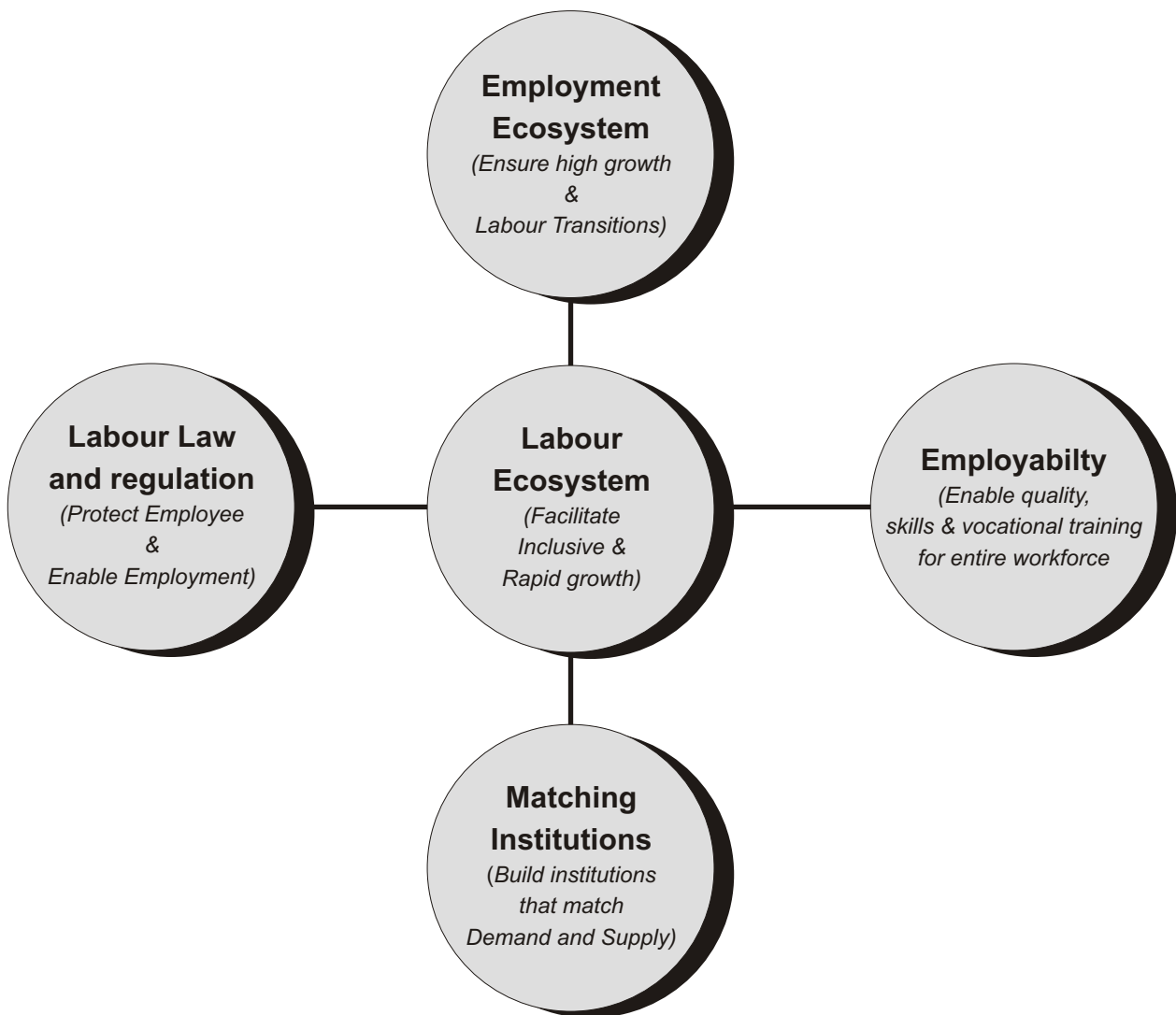
The only way to address the problem of these mismatches is by ensuring that market-based mechanisms function smoothly. This leads us to address four different labour ecosystems and their smooth functioning – employment, employability, legal and matching. We will turn to discussing these in the next sections.

³⁶ National Commission on Population, <http://populationcommission.nic.in/facts1.htm>

Section III : Employment for All - A Systemic Approach

The India Labour Report for various years, has been addressing various facets of ensuring employment for all. Our experience and research conducted by the authors of this study has allowed us to develop a framework that can better help understand the overall Labour ecosystem in the country, and more important, exhaustively categorize the range of efforts required to ensure employment for all and a high growth economy.

The previous India Labour Reports have dealt with how a good labour ecosystem can be ensured. This requires an appraisal of how labour supply, demand and labour laws are operating in different parts of the country. This in turn involved a measurement of the employment ecosystem (demand), employability issues (supply) and the legal and regulatory regime governing the labour markets.



Section 3A: The Legal Ecosystem

This ensures that the policy and regulatory environment is such that it promotes smooth employment related transactions/contracting. There are enough examples of places where a highly educated and skilled workforce was forced to migrate because the overall conditions did not favor a 'smooth' matching between the demand and supply of labour. The legal-regulatory regime plays an important role in this. The objective of a good legal-regulatory climate is to ensure that the costs of transacting in the labour markets be low. This is referred to as *labour law and regulatory structure*.

The *India Labour Report 2006* focused on issues related to the labour law and regulatory aspects and discussed options of consensus building among various pressure groups. The report argued that Labour policy requires to address two issues. First, for markets to work properly being that employees need to be protected against exploitation and poor working conditions. And second, generating greater employment options requires that regulations do not impinge on regular organized wage employment by businesses.

Note that we do not enter into the debate on whether greater powers be given to employers or employees – there is no need to do so. Efficiency enhancement is possible without getting into areas where there is disagreement and discontent. Nor does the study venture into the 'pro-labour' vs. 'pro-employer' legal/regulatory reform debate. The point being that for economic efficiency the laws should be harmonious with each other, easy to implement, be implemented, and ensure low cost transactions in the labour market.

Section 3B: The Employability ecosystem

This ensures that the new entrants in the job market are indeed employable for the new opportunities that growth will throw up. This requires a good educational and vocational training system that is accessible for all.

Purely creating opportunities will of course not necessarily lead to greater employment, if the proper match with the available human capital is not there. Increasingly there is a need for higher levels of education in terms of quality and quantity. With higher productivity becoming a critical aspect of competitiveness in all areas, greater usage of newer technologies, the need for a more knowledgeable, better educated and trained labour force is well recognized across the country.

While regulations and laws are an important concern, employability is therefore no less important. *The India Labour Report 2007* focused on the supply issue by concentrating on issues of employability. It found that currently both the educational and vocational training institutions are incapable of addressing the supply imbalance – both in terms of quantity and quality. The report called for a range of action points on the policy, regulatory and implementation fronts, and by both central and state governments to address the problem of employability.

Section 3C: The Employment Ecosystem

The employment ecosystem ensures that growth is based on robust institutions and respect for life and property. This is to ensure that the current expectations of high and inclusive growth are indeed realized.

As has been mentioned before, there are various factors that affect the likelihood of a state creating a good environment for employment generation. At a very basic level, opportunities for income generation should be created, that itself is a function of many different factors ranging from infrastructure, to governance, to overall investment. This is referred to as the employment ecosystem.

While Indian economic growth is gathering momentum, infrastructure is being built, tax reforms are occurring, and foreign and domestic investment are rising, it is becoming clear that growth by itself would not be able to address the problem of poverty at a pace rapid enough. Inclusive growth is a national objective and one of the few objectives where there is consensus across the political spectrum. *The India Labour Report 2008* addressed the issue of a good employment ecosystem being facilitated by an enabling environment that would facilitate, if not accelerate four transitions:

- (a) Rural to urban migration,
- (b) Farm to non-farm switching,
- (c) Movement from unorganized to organized sector and
- (d) Transfer from subsistence self-employment to quality wage employment.

Section 3D: The Need for Matching Institutions

India has been making significant progress on the structural front. Constraining labour law and regulatory problems while not absent, are considered by many to be less of an issue now than before; recent efforts by both central and state governments are aimed at addressing the problem of quality and skills in the educational system resulting in better employability parameters; and growth is spreading across the country – even the BIMARU states have seen an acceleration of economic growth as per the latest figures by the Central Statistical Organization.

The *India Labour Report 2009* focuses at addressing a fourth problem – that sparse-ness of matching institutions. That is, entities that are able to match the individual supplying his or her skills with the entities that require these skills.

Table 9: Additions to Workforce and Addition to GDP

State	2011	2021	2011 - 2021	2011 - 2021	2010 - 2020
	15 - 59 (yrs)	15 - 59 (yrs)	Addition	Addition (% Distribution)	GSDP (% Distribution)
Andhra	55.8	60.7	4.8	4.3%	9.0%
Assam	19.4	22.3	2.9	2.5%	1.2%
Bihar	57.5	69.2	11.7	10.4%	2.4%
Chhattisgarh	14.8	17.3	2.5	2.2%	1.7%
Delhi	12.7	16.8	4.1	3.6%	5.2%
Gujarat	38.1	43.5	5.4	4.8%	12.2%
Haryana	16.3	19.5	3.3	2.9%	4.8%
Himachal	4.4	4.8	0.4	0.4%	0.8%
J&K	7.5	8.5	1.0	0.9%	0.5%
Jharkhand	19.4	22.9	3.4	3.1%	1.9%
Karnataka	38.9	42.6	3.7	3.3%	6.1%
Kerala	22.5	23.4	1.0	0.9%	5.0%
MP	43.4	52.4	9.0	8.0%	2.1%
Maharashtra	72.6	83.5	11.0	9.7%	15.8%
Orissa	26.3	29.0	2.7	2.4%	3.0%
Punjab	18.1	20.0	1.9	1.7%	2.0%
Rajasthan	40.7	49.4	8.7	7.7%	4.1%
Tamil Nadu	44.6	46.2	1.6	1.4%	7.1%
UP	116.2	140.9	24.7	21.9%	5.6%
Uttaranchal	6.1	7.1	1.0	0.9%	1.1%
WB	59.3	65.1	5.8	5.2%	6.1%
All India	747.1	859.6	112.5	100.0%	100.0%

But reform of these three ecosystems alone will not be enough. Because of the mismatches we mentioned earlier, the matching ecosystem has to be in place for efficient functioning of labour markets. Moreover, increasingly India is shifting its focus away from purely economic growth and towards *inclusive growth*. In other words, it is now apparent that the 'trickle down' of opportunities and incomes is not expected to occur rapidly enough purely through market forces. Hence synergistic mechanisms need to be facilitated to ensure that new opportunities benefit those who are underprivileged and at the lower end of the economic strata.

Section IV : The Matching Ecosystem

India's recruitment industry landscape reveals a variety of player profiles, ranging from large global players to small local players. In recent years, there has been a spate of acquisitions and strategic alliances in this sector, especially after manpower consulting services were opened up for foreign direct investment.

Broadly, there are five classes of players:

- Executive Search Firms (Headhunters)
- Global Recruitment Solution Majors
- Stand-alone National Players
- Local Niche Operators
- Others

However, new forms of competition are emerging on the landscape: Online Recruitment Channels; Internal Referrals; Sector-specialist Training Institutions; and Knowledge Process Outsourcing (KPOs) providing HR services.

Staffing, a new trend in the human resource sector, is also becoming a major segment of the human resources market. But one should forget the wrong impression. All these channels are for the high-end of the market. The matching function for the low-end and unorganized segment of the market is still done by unorganized and small-time players. This is something that the employment exchanges were supposed to do. There are now 968 employment exchanges (including 82 university employment information and guidance bureaux); more over the Government runs a programme known as the Employment Market Information (EMI), ostensibly covering all public sector establishments and all non-agricultural establishments in the private sector that employ 10 or more workers.³⁷ This sounds impressive. But employment exchanges and the EMI don't function efficiently. If one reads the annual report carefully, one discovers that there is plenty of information about training programmes run by employment exchanges and the amount of money that has been spent on them. But there is absolutely no information on how many jobs were obtained through employment exchanges, the match-making role that they were expected to perform.

There have been no attempts, so far, on collecting statistical material on employment and unemployment; the only published figures at present available are the registrations and placements of employment exchanges. These figures cannot, however, give an idea of the total volume of unemployment. Firstly, employment exchanges are confined to industrial towns and the figures of registrations and placements which they compile are restricted mostly to the industrial and commercial sector. Secondly, even in the industrial sector, there is neither compulsion for the unemployed, to register with the exchanges, nor is there any obligation on the part of the employer to recruit labour only through these exchanges. Even the information regarding unemployment among the industrial workers is, thus, inadequate. Thirdly, in the nature of the case, employment exchange statistics cannot indicate the amount of disguised unemployment which is otherwise believed to exist. This means that the extent to which qualified persons have to accept work which does not give them the income which persons with similar qualifications get elsewhere cannot be assessed from these data. There is also to some extent registration of persons who are already in employment and who desire to seek better jobs. This tendency is reported to exist in the more qualified section of registrants, but to the extent a region maintains these persons on the register of employment

³⁷ Annual Report, 2008-09, Ministry of Labour and Employment, <http://labour.nic.in/annrep/annrep0809/Chapter-22.pdf>.

seekers, there is an overestimate of the number unemployed.” This was not written yesterday. It is a quote from India’s First Five Year Plan (1951-56) document. Nothing would substantially change if this were to be written now.

Unorganized sector male wage employment is primarily in manufacturing, construction, trading and transport. For women, trading and transport can be replaced by domestic services. Depending on how we count, the total is around 70 million. These figures are from 2004-05. They must have increased since then and it is a considerable number. Hence, one should ask the question: How do these workers find out jobs are available and decide on temporary or permanent migration? The answer is simple. Barring limited instances of job offers at factory gates, there are only two channels: informal (family, caste, community) networks and labour contractors. This kind of information dissemination cannot be efficient, apart from commissions, exploitative or otherwise, paid to agents. Other than such dis-intermediation and information dissemination being inefficient, there can be no question of skill formation if recruitment is through such informal channels.

Clearly, one needs efficient clearing houses that match supply and demand. Is that not what employment exchanges were supposed to do? Not quite. First, the system started (in 1945) because of the need to resettle demobilized defence service personnel and later (1948) displaced persons from Pakistan. Second, the mandatory Employment Exchanges (Compulsory Notification of Vacancies) Act of 1959, applicable to public sector and private sector units (excluding agriculture) that employ more than 25 people, is not as compulsory as one may think. For the private sector, the mandatory requirement only applies below a threshold level of wages and these have not been revised for years. Whatever the law may say *de jure*, there is nothing mandatory about employment exchanges *de facto*. For the public sector, a Supreme Court judgement in 1996 said that appointments no longer had to be from the pool that was registered with employment exchanges, as long as job vacancies were suitably publicized. The public sector also set up channels like Staff Selection Commissions, Banking Service Commissions and Railway Recruitment Boards. The Directorate General of Employment and Training’s (DGET) website states that, “Therefore Employment Exchanges are left with only stray cases that too at the lower levels of employment. Therefore in the placement side (regular wage employment) the role of Employment Exchanges is definitely going to be not very significant.”³⁸ One cannot be more honest than that.

What do the 968 employment exchanges do? There will be a song and dance about the training services they provide. But training is a separate issue. On matching supply and demand and providing employment, as of 31 December 2007, 39.97 million people were registered with employment exchanges to seek jobs. As far as employment exchange performance is concerned, in 2007, 263,540 people got jobs through employment exchanges and 7.3 million registered themselves with employment exchanges in 2006. To reinforce the spatial point made earlier, most placements were in Gujarat (178,346), Tamil Nadu (23,757), Kerala (10,962), Maharashtra (8,207), West Bengal (5,304) and Rajasthan (4,544).³⁹ If one leaves out Gujarat, the numbers are insignificant. Most new registrations are in Uttar Pradesh (with most of the backlog in West Bengal). Administration and expenditure on employment exchanges are now State subjects, an earlier matching grant from the Centre having run its course.

In 1952, a committee known as the Training and Employment Services Organization Committee (popularly known as the Shiva Rao Committee) was set up and it recommended that the administration of employment exchanges should be handed over to State governments. Till 1969, funding came through central sources. However, once this system was scrapped, though the service *per se* continues to be a joint responsibility, expenditure comes out of State government budgets. Hence, it is difficult to get data on expenditure on employment exchanges, or on what it costs the budget to get people those 263,540 jobs. A back-of-the-envelope computation with the

³⁸ <http://dget.gov.in/>

³⁹ Rajya Sabha Parliamentary Question, 18 March 2008.

Delhi government's budget suggests that it costs the government (and, therefore, citizens) Rs 228,381 for a single placement.⁴⁰ An employment exchange exists in Chitradurga in Karnataka, staffed with bureaucracy. But this has not provided a single job in the last four years and Chitradurga is not an exception. This is not efficient usage of scarce public funds and equally scarce infrastructure in those 968 exchanges. It is far better use of resources to allow the matching function to be undertaken through organized private channels. But this replacement of public employment exchanges by private placement does not seem to have any takers generally. For instance, the budget for 2009-10 promised that employment exchanges will be electronically linked on-line through the Net and applications received centrally. This becomes garbage in and garbage out, since the employment exchanges simply aren't efficient as clearing houses in the matching function.

The Ministry of Labour estimates that there are around 800 private placement agencies that are large and are not fraudulent. If one sets up a regulatory structure, fraudulent ones will be eliminated and informal networks (family, caste, community, contractors) will become large and formalized, ensuring economies of scale and scope in information processing, dissemination and intermediation. Some States have experimented with reforming employment exchanges. In 2002, an Administrative Reforms Commission (the Harnahalli Ramaswamy Commission) recommended that employment exchanges should be downsized. States like Gujarat⁴¹ and Rajasthan⁴² have experimented with allowing private placement agencies to get into the matching function.

Even a State like West Bengal has permitted private training organizations to offer training at employment exchanges. However, no State has yet taken the logical step of winding down public employment exchanges and handing the assets over to private placement agencies for management. Since this has been contemplated for industrial training institutes, there is no reason why it should not be done for employment exchanges as well. Instead, with the UPA government, the wheel has turned in the opposite direction. The argument is that public employment exchanges need to be revamped and computerized, not scrapped. As Indian budgets go, a great sum of money is not involved in computerization. One-third of the employment exchanges are apparently already computerized. However, such plans and talk of ISO certification should be considered against the backdrop of inefficient public expenditure and opportunity costs of those resources. While the skill deficit is important, by privatizing the matching function, one should also ensure more efficient distribution of existing skills.

⁴⁰ *State of Governance: Delhi Citizen Handbook*, Centre for Civil Society, 2006.

⁴¹ These are called *Rozgar Sahay Kendras* in Gujarat, labeled as public-private partnerships. The public employment exchange provides a database of people on the register (the supply of labour, so to speak) and the private agency matches it with demand.

⁴² Job “*melas*” have been organized in Rajasthan.

Section V : Ranking States on their Labor Ecosystem

The India Labour Report 2006 introduced a method of rating and ranking states on the basis of their overall labour ecosystem. The rating covered performance of states related to education and training, infrastructure, governance, not to mention the legal/regulatory structure - areas that are mostly determined by state-level efforts. The index that resulted from this rating was referred to as the *State Labour Ecosystem Index*. The index was created for the year 1995 and 2005. This section reports the performance of states for the year 2009.

The rest of this section proceeds as follows. Section 5A details the method, which is followed in section 5B by a brief discussion of the variables included in the state level index. Section 5C reports some analysis of the figures and what they imply for India's growth progress.

Section 5A: Methodology of the Labour Ecosystem Index

The Labour Ecosystem Index has been calculated for 19 states of India. Ideally, all 35 states and union territories should have been included; however, data unavailability for the smaller states and UTs prevented this. As a result only those states and union territories are included, for which data were available for most of the variables that are used to construct the index.

Further, many variables that would have found a suitable place in this index could not be included as data were available for only a very few states. Eventually about 40 variables were used to generate 28 ratios or measures. These measures cover diverse aspects of labour ecosystem index, and were utilized to arrive at a composite labour ecosystem index. We did however include some measures that we considered to be critical even if data were not available for some of the 19 states covered, as long as all the larger states were covered.

There are many different ways for constructing a composite index. One way to do this is to assign subjective weights to different variables. However, in order to ensure objectivity, this ranking refrains from such an exercise. No subjective weights have been used and each variable is considered to be equally important. That is, all measures get equal weights.

The following steps were followed in constructing the labour ecosystem index:

- Identifying the appropriate variables: The variables in the labour ecosystem index were chosen such that a comprehensive view could be obtained while working within the constraints of data availability.
- Normalizing the variables: The size and composition of the states is not uniform. Indian states vary in their geographical area, topography, social and economic milieu. Depending on the variable and what it aspires to measure, each variable has been appropriately 'normalized'. The normalization is done generally on a per capita basis, later sections give a measure by measure brief on this. We refer to the normalized variables as measures.
- Comparability of data: Since data is collected at the state level, care has to be taken to ensure that the data are defined in the same way for different states and also that they are for the same time point across all states. Further, since the rating and ranking exercise implies that higher values reflect better performance, appropriate ratios have been developed. Often this implied taking an inverse of a particular indicator or subtracting a percentage from 100.

- Creating an index for each category: Simple arithmetic mean was used to calculate the category indices. This implicitly ensured equal weights to each of the variables.
- Calculating a composite/overall index: This final step required all 3-category indices to be put together to come up with a composite indicator for the 19 states. This was done by taking a geometric mean of the three sub-indices.

The last three steps in constructing the labour ecosystem index are now explained in detail.

Creating an index of each variable: An index is obtained for each of the 28 ratios as mentioned earlier. The following formula was used to obtain each of the 28 indices:

$$I_{ij} = \frac{S_{ij} - \text{Min}(S1_j, S2_j, \dots, S19_j)}{\text{Max}(S1_j, S2_j, \dots, S19_j) - \text{Min}(S1_j, S2_j, \dots, S19_j)}$$

Where S_{ij} represents the value of ratio j for state i . The index is constructed for 19 states of India and therefore i ranges from 1 to 19. There are 28 ratios for which the indices have been constructed, $j=1,2,\dots,28$. I_{ij} is the index value that is derived for state i over ratio j . The index value lies between 0 to 1 for each ratio. The state corresponding to index value 0 can be interpreted as having the lowest level or poorest conditions as reflected by that particular variable, and the state with index value of 1 can be said to have the highest level or best condition relative to other states.

Across Time: Note that since one objective of the exercise was also to ensure time comparability the min and max values used are for the year 1995, therefore improvements across time are also captured.

Three sub-indices were thus created:

1. Employment Ecosystem Index
2. Employability Ecosystem Index
3. Labour Law Environment Index

Creating a composite index for each category: Arithmetic mean was used to calculate the category index as follows:

$$C_{ik} = \frac{\sum I_{ijk}}{n}$$

Where C_{ik} is the category index of the i^{th} state for the k^{th} category over n indices within the category. The index values were then multiplied by 1000 for reporting purposes.

Calculating a composite / overall index: Once all the indices for the 28 ratios were obtained, a composite index was obtained using all these indices. A geometric mean of the three sub-indices helped to arrive at the index. The formula used to calculate the composite index is as follows:

Calculating a composite/overall index: Once all the indices for the 28 ratios were obtained, a composite index was obtained using all these indices. A geometric mean of the three sub-indices helped to arrive at the index. The formula used to calculate the composite index is as follows:

$$M_i = (C_{i1} * C_{i2} * C_{i3}) ^ (1/3)$$

Why is the composite index not additive? The reasoning being that all three components have to be present in at high levels for the labour ecosystem of a state to be considered to be 'good'. To give an example, if a state is very good in both opportunities as well as legal climate (say having a value 1 in each), but was '0' in employability, the comprehensive index value would be '0' and not $(1+1+0)/3 = 0.67$. The index values were then multiplied by 1000 for reporting purposes.

Section 5B: The Labour Ecosystem Index

This section discusses the variables that have gone into each of the sub indices. Each sub-index has a set of variables that have been used to create appropriately normalized ratios or measures.

1. The Employment Ecosystem Index

Investment is perhaps the most important component of ensuring that economic growth occurs and as a result greater employment opportunities are created. The intention of businesses to invest in a state, if actually translated into investment, also reveals the superior economic conditions in a state. Infrastructure availability in a state is captured through per capita road length (note that road density, or road length divided by area, is not used as that unnecessarily 'punishes' low population density states). Power surplus and deficit, and telephone penetration (including mobile phones) completes the key infrastructure variables.

States that charge a high level of taxes do create adverse conditions for greater economic activity and therefore the inverse of the state-level commodity and service taxes to GSDP ratio is included. State level action against corruption is captured as the inverse of the ratio of corruption cases pending against those registered. Crime is another important aspect that reveals the overall climate for greater economic activity. The inverse of violent crimes to total reported IPC crimes reveals one more aspect of the economic climate of the state and as a result the overall employment ecosystem.

Most of the data are from a three-year period between 2006-09. The sources are all public and all from government or semi-government institutions.

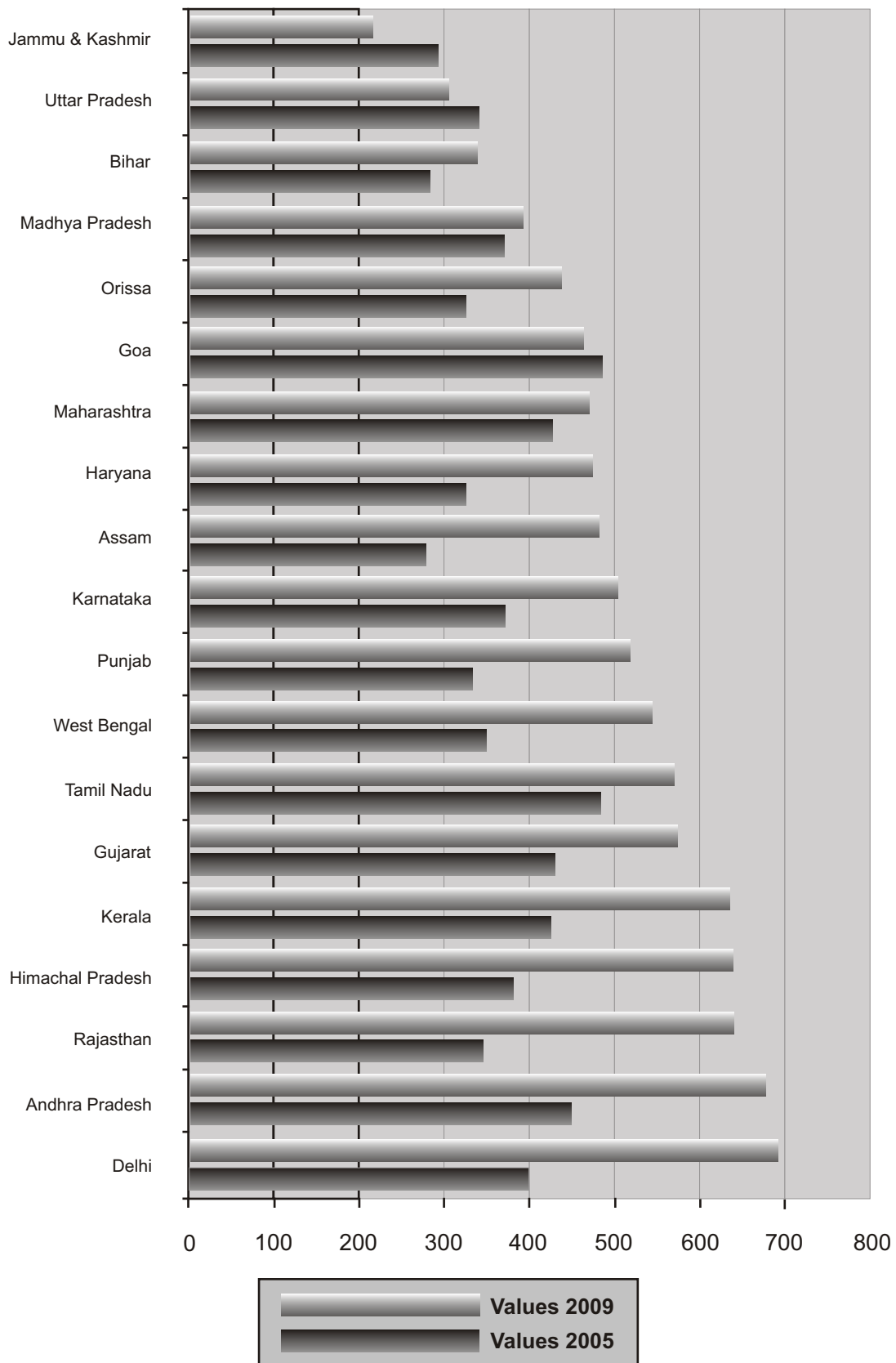
Table 10A: Variables in The Employment Ecosystem Index

S.No	Normalized Variables or Measures	Variables
1	Capital Formation as as share of Gross State Domestic Product	Capital Formation
		GSDP (93-94 constant prices)
2	Percentage of IEMs implemented	No. Of Cases Implemented (IEMs)
		Numbers Filed (IEMs)
3	Actual investment as share of proposed as per IEMs	Investment (Implementation of IEMs)
		Value of Proposed IEMs
4	Per Capita Availability of Roads	Total Length of Roads in India
		Total Population
5	Power Surplus / Deficit as % of Required	Power Supply (Surplus (+) / Deficit (-))
6	Tele Density	Tele Density
7	Gross State Domestic Product (at current prices) by Taxes on Commodities & Services	GSDP (current price)
		Taxes on Commodities and Services (at Current Prices)
8	Inverse of Corruption cases pending investigation divided by cases registered under Prevention of Corruption & Related Acts	Corruption: Total Cases under Investigation
		100 + Corruption: Pending Investigation from Previous Year
9	Inverse of Violent Crimes divided by Cognizable Crime under IPC	Total (reported) cognizable crime under IPC
		100 + Total Violent Crimes

Table 10B: Employment Ecosystem Index

States	Values 2005	Rank 2005	Value 2009	Rank 2009
Delhi	450	4	694	1
Andhra Pradesh	439	7	668	2
Rajasthan	337	5	633	3
Himachal Pradesh	373	3	630	4
Kerala	417	6	626	5
Gujarat	418	1	565	6
Tamil Nadu	475	8	562	7
West Bengal	343	9	539	8
Punjab	324	12	512	9
Karnataka	365	14	497	10
Assam	272	15	473	11
Haryana	318	11	468	12
Maharashtra	416	13	463	13
Goa	478	2	454	14
Orissa	318	10	430	15
Madhya Pradesh	362	16	385	16
Bihar	276	19	330	17
Uttar Pradesh	334	18	297	18
Jammu & Kashmir	284	17	210	19

Figure: Employability Ecosystem Index



Delhi is now the top ranked state in the country in this sub-index on account of improved performance in power supply as well as among the highest tele-densities in the country. Himachal, Rajasthan and Andhra Pradesh's improved performance is driven by tele-density. Gujarat is another state that has shown all-round improvement in infrastructure and has shown significant improvement in both higher tele-density and low taxation vis-à-vis the size of its economy.

Overall most states have improved their performance on this sub-index, a reflection of India finally improving its economic ecosystem, infrastructure in the second half of 2000s. However, states such as J&K have shown a worsening during the period on account of power deficit, investment levels. Moreover, its tele-density through improved, as poorer than that of many other states.

2. The Employability Ecosystem Index

Work Participation Rate is one of the more used measures of employment in the state; high value of the population in the 20-60 age group as a share of total population as well as employment also reveals that there is a large labour force to draw from. However, many states might have a high percentage in this age group but have low levels of human capital. Literacy rate captures a very basic measure of human capital in a state; the percentage of population that has graduated from secondary school is arguably a better measure of human capital.

Education achievement by itself may not be an adequate measure of achievement in the human capital sphere if the quality of the education is not captured. We do so by including the teacher pupil ratio as one measure of quality of education in the state. The state-government's percentage of total budget towards education also reveals the emphasis that the state has put on education and skill formation and that is also included. However in states where public sector employment is high, a larger share of the population is drawn away from the other productive sectors, and therefore the inverse of the public sectors share of employment is included

Increasingly, it is felt that the sunrise sectors will require greater numbers of those who are highly educated. They will help attract economic activity to the state, which in turn will help the trickle down of the benefits that come from these activities. The number of seats in engineering colleges, it is, MBA institutes are normalized by the class XI and XII enrollment to capture the extent of professional human capital creation in the state.

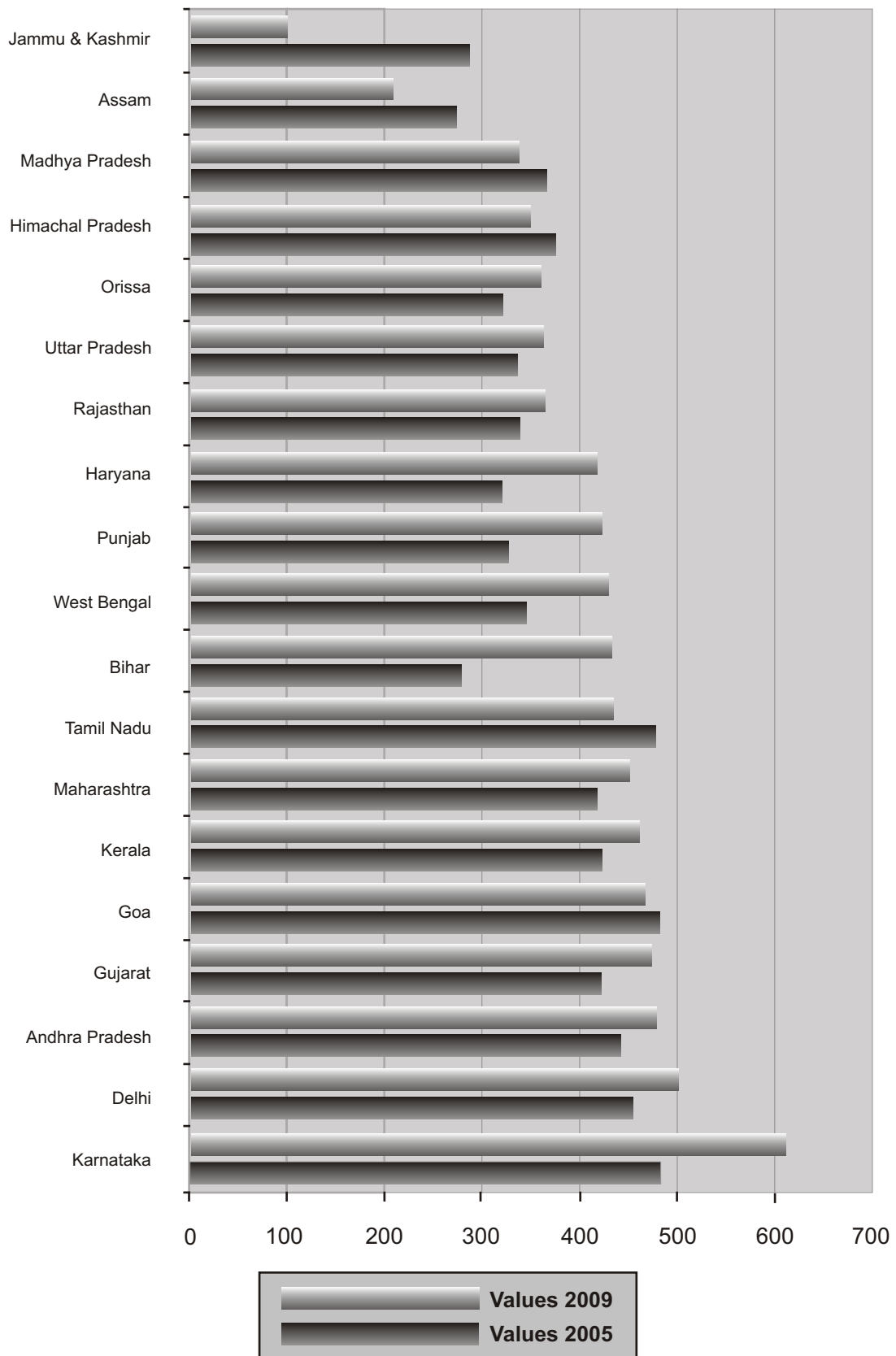
Table 11A: Variables in The Employability Ecosystem Index

S.No	Normalized Variables or Measures	Variables
1	Work Participation Rate	Work Participation Rate
		Population in 20-60 age group
2	Population in 20-60 age group as a share of Total population	Total population
3	Population in 20-60 age group as a share of Total Employees	Population in 20-60 age group
		Total Employees
4	Total employment by Public sector employment	Total Employment
		Employment in Public sector
5	Literacy Rate	Literacy Rate
6	Population graduated from secondary as a share of population	Population graduated from secondary & above
		Total Population
7	Pupil Teacher Ratio	Pupil Teacher Ratio
8	Percentage of Expenditure on Education to Total Budgets	Expenditure on Education
		Revenue Expenditure
9	No. Of Seats available in Engineering by No. Of Enrolment in Class (XI-XII)	No. Of Seats available in Engineering
		No. Of Enrolment in Class (XI-XII)
10	No. Of Seats available in Engineering by No. Of Enrolment in Class (XI-XII)	No. Of Seats available in I.T.I.s
		No. Of Enrolment in Class (XI-XII)
11	No. Of seats available in M.B.A by No. Of Enrolment in Class (XI-XII)	No. Of Seats available in M.B.A
		No. Of Enrolment in Classes (XI-XII)

Table 11B: Employment Ecosystem Index

States	Values 2005	Rank 2005	Value 2009	Rank 2009
Karnataka	478	2	607	1
Delhi	450	4	500	2
Andhra Pradesh	439	5	476	3
Gujarat	418	6	470	4
Goa	478	1	464	5
Kerala	417	7	458	6
Maharashtra	416	8	448	7
Tamil Nadu	475	3	432	8
Bihar	276	18	429	9
West Bengal	343	11	426	10
Punjab	324	14	419	11
Haryana	318	15	415	12
Rajasthan	337	12	363	13
Uttar Pradesh	334	13	359	14
Orissa	318	16	356	15
Himachal Pradesh	373	9	347	16
Madhya Pradesh	362	10	334	17
Assam	272	19	207	18
Jammu & Kashmir	284	17	100	19

Figure: Employability Ecosystem Index



Karnataka has one of the most well spread network of engineering institutions that has been supplemented by an improvement in seats in post graduate management courses as well as skill training institutions. Moreover, recent years have also seen an improvement in teacher pupil ratio in the state.

Recent improvements in Bihar on the economic growth front, are also reflected in this index - we see improved relative performance in this index on account of its growth in work force relative to the employment opportunities available. Moreover, growth in employment is not only on account of its public sector, further improving its performance in this sub-index.

At the other extreme, J&K has also seen a fall in performance on account of a fall in teacher pupil ratio and overall performance in school education relative to its total population. Most states barring J&K and Assam have seen an improvement or a minor fall (TN and Goa). But the latter two states are known to have a good supply system and the fall is not very significant.

3. Labour Law Environment Index

Lockouts and strikes reveal the failure of the legal-regulatory mechanism in synchronizing the interests of the employers and employees. Therefore the inverse of strikes per unit and lockouts per unit are included. Increasingly the service sector has become quite important and the shops and establishment act needs to be enforced adequately. The inverse of the number of prosecutions launched as a share of inspections under the Shops and Establishments Act is included. Purely launching a prosecution however is not enough, the cases need to be disposed off by the courts fairly rapidly, and therefore cases disposed as a share of prosecutions launched under the Shops and Establishments Act are also included. Note that there is much about the shops and establishment act that needs to be changed and in many cases it imposes unnecessary constraints on both the employers and employees.

There are many labour laws and there are many avenues through which employers and employees can come to a satisfactory resolution of their differences. However, we find that there are significant state level differences. The inverse of the employee instituted cases as a share of total labour cases (as counted from the Labour Law Digest for 2008) reveals that the labour law regime is not providing other avenues to the employees. More important, if overall the number of cases as a share of total organized sector employment is high, it reveals, another aspect of the failure of the labour-law regime in smooth resolution of differences.

Last, but perhaps not the least. There have been many state-level amendments to the IDA since its inception. Some studies have attempted to identify these amendments as *pro-labour* or *pro-employer*. We do not agree on such assignment, and consider this distinction to be flawed. Instead we assign labour laws to be either transaction cost reducing or transaction cost increasing. A transaction cost reducing amendment is one that ensures smoother and more rapid resolution of differences. Hence amendments that introduce greater number of steps in any dispute resolution would be classified as transaction cost increasing. And those that facilitate rapid resolution of differences as transaction cost reducing. The Appendix has greater details. Each TC reducing amendment is given a value of 1, and a TC increasing amendment is given a value of -1. Some amendments are considered to be TC neutral and are assigned a value of 0. These are then summed for each state up to the year under consideration; and the net summed value is included as another indicator in this sub-index.

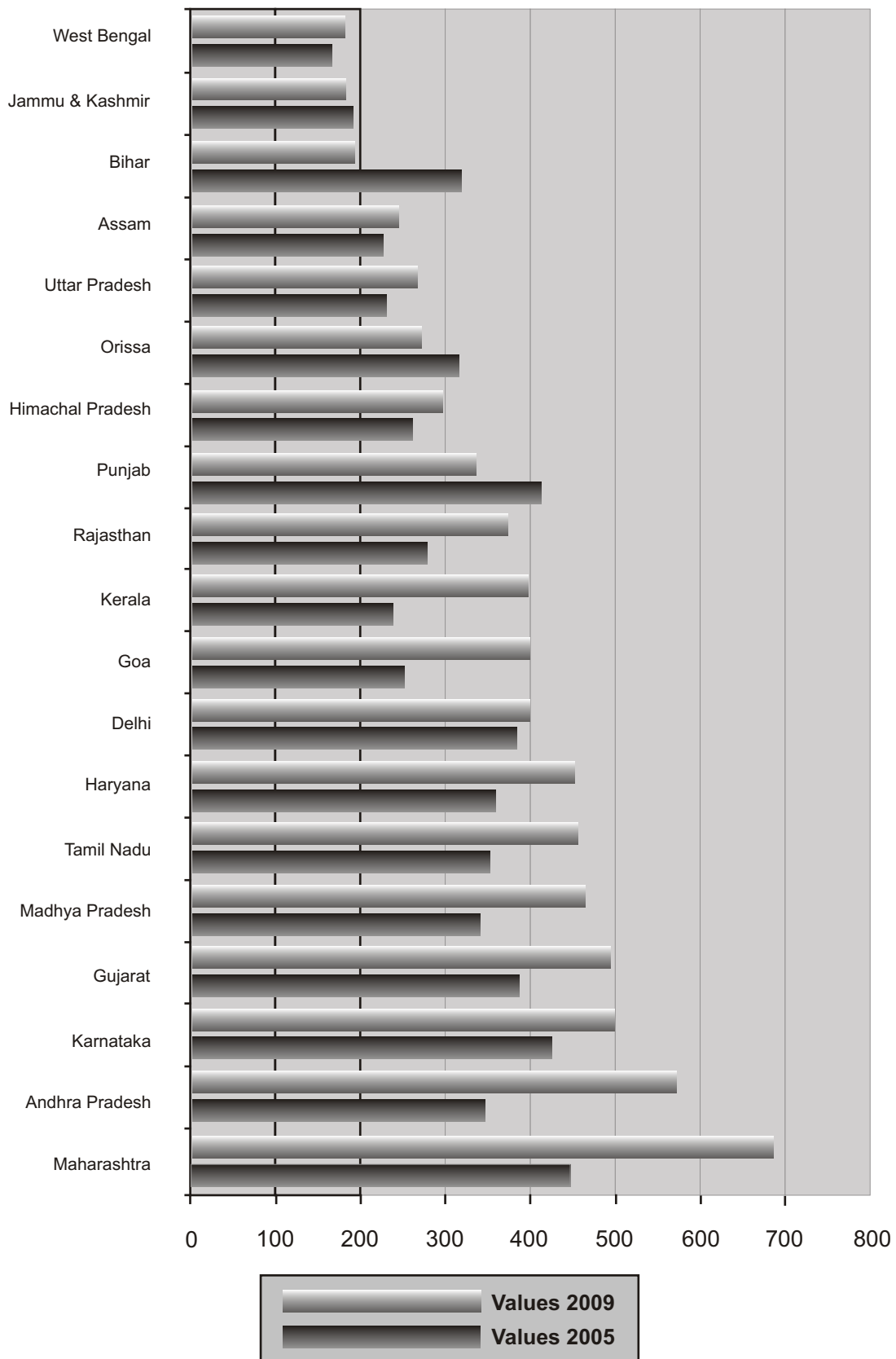
Table 12A: Variables in Labour Law Environment Index

S.No	Normalized Variables or Measures	Variables
1	Average wages of registered workers by Minimum wages for lowest daily paid workers.	Minimum Wages*300
		Average wages of registered workers
2	Inverse of Lockouts per Unit	No of Units
		No. Of Lockouts
3	Inverse of Strikes per Unit	No of Units
		No. Of Strikes
4	Inspections made under Shops & Establishment Act by Prosecutions launched	Inspections made (Shops& Estab. Act)
		Prosecutions Launched (Shops& Estab. Act)
5	Cases disposed Off by the Courts under Shops & Establishment Act by Prosecutions launched	Cases disposed off by the Courts (Shops& Estab. Act) Prosecutions Launched (Shops& Estab. Act)
6	Inverse of Employee instituted Labour cases divided by total Labour related cases	Total Cases (Management & Employees as Appellant)
		No. Of Cases with Employees as Appellant Total Employees
7	Inverse of Total Appellant Cases related to Labour laws divided by No. Of Organized sector Employees	Total Employees
		Total Cases (Management & Employees as Appellant)
8	Net Transaction Cost Reduction	Net transaction cost reducing changes to the Industrial Disputes Act

Table 12B: Labour Law Ecosystem Index Values & Ranks

States	Values 2005	Rank 2005	Value 2009	Rank 2009
Maharashtra	4449	1	690	1
Andhra Pradesh	348	8	573	2
Karnataka	427	2	501	3
Gujarat	387	4	495	4
Madhya Pradesh	344	9	468	5
Tamil Nadu	354	7	456	6
Haryana	361	6	452	7
Delhi	386	5	401	8
Goa	251	14	400	9
Kerala	241	15	398	10
Rajasthan	300	12	374	11
Punjab	413	3	335	12
Himachal Pradesh	263	13	298	13
Orissa	317	11	273	14
Uttar Pradesh	232	16	271	15
Assam	229	17	246	16
Bihar	318	10	197	17
Jammu & Kashmir	193	18	184	18
West Bengal	167	19	181	19

Figure: Labour Law Ecosystem



Maharashtra is not only the topmost among the states' law and regulatory index but has also improved its performance significantly over the period. This is because there has been a rapid increase in its workforce without a commensurate increase in strikes and lock-outs, moreover minimum average wages in the state are relatively higher than the minimum wages in 2009 as compared to the 2005 value.

Andhra as well has seen a relative improvement in its labour climate, but it has also seen an improvement in the efficiency with which labour laws are implemented.

Kerala has also seen some improvement with a fall in number of lockouts & strikes as well as a fall in the number of cases with employees as appellants.

Punjab on the other hand has seen a rise in industrial unrest in the state that has affected its performance adversely. Bihar is another state where we see that the number of units has fallen and average market wages have not risen significantly enough to counteract the rise in its minimum wages.

4. The Labour Ecosystem Index

The overall labour ecosystem index is next calculated. As discussed before, a state has to have relatively high levels of all three sub-indices for it to do better in the overall Labour ecosystem index.

Among all the major states we find that almost all the states have made significant improvement in the 2000s including Bihar (J&K and Assam being the two states that have made some progress in the period 2005-09 but continue to be below their performance levels in 1995. Another state that has now shown any improvement in the post reform period has been Orissa that has been worsening in a secular manner.

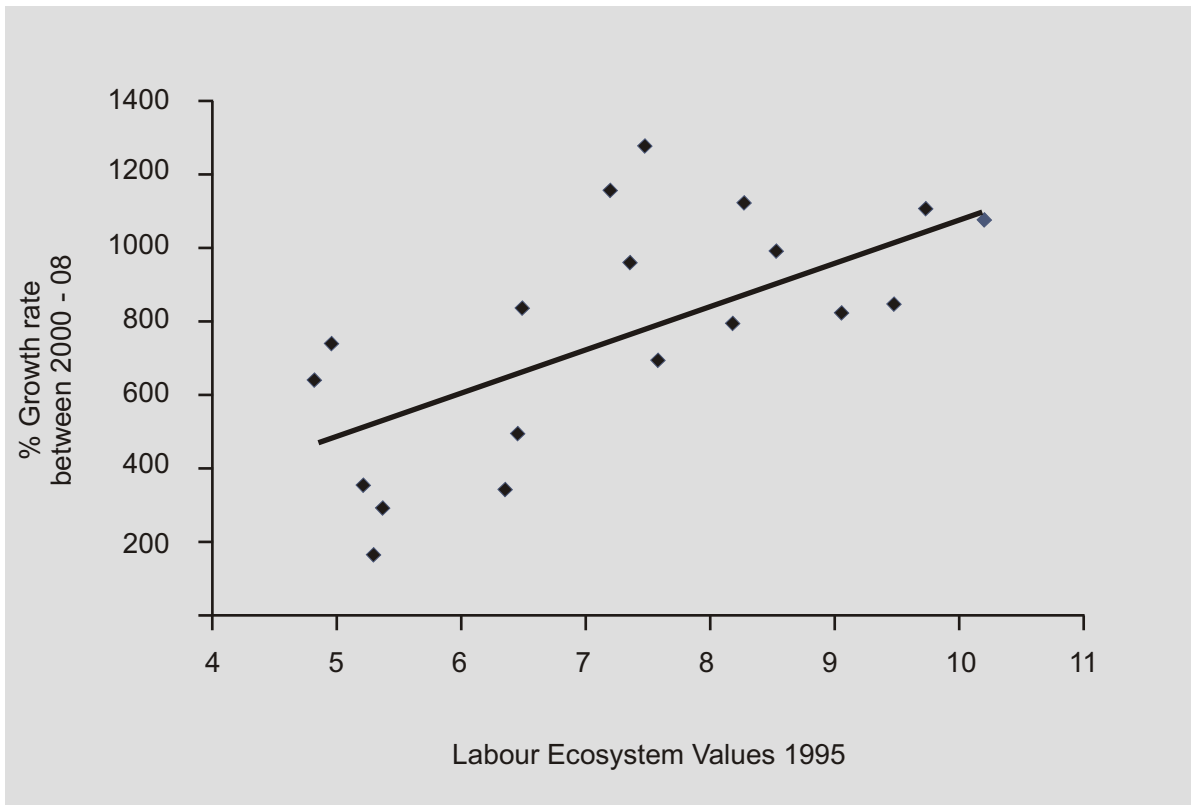
Andhra has been making rapid progress since the middle nineties and this only accelerated during the period 2005 onwards. Moreover, as the preceding discussion shows, this improvement on the labour ecosystem has been on an all-round basis. This has pushed Andhra ahead of Gujarat and Delhi and even ahead of Karnataka. Needless to say, the southern states tend to perform better than the rest, including Kerala – this is not only due to their better human capital creation but also on account of good performance in infrastructure and law and order.

Table 13: Labour Ecosystem Index 2009, 2005 and 1995

States	Rank 2009	Rank 2005	Rank 1995	Overall Index Values 2009	Overall Index Values 2005	Overall Index Values 1995
Andhra Pradesh	1	6	8	1288	748	608
Karnataka	2	3	2	1165	765	937
Maharashtra	3	5	4	1131	757	808
Delhi	4	1	1	1114	835	967
Gujarat	5	2	3	1079	834	829
Kerala	6	11	9	994	564	602
Tamil Nadu	7	4	7	977	763	614
Haryana	8	12	11	850	558	537
Rajasthan	9	9	13	838	573	507
Goa	10	7	5	829	670	712
Punjab	11	8	12	748	617	520
Himachal	12	10	14	699	568	409
Madhya	13	13	6	661	523	703
Orissa	14	14	10	501	510	560
West Bengal	15	15	15	501	307	379
Uttar Pradesh	16	17	17	359	170	297
Bihar	17	18	19	345	136	177
Assam	18	16	16	294	269	360
Jammu & Kashmir	19	19	18	177	126	190

Andhra's example shows that a good labour ecosystem takes some time to create and it yields fruit in the long run. This is also reflected in the figure below that graphs the values of each of the states in 1995 with their growth levels in the 2000s. The strong correlation between a good labour ecosystem and future growth is quite unambiguous.

Figure B5: Labour Ecosystem Index and Future Growth in GSDP



Section 5C: Conclusion

This concluding section has created a Labour Ecosystem Index that has the following characteristics: It is based on objective and measurable criteria and not on subjectivities; it can incorporate all the states and UTs – current and in the future those that may be created; it is comparable across geography and across time; it is based on publicly available information; the data used are all from highly credible institutions; it is politically neutral and rooted in universally acceptable objectives.

Moreover, the Index is one way to put forth the argument that greater employment will not merely come about through greater investment, or only through greater education, or only through labour law reform. All have to play a role.

The results are not surprising; the states that invest in creating a good labour ecosystem are those that grow more rapidly in the long run.

Annexures - I Data on Labour Issues

Table A : Population of India by Age distribution (1981)

Age Group Units	Male	Female
	(in million)	
0-4	42.2	41.3
5 to 9	48.3	45.4
10 to 14	45.3	40.6
15-19	34.0	30.1
20-24	29.0	28.3
25-29	25.8	25.0
30-34	21.6	20.8
35-39	19.9	19.0
40-44	18.0	16.2
45-49	15.4	13.9
50-54	13.8	11.6
55-59	8.5	7.9
60-64	9.4	8.8
65-69	4.8	4.7
70+	8.0	7.8
Age not stated		-
Total	343.9	321.4

Source : Registrar General of India

Table B : Population of India by Age distribution (2001)

Age Group Units	Male	Female
	(in million)	
0-4	57.1	53.3
5 to 9	66.7	61.6
10 to 14	65.6	59.2
15-19	53.9	46.3
20-24	46.3	43.4
25-29	41.6	41.9
30-34	37.4	36.9
35-39	36.0	34.5
40-44	29.9	25.9
45-49	24.9	22.5
50-54	19.9	16.7
55-59	13.6	14.1
60-64	13.6	13.9
65-69	9.5	10.3
70+	14.7	14.6
Age not stated	1.5	1.2
Total	532.2	496.5

Source : Registrar General of India

Table C : Population of India by Age distribution (2021)

Age Group Units	Male	Female
	(in million)	
0-4	59.0	52.5
5 to 9	59.7	53.0
10 to 14	59.8	53.0
15-19	59.5	52.8
20-24	60.6	56.5
25-29	62.5	57.2
30-34	61.0	54.7
35-39	52.8	46.9
40-44	44.7	41.9
45-49	39.0	39.1
50-54	34.6	35.3
55-59	30.4	30.1
60-64	24.6	23.7
65-69	18.4	17.7
70-74	12.6	12.7
75-79	7.9	9.0
80+	7.1	9.6
Total	694.1	645.7

Source : Registrar General of India

Table A : Population aged 60 or over from 1950 to 2050 (medium variant)

Country	India	China	U.S.A	United Kingdom	Russian Federation	Brazil	France	Germany	Japan
Year	(in '000)								
1950	20,052	40,837	19,728	7,854	9,440	2,627	6,793	9,983	6,375
1960	23,311	46,682	24,696	8,832	11,205	3,871	7,708	12,578	8,224
1970	30,210	55,779	29,491	10,467	15,557	5,471	9,212	15,533	11,054
1980	40,339	72,487	35,887	11,243	18,712	7,531	9,324	15,098	14,996
1990	52,901	96,652	42,262	11,910	23,711	10,180	10,981	16,218	21,457
2000	69,790	126,523	46,591	12,251	26,929	14,156	12,235	19,040	29,540
2010	91,652	166,493	57,782	14,040	25,378	19,840	14,518	21,317	38,707
2020	134,533	239,404	77,113	15,780	30,454	29,315	17,587	24,350	42,668
2030	184,611	342,323	93,519	18,466	32,197	41,004	20,192	28,453	44,496
2040	244,759	400,065	102,209	19,539	33,349	52,643	21,512	28,329	46,693
2050	315,637	440,439	110,508	20,869	36,844	64,025	22,034	27,873	44,914
Country	India	China	U.S.A	United Kingdom	Russian Federation	Brazil	France	Germany	Japan
Year	(Percentage)								
1950	5.4	7.5	12.5	15.5	9.2	4.9	16.2	14.6	7.7
1960	5.2	7.2	13.3	16.9	9.3	5.3	16.9	17.3	8.8
1970	5.5	6.8	14.1	18.8	11.9	5.7	18.1	19.9	10.6
1980	5.8	7.4	15.6	20	13.5	6.2	17.3	19.3	12.8
1990	6.1	8.5	16.6	20.8	16	6.8	19.3	20.4	17.4
2000	6.7	10	16.2	20.8	18.4	8.1	20.7	23.2	23.3
2010	7.5	12.3	18.2	22.7	18.1	10.2	23.2	26	30.5
2020	9.8	16.7	22.3	24.2	22.5	14	27.1	30.3	34.5
2030	12.4	23.4	25.3	27.2	25	18.9	30.4	36.5	37.9
2040	15.6	27.5	26.3	27.8	27.3	23.9	31.9	38.1	42.5
2050	17.5	31.1	27.4	28.8	31.7	29.3	32.6	39.5	44.2

Source: World population Prospects: The 2008 Revision Population Database, United Nations

Table A: Population Projections - Statewise

Year	2011	2021	2021-2011	2021-2011
	Population	Population	Addition	Addition (% Distr)
State	('000)			
Andhra Pradesh	84.7	91.5	6.8	4.6%
Assam	30.6	34.2	3.6	2.5%
Bihar	97.7	109.4	11.7	8.0%
Chhattisgarh	24.3	27.3	3.1	2.1%
Delhi	18.5	24.5	6.0	4.1%
Gujarat	59.0	66.1	7.1	4.8%
Haryana	25.4	29.4	3.9	2.7%
Himachal Pradesh	6.8	7.4	0.6	0.4%
Jammu & Kashmir	11.7	13.0	1.3	0.9%
Jharkhand	31.5	35.7	4.2	2.8%
Karnataka	59.4	64.8	5.4	3.7%
Kerala	34.6	36.6	2.0	1.4%
Madhya Pradesh	72.2	83.1	10.9	7.4%
Maharashtra	112.7	127.1	14.4	9.8%
NE States	13.8	15.3	1.5	1.0%
Orissa	40.8	44.1	3.3	2.3%
Punjab	27.7	30.3	2.6	1.8%
Rajasthan	67.8	77.7	9.8	6.7%
Tamil Nadu	67.4	70.9	3.4	2.3%
Uttar Pradesh	200.8	234.6	33.9	23.0%
Uttaranchal	9.9	11.2	1.3	0.9%
West Bengal	89.5	97.4	7.9	5.4%
All India	1,192.5	1,339.7	147.2	100.0%

Source : Registrar General of India

Table B: Projections 15-59 year olds - Statewise

Year	2011	2021	2021-2011	2021-2011
Age Group	15-59 (yrs)	15-59 (yrs)	Addition	Addition (% Distr)
	('000)			
Andhra Pradesh	55.8	60.7	4.8	4.3%
Assam	19.4	22.3	2.9	2.5%
Bihar	57.5	69.2	11.7	10.4%
Chhattisgarh	14.8	17.3	2.5	2.2%
Delhi	12.7	16.8	4.1	3.6%
Gujarat	38.1	43.5	5.4	4.8%
Haryana	16.3	19.5	3.3	2.9%
Himachal Pradesh	4.4	4.8	0.4	0.4%
Jammu & Kashmir	7.5	8.5	1.0	0.9%
Jharkhand	19.4	22.9	3.4	3.1%
Karnataka	38.9	42.6	3.7	3.3%
Kerala	22.5	23.4	1.0	0.9%
Madhya Pradesh	43.4	52.4	9.0	8.0%
Maharashtra	72.6	83.5	11.0	9.7%
NE States	9.2	10.3	1.1	1.0%
Orissa	26.3	29.0	2.7	2.4%
Punjab	18.1	20.0	1.9	1.7%
Rajasthan	40.7	49.4	8.7	7.7%
Tamil Nadu	44.6	46.2	1.6	1.4%
Uttar Pradesh	116.2	140.9	24.7	21.9%
Uttaranchal	6.1	7.1	1.0	0.9%
West Bengal	59.3	65.1	5.8	5.2%
All India	747.1	859.6	112.5	100.0%

Source : Registrar General of India

Table A: Households across Income distribution

Year	2009- 10	2009- 10	2009- 10	2009- 10
Annual Household Income	Urban	Urban	Rural	Rural
Units	(in million)			
< Rs. 75k	22.9	11.7	96.7	76.3
Rs. 75k- Rs.150k	20.4	19.1	40.4	49
Rs.150k- Rs. 300k	16.5	26.1	18.8	32.6
Rs. 300k- Rs. 500k	7.8	16	5.9	12.7
Rs. 500k- Rs. 1,000k	6	14	3.2	7.5
Rs.1,000k-Rs.1500k	1.8	5	0.7	1.8
>Rs. 1500k	2.2	7.5	0.7	1.8
Total	77.7	99.5	166.4	181.5

Note: Household Annual Income in 2009-10 (current) prices.

Table B: Percentage of Households across Income Distribution (%)

Year	2009- 10	2009- 10	2009- 10	2009- 10
Annual Household Income	Urban	Urban	Rural	Rural
Units	(Percentage)			
< Rs. 75k	29.5	11.7	58.1	42
Rs. 75k- Rs.150k	26.3	19.2	24.3	27
Rs.150k- Rs. 300k	21.3	26.2	11.3	18
Rs. 300k- Rs. 500k	10.1	16.1	3.6	7
Rs. 500k- Rs. 1,000k	7.7	14.1	1.9	4.1
Rs.1,000k-Rs.1500k	2.3	5	0.4	1
>Rs. 1500k	2.9	7.5	0.4	1
Total	100	100	100	100

Source: Market Skyline of India, 2009-10, Indicus Analytics

Table 1: Total Employment in India (Millions)

Year	Employment
2004-05	337.88
2008-09	390.15
2015-16	516.41
2020-21	645.09
2025-26	828.95

Source : Indicus Estimates

Table 2: Projected Employment in India (Millions)

NCO 1 digit / Year	2004-05	2008-09	2015-16	2020-21	2025-26
0-1	13.9	15.5	18.7	21.4	24.7
2	11.9	14.2	20.0	26.0	34.5
3	10.3	10.3	10.6	11.2	12.4
4	27.8	31.2	38.5	45.4	54.0
5	14.4	15.9	19.4	22.8	27.2
6	183.6	212.5	278.7	341.3	427.7
7	18.3	19.8	22.9	25.4	28.3
8	15.6	17.1	20.4	23.4	27.4
9	41.1	52.7	86.3	127.0	191.9
10	0.9	0.9	1.0	1.0	1.0
Total	337.9	390.1	516.4	645.1	829.0

Source : Indicus Estimates

Table 3: Additional Employment in India (Millions)

NCO 1 digit / Year	2004-05 to 2008-09	2008-09 to 2015-16	2015-16 to 2020-21	2020-21 to 2025-26	2008-09 to 2025-26
0-1	1.5	3.3	2.7	3.3	9.2
2	2.3	5.7	6.0	8.5	20.3
3	0.0	0.3	0.6	1.2	2.1
4	3.4	7.3	6.9	8.6	22.8
5	1.5	3.5	3.4	4.4	11.2
6	28.9	66.2	62.7	86.3	215.2
7	1.5	3.0	2.5	2.9	8.4
8	1.5	3.3	3.1	3.9	10.3
9	11.6	33.6	40.7	64.8	139.2
10	0.0	0.0	0.0	0.0	0.1
Total	52.3	126.3	128.7	183.9	438.8

Source : Indicus Estimates

Table : Occupation wise Years of Education

NCO2	NCO2 Description	Average Years of Education (number)
0	Physical Scientists	16
1	Physical Science Technicians	8
2	Architects, Engineers, Technologists and Surveyors	14
3	Engineering Technicians	13
4	Aircraft and Ships Officers	13
5	Life Scientists	13
6	Life Science Technicians	12
7	Physicians and Surgeons (Allopathic Dental and Veterinary Surgeons)	14
8	Nursing and other Medical and Health Technicians	11
9	Scientific, Medical and Technical Persons, Other	12
10	Mathematicians, Statisticians and Related Workers	15
11	Economists and Related Workers	14
12	Accountants, Auditors and Related Workers	14
13	Social Scientists and Related Workers	12
14	Jurists	15
15	Teachers	14
16	Poets, Authors, Journalists and Related Workers	13
17	Sculptors, Painters, Photographers and Related Creative Artists	10
18	Composers and Performing Artists	6
19	Professional Workers, n.e.c.	9
20	Elected and Legislative Officials	10
21	Administrative and Executive Officials Government and Local Bodies	15
22	WPDM, Wholesale and Retail Trade	9
23	WPDM Financial Institutions	15
24	WPDM Mining, Construction, Manufacturing and Related Concerns, Manufacturing and Related Concerns	8
25	WPDM and Related Executives, Transport, Storage and Communication	10
26	WPDM, Other Service	9
29	Administrative, Executive and Managerial Workers, n.e.c.	15
30	Clerical and Other Supervisors	13
31	Village Officials	11
32	Stenographers, Typists and Card and Tape Punching Operators	14
33	Book-keepers, Cashiers and Related Workers	13
34	Computing Machine Operators	14

Table : Occupation wise Years of Education (Contd.)

NCO2	NCO2 Description	Average Years of Education (number)
35	Clerical and Related Workers, n.e.c.	11
36	Transport and Communication Supervisors	12
37	Transport Conductors and Guards	9
38	Mail Distributors and Related Workers	9
39	Telephone and Telegraph Operators	11
40	Merchants and Shopkeepers, Wholesale and Retail Trade	8
41	Manufacturers, Agents	9
42	Technical Salesmen and Commercial Travellers	13
43	Salesmen, Shop Assistants and Related Workers	6
44	Insurance, Real Estate, Securities and Business Service Salesmen and Auctioneers and Auctioneers	11
45	Money Lenders and Pawn Brokers	11
49	Sales Workers, n.e.c.	8
50	Hotel and Restaurant Keepers	5
51	House Keepers, Matron and Stewards (Domestic and Institutional)	8
52	Cooks, Waiters, Bartenders and Related Worker (Domestic and Institutional)	5
53	Maids and Other House Keeping Service Workers n.e.c.	3
54	Building Caretakers, Sweepers, Cleaners and Related Workers	4
55	Launderers, Dry-cleaners and Pressers	3
56	Hair Dressers, Barbers, Beauticians and Related Workers	6
57	Protective Service Workers	9
59	Service Workers, n.e.c.	6
60	Farm Plantation, Dairy and Other Managers and Supervisors	7
61	Cultivators	4
62	Farmers other than Cultivators	3
63	Agricultural Labourers	2
64	Plantation Labourers and Related Workers	3
65	Other Farm Workers	3
66	Forestry Workers	3
67	Hunters and Related Workers	4
68	Fishermen and Related Workers	4
71	Miners, Quarrymen, Well Drillers and Related Workers	3
72	Metal Processors	6

Table : Occupation wise Years of Education (Contd.)

NCO2	NCO2 Description	Average Years of Education (number)
73	Wood Preparation Workers and Paper Makers	5
74	Chemical Processors and Related Workers	8
75	Spinners, Weavers, Knitters, Dyers and Related Workers	5
76	Tanners, Fellmongers and Pelt Dressers	6
77	Food and Beverage Processors	5
78	Tobacco Preparers and Tobacco Product Makers	3
79	Tailors, Dress Makers, Sewers, Upholsterers and Related Workers	7
80	Shoe makers and Leather Goods Makers	6
81	Carpenters, Cabinet and Related Wood Workers	6
82	Stone Cutters and Carvers	4
83	Blacksmiths, Tool Makers and Machine Tool Operators	6
84	Machinery Fitters, Machine Assemblers and Precision Instrument Makers (except Electrical)	8
85	Electrical Fitters and Related Electrical and Electronic Workers	9
86	Broadcasting Station and Sound Equipment Operators and Cinema Projectionists	7
87	Plumbers, Welders, Sheet Metal and Structural Metal Preparers and Erectors	7
88	Jewellery and Precious Metal Workers and Metal Engravers (Except Printing)	7
89	Glass Formers, Potters and Related Workers	3
90	Rubber and Plastic Product Makers	6
91	Paper and Paper Board Products Makers	7
92	Printing and Related Workers	9
93	Painters	6
94	Production and Related Workers, n.e.c.	5
95	Bricklayers and Other Constructions Workers	4
96	Stationery Engines and Related Equipment Operators, Oilers and Greasers	7
97	Material Handling and Related Equipment Operators, Loaders and Unloaders	5
98	Transport Equipment Operators	6
99	Labourers, n.e.c.	3
	New Workers Seeking Employment	6
	Workers Reporting Occupations Unidentifiable or Inadequately Described	2
	Workers not Reporting any Occupations	4
		6

Source : Indicus Estimates

Table: Top Growing Non Agriculture Jobs (millions)

NCO2 Description (Not Including Agriculture)	New Jobs between 2008/09 & 2020/21
Bricklayers and Other Constructions Workers	47.40
Transport Equipment Operators	11.60
Salesmen, Shop Assistants and Related Workers	8.60
Production and Related Workers, n.e.c.	6.88
Material Handling and Related Equipment Operators, Loaders and Unloaders	6.27
Maids and Other House Keeping Service Workers n.e.c.	4.27
WPDM, Other Service	4.13
Teachers	3.19
Merchants and Shopkeepers, Wholesale and Retail Trade	3.10
WPDM and Related Executives, Transport, Storage and Communication	3.01
Tailors, Dress Makers, Sewers, Upholsterers and Related Workers	2.76
Carpenters, Cabinet and Related Wood Workers	2.74
WPDM Mining, Construction, Manufacturing and Related Concerns, Manufacturing and Related Concerns	2.48
Painters	2.23
Insurance, Real Estate, Securities and Business Service Salesmen and Auctioneers and Auctioneers	2.22
Computing Machine Operators	1.42
Plantation Labourers and Related Workers	1.42
Stone Cutters and Carvers	1.37
Administrative, Executive and Managerial Workers, n.e.c.	1.32
Spinners, Weavers, Knitters, Dyers and Related Workers	1.24
Tobacco Preparers and Tobacco Product Makers	1.21
Professional Workers, n.e.c.	1.06
Hair Dressers, Barbers, Beauticians and Related Workers	1.04
Plumbers, Welders, Sheet Metal and Structural Metal Preparers and Erectors	0.90
Cooks, Waiters, Bartenders and Related Worker (Domestic and Institutional)	0.61
Nursing and other Medical and Health Technicians	0.46
WPDM, Wholesale and Retail Trade	0.44
Electrical Fitters and Related Electrical and Electronic Workers	0.42
Printing and Related Workers	0.40
Miners, Quarrymen, Well Drillers and Related Workers	0.38
Jewellery and Precious Metal Workers and Metal Engravers (Except Printing)	0.34
Building Caretakers, Sweepers, Cleaners and Related Workers	0.33
Hotel and Restaurant Keepers	0.32
Glass Formers, Potters and Related Workers	0.32
WPDM Financial Institutions	0.32
Book-keepers, Cashiers and Related Workers	0.30
Shoe makers and Leather Goods Makers	0.29
Physicians and Surgeons (Allopathic Dental and Veterinary Surgeons)	0.25

Table: Top Growing Non Agriculture Jobs (millions) (Contd.)

NCO2 Description (Not Including Agriculture)	New Jobs between 2008/09 & 2020/21
Sculptors, Painters, Photographers and Related Creative Artists	0.24
Launderers, Dry-cleaners and Pressers	0.23
Paper and Paper Board Products Makers	0.16
Accountants, Auditors and Related Workers	0.15
Protective Service Workers	0.15
Engineering Technicians	0.14
Architects, Engineers, Technologists and Surveyors	0.13
Chemical Processors and Related Workers	0.12
Mathematicians, Statisticians and Related Workers	0.12
Money Lenders and Pawn Brokers	0.11
Composers and Performing Artists	0.09
Wood Preparation Workers and Paper Makers	0.09
Technical Salesmen and Commercial Travellers	0.08
Misc	0.07
Transport Conductors and Guards	0.06
Social Scientists and Related Workers	0.05
Sales Workers, n.e.c.	0.05
Elected and Legislative Officials	0.05
Tanners, Fellmongers and Pelt Dressers	0.05
Administrative and Executive Officials Government and Local Bodies	0.04
Farm Plantation, Dairy and Other Managers and Supervisors	0.04
Broadcasting Station and Sound Equipment Operators and Cinema Projectionists	0.03
Jurists	0.03
House Keepers, Matron and Stewards (Domestic and Institutional)	0.02
Poets, Authors, Journalists and Related Workers	0.02

Source : Indicus Estimates

Table: Top Reducing Non Agriculture Jobs (millions)

NCO2 Description (Reduction in Jobs Not Including Agriculture)	New Jobs between 2008/09 & 2020/21
Clerical and Related Workers, n.e.c.	-0.37
Clerical and Other Supervisors	-0.36
Food and Beverage Processors	-0.17
Service Workers, n.e.c.	-0.10
Metal Processors	-0.10
Rubber and Plastic Product Makers	-0.07
Blacksmiths, Tool Makers and Machine Tool Operators	-0.05
Transport and Communication Supervisors	-0.02
Telephone and Telegraph Operators	-0.02
Labourers, n.e.c.	-0.53

Source : Indicus Estimates

Table 1: Labour Supply Ecosystem Index Values & Ranks

States	Values 2005	Rank 2005	Value 2009	Rank 2009
Andhra Pradesh	439	5	476	3
Assam	272	19	207	18
Bihar	276	18	429	9
Delhi	450	4	500	2
Goa	478	1	464	5
Gujarat	418	6	470	4
Haryana	318	15	415	12
Himachal Pradesh	373	9	347	16
Jammu & Kashmir	284	17	100	19
Karnataka	478	2	607	1
Kerala	417	7	458	6
Madhya Pradesh	362	10	334	17
Maharashtra	416	8	448	7
Orissa	318	16	356	15
Punjab	324	14	419	11
Rajasthan	337	12	363	13
Tamil Nadu	475	3	432	8
Uttar Pradesh	334	13	359	14
West Bengal	343	11	426	10

Table 2 : Labour Demand Ecosystem Index Values & Ranks

States	Values 2005	Rank 2005	Value 2009	Rank 2009
Andhra Pradesh	439	7	668	2
Assam	272	15	473	11
Bihar	276	19	330	17
Delhi	450	4	694	1
Goa	478	2	454	14
Gujarat	418	1	565	6
Haryana	318	11	468	12
Himachal Pradesh	373	3	630	4
Jammu & Kashmir	284	17	210	19
Karnataka	365	14	497	10
Kerala	417	6	626	5
Madhya Pradesh	362	16	385	16
Maharashtra	416	13	463	13
Orissa	318	10	430	15
Punjab	324	12	512	9
Rajasthan	337	5	633	3
Tamil Nadu	475	8	562	7
Uttar Pradesh	334	18	297	18
West Bengal	343	9	539	8

Table 3 : Labour Law Ecosystem Index Values & Ranks

States	Values 2005	Rank 2005	Value 2009	Rank 2009
Andhra Pradesh	348	8	573	2
Assam	229	17	246	16
Bihar	318	10	197	17
Delhi	386	5	401	8
Goa	251	14	400	9
Gujarat	387	4	495	4
Haryana	361	6	452	7
Himachal Pradesh	263	13	298	13
Jammu & Kashmir	193	18	184	18
Karnataka	427	2	501	3
Kerala	241	15	398	10
Madhya Pradesh	344	9	468	5
Maharashtra	449	1	690	1
Orissa	317	11	273	14
Punjab	413	3	335	12
Rajasthan	300	12	374	11
Tamil Nadu	354	7	456	6
Uttar Pradesh	232	16	271	15
West Bengal	167	19	181	19

Table: Labour Ecosystem Rankings 2009

States / Year	Rank 2009	Rank 2005	Rank 1995	Overall Index Values 2009	Overall Index Values 2005	Overall Index Values 1995
Andhra Pradesh	1	6	8	1288	748	608
Assam	18	16	16	294	269	360
Bihar	17	18	19	345	136	177
Delhi	4	1	1	1114	835	967
Goa	10	7	5	829	670	712
Gujarat	5	2	3	1079	834	829
Haryana	8	12	11	850	558	537
Himachal Pradesh	12	10	14	699	568	409
Jammu & Kashmir	19	19	18	177	126	190
Karnataka	2	3	2	1165	765	937
Kerala	6	11	9	994	564	602
Madhya Pradesh	13	13	6	661	523	703
Maharashtra	3	5	4	1131	757	808
Orissa	14	14	10	501	510	560
Punjab	11	8	12	748	617	520
Rajasthan	9	9	13	838	573	507
Tamil Nadu	7	4	7	977	763	614
Uttar Pradesh	16	17	17	359	170	297
West Bengal	15	15	15	501	307	379

Table 1 : Employment Exchange Statistics-All Categories-Statewise 2005

SL. No.	STATE/UT	Employment Exchanges	Registration	Vacancies Notified	Submission Made	Placement	Live Register	Placement as % of Registration
Units		('000)						
1	Andhra Pradesh	31.0	377.2	13.2	225.0	1.7	2,427.6	0.5%
2	Arunachal Pradesh	10.0	4.9	.	3.6	.	25.1	
3	Assam	52.0	218.4	3.9	73.2	0.4	1,760.8	0.2%
4	Bihar	37.0	98.4	0.3	13.9	.	1,461.8	
5	Chhattisgarh	18.0	191.8	3.2	12.5	2.2	988.5	1.1%
6	Delhi	14.0	94.0	1.7	16.0	0.1	671.4	0.1%
7	Goa	1.0	7.7	1.0	11.1	0.3	100.8	3.9%
8	Gujarat	42.0	193.2	121.5	396.7	92.9	854.6	48.1%
9	Haryana	61.0	261.1	9.7	12.3	3.5	1,064.7	1.3%
10	Himachal Pradesh	15.0	157.4	4.1	113.5	1.7	911.3	1.1%
11	Jammu And Kashn	14.0	16.5	0.1	0.7	.	116.0	
12	Jharkhand	33.0	126.0	0.9	24.6	2.7	1,208.9	2.1%
13	Karnataka	40.0	154.2	6.1	70.2	1.7	1,318.3	1.1%
14	Kerala	86.0	324.4	14.6	204.1	9.7	3,628.6	3.0%
15	Madhya Pradesh	58.0	439.9	3.6	16.1	1.7	2,160.9	0.4%
16	Maharashtra	46.0	680.6	36.8	388.7	15.0	3,991.8	2.2%
17	Manipur	11.0	76.1	24.0	94.6	0.3	532.3	0.4%
18	Meghalaya	11.0	9.0	0.9	2.8	.	38.0	
19	Mizoram	3.0	2.8	0.8	2.3		34.4	
20	Nagaland	7.0	7.8	.	0.3	.	44.3	
21	Orrisa	40.0	127.4	1.4	47.8	2.0	833.2	1.6%
22	Punjab	46.0	86.4	6.8	46.4	2.1	463.1	2.4%
23	Rajasthan	42.0	170.6	12.4	61.5	7.7	793.6	4.5%
24	Sikkim*							
25	Tamil Nadu	34.0	688.8	37.9	276.8	15.3	3,681.2	2.2%
26	Tripura	5.0	24.9	0.2	1.7	0.2	399.7	0.8%
27	Uttaranchal	23.0	151.2	6.2	26.1	2.1	378.9	1.4%
28	Uttar Pradesh	84.0	308.7	20.6	99.2	1.6	1,871.3	0.5%
29	West Bengal	75.0	404.5	11.3	113.8	7.3	7,291.9	1.8%
	Union Territories							
30	A. & N. Islands	1.0	4.6	0.1	0.9	0.1	39.0	2.2%
31	Chandigarh	2.0	7.5	2.8	8.9	0.2	56.0	2.7%
32	D. & N.Haveli	1.0					6.5	
33	Daman And Diu	2.0	0.7	0.1	.	.	10.6	
34	Lakshadweep	1.0	1.2	0.2	4.7		11.2	
35	Pondicherry	1.0	19.3	2.7	31.9	0.7	171.4	3.6%
	Total	947.0	5,437.1	349.2	2,402.0	173.2	39,374.8	3.2%

Source : Directorate General Of Employment & Training, Ministry Of Labour Government Of India

Table 2 : Employment Exchange Statistics-All Categories-Statewise 2000

SL. No.	STATE/UT	Employment Exchanges	Registration	Vacancies Notified	Submission Made	Placement	Live Register	Placement as % of Registration
Units		('000)						
1	Andhra Pradesh	31.0	365.9	12.2	254.4	4.7	3,225.0	1.3%
2	Arunachal Pradesh	8.0	7.4	0.4	1.6	.	21.0	
3	Assam	53.0	137.2	3.5	49.8	1.3	1,442.3	0.9%
4	Bihar	68.0	509.6	13.0	150.5	7.4	3,297.3	1.5%
5	Goa	1.0	11.4	1.5	26.1	0.3	103.0	2.6%
6	Gujarat	41.0	371.1	75.3	234.3	69.4	1,068.3	18.7%
7	Haryana	95.0	230.8	11.6	50.2	4.7	789.4	2.0%
8	Himachal Pradesh	15.0	132.1	3.5	65.2	2.3	885.1	1.7%
9	Jammu And Kashmir	14.0	33.2	0.2	4.8	2.8	167.3	8.4%
10	Karnataka	40.0	380.9	13.6	121.6	8.5	1,965.0	2.2%
11	Kerala	81.0	619.6	27.8	229.8	16.8	4,193.7	2.7%
12	Madhya Pradesh	75.0	398.2	6.6	34.7	3.9	2,549.7	1.0%
13	Maharashtra	42.0	748.4	42.3	270.3	17.4	4,347.4	2.3%
14	Manipur	11.0	10.5	0.7	11.9	.	391.9	
15	Meghalaya	10.0	11.8	0.4	3.4	0.2	35.4	1.7%
16	Mizoram	3.0	15.2	0.8	10.0	0.3	88.7	2.0%
17	Nagaland	7.0	9.4	0.2	1.5	0.1	37.2	1.1%
18	Orrisa	40.0	161.6	3.4	107.1	2.3	968.4	1.4%
19	Punjab	43.0	111.8	8.1	45.7	2.4	527.7	2.1%
20	Rajasthan	38.0	107.6	4.0	43.8	1.6	791.0	1.5%
21	Sikkim*							
22	Tamil Nadu	37.0	603.9	23.6	104.7	13.2	4,659.7	2.2%
23	Tripura	5.0	23.8	0.3	3.6	0.9	303.9	3.8%
24	Uttar Pradesh	103.0	407.8	8.4	103.1	4.0	2,316.9	1.0%
25	West Bengal	75.0	481.6	12.6	285.3	11.7	5,899.4	2.4%
	Union Territories							
26	A. & N. Islands	1.0	3.9	0.2	2.3	0.3	30.8	7.7%
27	Chandigarh	2.0	12.6	2.4	14.2	0.5	92.9	4.0%
28	D. & N.Haveli	1.0	0.6	0.6	5.2	.	4.7	
29	Delhi	14.0	115.6	2.5	43.8	0.3	991.0	0.3%
30	Daman And Diu	2.0	1.7	0.8	4.3	.	7.3	
31	Lakshadweep	1.0	0.9	.	0.1	.	10.2	
32	Pondicherry	1.0	15.9	2.0	39.7	0.2	132.3	1.3%
	Total	958.0	6,041.9	284.5	2,322.8	177.7	41,343.6	2.9%

Source : Directorate General Of Employment & Training, Ministry Of Labour Government Of India

Table: Employment Exchange Statistics-All India-All Categories-1996-2005

Year	Employment Exchanges	Registration	Vacancies Notified	Submission Made	Placement	Live Register	Placement as % of Registration
Units	(in '000)						
1992	860	5,300.6	238.7	419.6	3,652.0	36,758.4	4.5%
1993	887	5,532.2	231.4	384.7	3,317.8	36,275.5	4.2%
1994	891	5,927.3	204.9	396.4	3,723.4	36,691.5	3.5%
1995	895	5,858.1	214.9	385.7	3,569.9	36,742.3	3.7%
1996	914	5,872.4	233.0	423.9	3,605.9	37,429.6	4.0%
1997	934	6,321.9	275.0	393.0	3,767.8	39,139.9	4.3%
1998	945	5,851.8	233.3	358.8	3,076.6	40,089.6	4.0%
1999	955	5,966.0	221.3	328.9	2,653.2	40,371.4	3.7%
2000	958	6,041.9	177.7	284.5	2,322.8	41,343.6	2.9%
2001	938	5,552.6	169.2	304.1	1,908.8	41,995.9	3.0%
2002	939	5,064.0	142.6	220.3	1,748.8	41,171.2	2.8%
2003	945	5,462.9	154.9	256.1	1,917.3	41,388.7	2.8%
2004	947	5,373.0	137.7	274.6	1,801.4	40,457.6	2.6%
2005	947	5,437.1	173.2	349.2	2,402.0	39,347.8	3.2%

Source : Directorate General Of Employment & Training, Ministry Of Labour Government Of India

Table: Skill Profile of those Registered in Employment Exchanges (2005)

SL. No.	Educational Level	Number on Live Register (in '000)			Percentage of Each Level to Total
		Men	Women	Total	
	DISCIPLINE				
1	10th Class Pass	12,266.3	4,176.3	16,442.6	56.2
2	10th + 2 Passed	5,836.5	1,731.6	7,568.1	25.9
3	Graduates And Post Graduates				Percentage of each stream to Total Graduate & above
I	Arts	1,463.7	661.0	2,124.7	40.5
II	Science	697.0	286.7	983.7	18.7
III	Commerce	591.2	177.8	769.0	14.7
IV	Engineering	189.8	26.2	216.0	4.1
V	Medicine	31.4	16.1	47.5	0.9
VI	Veterinary	5.7	1.2	6.9	0.1
VII	Agriculture	31.2	4.7	35.9	0.7
VIII	Law	17.2	4.0	21.2	0.4
IX	Education	427.0	367.3	794.3	15.1
X	Others	168.4	84.8	253.2	4.8
	TOTAL	3,622.7	1,629.8	5,252.5	100
	GRAND TOTAL	21,725.5	7,537.7	29,263.2	100

Source : Directorate General Of Employment & Training, Ministry Of Labour Government Of India

**Table: Job Seekers On The Live Register By Broad Occupational Group
(31-12-2004)**

Occupational Groups	TOTAL (in '000)
Professional Technical & Related Workers	3,506.9
Administrative And Executive And Managerial Workers	31.9
Clerical & Related Workers	2,619.8
Sales Workers	93.9
Service Workers	460.0
Farmers, Fishermen, Hunters, Loggers & Related Workers	100.3
Production & Related Workers Transport Equipment Labourers	4,335.3
Workers Not Classified By Any Occupation	29,309.7
Total Live Register	40,457.6

Source : Directorate General Of Employment & Training, Ministry Of Labour Government Of India

Table: Performance Of Employment Exchange-All India 1995-2004

Year	Percentage of Placement to Live Register of Ex ITI	Percentage of Placement to Live Register of Full Term Apprentices
1995	0.8	1.6
1996	1.1	2.4
1997	1.2	2.4
1998	0.7	1.9
1999	0.9	1.8
2000	0.4	1
2001	0.3	1.3
2002	0.4	0.9
2003	0.3	0.4
2004	0.3	0.8

Source : Directorate General Of Employment & Training, Ministry Of Labour Government Of India

**Table: Employment Exchange Statistics On Scheduled Castes/
Tribes & Obc Job Seekers Statewise -2004**

SL No.	STATE/UT	(SC) Placement To S.C Registration	(ST) Placement To S.T Registration	(OBC) Placement To OBC Registration
(Percentage)				
1	Andhra Pradesh	0.5	0.7	0.6
2	Arunachal Pradesh	0	0	-
3	Assam	0	0	0
4	Bihar	0	0	0
5	Chhattisgarh	0.7	0.9	0.8
6	Delhi	0	0	0
7	Goa	0	0	12.54
8	Gujarat	19	19.6	14.3
9	Haryana	0.7	-	0
10	Himachal Pradesh	0.5	0	1.8
11	Jammu And Kashmir	0	0	0
12	Jharkhand	0	0.4	0
13	Karnataka	0.8	1.4	2.3
14	Kerala	3.1	4.2	1.7
15	Madhya Pradesh	0.4	0.6	0.5
16	Maharashtra	2.3	6.9	2
17	Manipur	0	0	-
18	Meghalaya		0	-
19	Mizoram		0	-
20	Nagaland	0.4	0	-
21	Orissa	1.2	0.8	1
22	Punjab	2.2	-	0
23	Rajasthan	166.4	1.9	2.2
24	Sikkim*			
25	Tamil Nadu	2.8	9.1	2.4
26	Tripura	4.2	5.9	0
27	Uttaranchal	4.1	5.3	2.9
28	Uttar Pradesh	0.9	0	0.6
29	West Bengal	7	7.7	9.5
	Union Territories			
30	A. & N. Islands			0
31	Chandigarh	11.1	-	-
32	D. & N.Haveli	-	-	-
33	Daman And Diu	-	-	-
34	Lakshadweep	-	-	-
35	Pondicherry	0	-	14.3
	Cee			
	Total	2.2	3	1.4

Source : Directorate General Of Employment & Training, Ministry Of Labour Government Of India

Table: Employment –Scenario (in Million)

Year	2001	2020
Population	1028.6	1358.5
Labour force	447.4	716
Assuming Employment Elasticity of 0.15		
Workforce	402.2	504.6
Unemployment	45.2	211.4
% Unemployment	10.1	0.295
Assuming Employment Elasticity of 0.30		
Workforce		635.2
Unemployment		84.7
% Unemployment		0.133

Source: Indicus Estimates.

Table: Percentage of Income earners by Education and Annual Reported Incomes

Education Level / Annual Income (Rs.)	Less than 25,000	25000-75000	75000-1,50,000	1,50,000-3,00,000	3,00,000-8,00,000	8,00,000 & above
Illiterate	78.8	19.4	1.5	0.1	0.2	0.0
Literate but without formal schooling	59.8	34.5	5.1	0.0	0.6	0.0
Less than primary	58.2	35.7	5.6	0.5	0.0	0.0
Primary	50.9	41.9	5.2	1.8	0.2	0.0
Middle	43.8	45.9	7.9	1.7	0.6	0.2
High school	29.7	54.5	12.6	2.3	1.0	0.0
Secondary	20.7	52.7	19.5	4.2	2.7	0.2
Technical Education	6.9	41.1	39.9	10.3	1.9	0.0
Graduate	11.9	43.9	34.2	7.7	1.5	0.8
Professional Degree	8.1	33.0	48.0	8.6	2.3	0.0
Post Graduate and above	4.6	39.6	43.4	12.2	0.3	0.0

Source : Indicus Estimates



Table: Percentage Distribution of Occupations Across Different Sectors

NCO 1 Description	PROFESSIONAL, TECHNICAL AND RELATED WORKERS									
	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1
NCO 1 Digit	Physical Scientists	Physical Science Technicians	Architects, Engineers, Technologists and Surveyors	Engineering Technicians	Aircraft and Ships Officers	Life Scientists	Life Science Technicians	Physicians and Surgeons (Allopathic Dental and Veterinary Surgeons)	Nursing and other Medical and Health Technicians	Scientific, Medical and Technical Persons, Other
NCO Number	0	1	2	3	4	5	6	7	8	9
Agriculture		6.8%	0.3%	0.5%		4.8%	4.1%	0.4%	0.1%	
Forestry and Allied						0.0%				
Fishing						2.3%	4.9%			
Mining and Quarrying			1.9%	2.8%				0.6%	0.8%	1.7%
Manufacturing	44.5%	3.5%	21.2%	32.0%		6.6%		0.5%	3.9%	18.1%
Electricity, water and Gas	6.6%		13.0%	8.7%						1.1%
Construction			14.9%	5.4%	3.3%				0.9%	
Trade, Hotels and Restaurants	0.1%	1.2%	2.0%	1.5%		6.6%		0.9%	0.9%	
Transport & Storage			6.3%	7.5%	78.8%			0.0%	0.2%	4.7%
Banking & Insurance			0.7%	0.3%					0.2%	
Real Estate	15.7%		14.7%	12.4%		18.3%	0.0%		0.0%	4.9%
Public Administration	32.6%	1.8%	22.0%	25.7%	17.9%	39.1%	18.0%	1.2%	4.7%	9.7%
Other Services	0.5%	86.7%	2.9%	3.3%		22.4%	73.0%	96.3%	88.3%	59.8%
All	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Source: Indicis estimates using NSSO 2004-05

Table: Percentage Distribution of Occupations Across Different Sectors (continued)

NCO 1 Description	PROFESSIONAL, TECHNICAL AND RELATED WORKERS									
	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1
NCO 1 Digit	Mathematicians, Statisticians and Related Workers	Economists and Related Workers	Accountants, Auditors and Related Workers	Social Scientists and Related Workers	Jurists	Teachers	Poets, Authors, Journalists and Related Workers	Sculptors, Painters, Photographers and Related Creative Artists	Composers and Performing Artists	0-1
NCO 1 Digit	10	11	12	13	14	15	16	17	18	19
NCO 2 Number	10	11	12	13	14	15	16	17	18	19
Agriculture	0.0%	13.3%	0.2%	0.3%		0.3%	16.0%		0.5%	0.0%
Forestry and Allied										
Fishing										
Mining and Quarrying			2.0%		0.3%					
Manufacturing	6.6%		22.5%	1.7%	1.6%	0.2%	45.6%	9.6%	1.6%	0.6%
Electricity, water and Gas	0.3%		2.2%							
Construction			1.5%	0.1%		0.3%		6.0%		
Trade, Hotels and Restaurants	1.0%		5.2%	2.6%		0.1%				0.1%
Transport & Storage	1.4%	1.5%	6.9%	0.6%		0.0%		0.7%	0.5%	
Banking & Insurance	2.5%		11.3%		1.2%					
Real Estate	79.3%	42.3%	28.1%	3.5%	84.4%	0.1%	4.6%	65.9%	0.5%	4.1%
Public Administration	7.0%	38.2%	16.7%	21.6%	6.9%	1.6%	3.2%	2.5%	0.0%	1.2%
Other Services	1.9%	4.7%	3.5%	69.7%	5.6%	97.5%	30.7%	15.4%	97.0%	94.0%
All	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Source: Indicis estimates using NSSO 2004-05

Table: Percentage Distribution of Occupations Across Different Sectors (continued)

NCO 1 Description NCO 1 Digit	ADMINISTRATIVE, EXECUTIVE AND MANAGERIAL WORKERS							
	2	2	2	2	2	2	2	
NCO2 Description	Elected and Legislative Officials	Administrative and Executive Officials Government and Local Bodies	Working Proprietors, Directors and Managers, Wholesale and Retail Trade	Directors and Managers, Financial Institutions	Working Proprietors, Directors and Managers Mining, Construction, Manufacturing and Related Concerns, Manufacturing and Related Concerns	Working Proprietors, Directors, Managers and Related Executives, Transport, Storage and Communication	Working Proprietors, Directors and Managers, Other Service	Administrative, Executive and Managerial Workers, n.e.c.
NCO2 Number	20	21	22	23	24	25	26	29
Agriculture	3.6%	0.2%	0.2%		0.1%	0.0%	0.3%	3.6%
Forestry and Allied		0.1%	0.3%		0.0%	0.1%	0.0%	
Fishing			0.1%				0.1%	
Mining and Quarrying		2.2%	0.0%		1.4%		0.0%	0.4%
Manufacturing	2.0%	4.8%	2.0%	0.8%	82.0%	1.2%	5.6%	27.9%
Electricity, water and Gas		3.6%			0.1%	0.0%		0.9%
Construction		0.0%	0.0%		13.3%	0.4%	0.9%	1.9%
Trade, Hotels and Restaurants	2.7%	1.5%	96.3%	5.1%	2.2%	5.2%	46.7%	10.5%
Transport & Storage	1.9%	1.6%	0.1%	0.8%	0.2%	87.8%	2.7%	5.8%
Banking & Insurance	3.8%	7.7%		91.9%	0.0%	0.1%	1.9%	24.1%
Real Estate	8.2%	2.0%	0.5%		0.4%	4.8%	22.5%	12.6%
Public Administration	59.0%	71.0%	0.1%	1.5%	0.1%	0.2%	0.3%	5.0%
Other Services	18.8%	5.4%	0.3%		0.2%	0.1%	19.2%	7.3%
All	100%	100%	100%	100%	100%	100%	100%	100%

Source: Indicus estimates using NSSO 2004-05

Table: Percentage Distribution of Occupations Across Different Sectors (continued)

NCO 1 Description	CLERICAL AND RELATED WORKERS									
	3	3	3	3	3	3	3	3	3	3
NCO 1 Digit										
NCO2 Description	Clerical and Other Supervisors	Village Officials	Stenographers, Typists and Card and Tape Punching Operators	Bookkeepers, Cashiers and Related Workers	Computing Machine Operators	Clerical and Related Workers, n.e.c.	Transport and Communication Supervisors	Transport Conductors and Guards	Mail Distributors and Related Workers	Telephone and Telegraph Operators
NCO2 Number	30	31	32	33	34	35	36	37	38	39
Agriculture	1.0%	0.1%	0.1%	0.7%		0.5%			0.0%	0.4%
Forestry and Allied	0.1%	0.3%	0.1%			0.1%		0.7%		
Fishing	0.1%					0.0%				
Mining and Quarrying	0.9%			1.4%	0.2%	1.2%				0.5%
Manufacturing	8.6%		15.8%	13.8%	16.1%	10.1%		0.1%	2.1%	4.9%
Electricity, water and Gas	3.3%		7.1%	2.9%	0.4%	2.3%		0.2%		0.0%
Construction	1.3%	0.2%	0.2%	1.6%	0.3%	1.1%				2.7%
Trade, Hotels and Restaurants	4.9%		1.4%	19.7%	6.0%	4.6%	0.0%	0.0%	2.1%	
Transport & Storage	9.3%	0.1%	5.7%	6.0%	3.1%	10.0%	91.7%	96.7%	85.0%	81.6%
Banking & Insurance	9.4%	0.3%	7.4%	30.2%	10.7%	11.4%		0.1%	3.3%	
Real Estate	2.2%		8.9%	9.3%	53.0%	3.4%			0.1%	3.3%
Public Administration	47.0%	95.3%	49.9%	8.8%	3.2%	36.0%	7.7%	2.2%	7.2%	5.0%
Other Services	12.0%	3.7%	3.5%	5.8%	7.1%	19.2%	0.6%	0.0%	0.2%	1.7%
All	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Source: Indicis estimates using NSSO 2004-05

Table: Percentage Distribution of Occupations Across Different Sectors (continued)

NCO 1 Description	SALES WORKERS						
	4	4	4	4	4	4	4
NCO 1 Digit	4	4	4	4	4	4	4
NCO2 Description	Merchants and Shopkeepers, Wholesale and Retail Trade	Manufacturers, Agents	Technical Salesmen and Commercial Travellers	Salesmen, Shop Assistants and Related Workers	Insurance, Real Estate, Securities and Business Service Salesmen and Auctioneers and Auctioneers	Money Lenders and Pawn Brokers	Sales Workers, n.e.c.
NCO2 Number	40	41	42	43	44	45	49
Agriculture	0.3%	1.3%	0.1%	0.3%	0.4%		
Forestry and Allied	1.1%	0.0%		0.1%	0.1%		
Fishing	0.0%			0.1%			
Mining and Quarrying	0.0%	0.3%					
Manufacturing	1.1%	36.1%	30.2%	4.1%	1.4%	4.2%	9.2%
Electricity, water and Gas	0.0%	0.2%		0.0%	0.0%	0.1%	1.2%
Construction	0.0%	0.1%		0.0%	0.3%	10.6%	0.0%
Trade, Hotels and Restaurants	97.2%	54.6%	49.1%	93.4%	28.1%	1.8%	80.0%
Transport & Storage	0.1%	2.1%	9.4%	0.5%	6.5%		0.0%
Banking & Insurance	0.0%	2.1%	3.7%	0.2%	40.0%	83.4%	7.5%
Real Estate	0.1%	2.4%	5.2%	0.7%	21.0%		0.6%
Public Administration	0.0%	0.7%		0.3%	0.1%		0.3%
Other Services	0.0%	0.0%	2.3%	0.3%	2.2%		1.1%
All	100%	100%	100%	100%	100%	100%	100%

Source: Indicus estimates using NSSO 2004-05

Table: Percentage Distribution of Occupations Across Different Sectors (continued)

NCO 1 Description	SERVICE WORKERS																			
	5	5	5	5	5	5	5	5	5	5										
NCO 1 Digit																				
NCO2 Description	Hotel and Restaurant Keepers	House Keepers, Matron and Stewards (Domestic and Institutional)	Cooks, Waiters, Bartenders and Related Worker (Domestic and Institutional)	Maids and Other House Keeping Service Workers n.e.c.	Building Caretakers, Sweepers, Cleaners and Related Workers	Laundryers, Dry-cleaners and Pressers	Hair Dressers, Barbers, Beauticians and Related Workers	Protective Service Workers	Service Workers, n.e.c.											
NCO2 Number	50	51	52	53	54	55	56	57	59											
Agriculture	0.1%		0.1%	0.3%	0.0%	0.1%	0.1%	1.3%	0.6%											
Forestry and Allied																				
Fishing																				
Mining and Quarrying			0.2%	0.0%	0.1%															
Manufacturing	0.1%		3.7%	0.2%	5.7%	4.4%														
Electricity, water and Gas					0.7%															
Construction	0.0%		0.4%	0.1%	0.6%	0.1%	0.1%	1.6%	1.5%											
Trade, Hotels and Restaurants	99.6%	30.4%	72.4%	0.4%	5.3%	0.1%	0.1%	2.8%	13.0%											
Transport & Storage		0.1%	0.3%	0.2%	5.0%			4.7%	4.0%											
Banking & Insurance					2.8%			2.8%	2.5%											
Real Estate		4.1%		0.3%	4.2%	0.2%	0.4%	8.2%	8.7%											
Public Administration		15.3%	2.8%	1.1%	37.6%	0.3%	0.0%	49.3%	8.9%											
Other Services	0.2%	50.0%	20.2%	97.5%	37.9%	94.9%	99.3%	14.9%	39.5%											
All	100%	100%	100%	100%	100%	100%	100%	100%	100%											

Source: Indicis estimates using NSSO 2004-05

Table: Percentage Distribution of Occupations Across Different Sectors (continued)

NCO 1 Description	FARMERS, FISHERMEN, HUNTERS, LOGGERS AND RELATED WORKERS									
	6	6	6	6	6	6	6	6	6	6
NCO 1 Digit										
NCO2 Description	Farm Plantation, Dairy and Other Managers and Supervisors	Farm Cultivators	Farmers other than Cultivators	Agricultural Labourers	Plantation Labourers and Related Workers	Other Farm Workers	Forestry Workers	Hunters and Related Workers	Fishermen and Related Workers	
NCO2 Number	60	61	62	63	64	65	66	67	68	6
Agriculture	83.0%	100.0%	99.6%	99.9%	96.8%	74.1%	1.1%	68.8%	0.4%	
Forestry and Allied	0.7%		0.1%	0.0%	1.1%	0.6%	86.3%			
Fishing	0.0%		0.2%	0.0%		0.9%			96.9%	
Mining and Quarrying	0.9%					0.2%				
Manufacturing	5.8%	0.0%	0.0%	0.0%	1.7%	3.7%	5.8%		0.7%	
Electricity, water and Gas						0.5%				
Construction		0.0%		0.0%		7.4%	0.0%			
Trade, Hotels and Restaurants	1.0%	0.0%	0.1%	0.0%	0.0%	1.6%	2.5%		0.8%	
Transport & Storage	2.6%	0.0%		0.0%	0.0%	2.4%	0.1%	17.3%	0.8%	
Banking & Insurance										
Real Estate					0.0%	0.8%				
Public Administration	3.2%	0.0%	0.0%	0.0%	0.3%	3.5%	3.9%	10.5%	0.3%	
Other Services	2.7%	0.0%	0.0%	0.0%	0.1%	4.4%	0.3%	3.5%		
All	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Source: Indicis estimates using NSSO 2004-05

Table: Percentage Distribution of Occupations Across Different Sectors (continued)

NCO 1 Description	PRODUCTION AND RELATED WORKERS, TRANSPORT EQUIPMENT OPERATORS AND LABOURERS									
	7 8 9	7 8 9	7 8 9	7 8 9	7 8 9	7 8 9	7 8 9	7 8 9	7 8 9	7 8 9
NCO 1 Digit	7 8 9	7 8 9	7 8 9	7 8 9	7 8 9	7 8 9	7 8 9	7 8 9	7 8 9	7 8 9
NCO2 Description	Miners, Quarrymen, Well Drillers and Related Workers	Metal Processors	Wood Preparation Workers and Paper Makers	Chemical Processors and Related Workers	Spinners, Weavers, Knitters, Dyers and Related Workers	Tanners, Fellmongers and Pelt Dressers	Food and Beverage Processors	Tobacco Preparers and Product Makers	Tailors, Dress Makers, Sewers, Upholsterers and Related Workers	
NCO2 Number	71	72	73	74	75	76	77	78	79	
Agriculture	0.2%			0.1%	0.7%		0.4%	0.2%	0.4%	
Forestry and Allied	0.0%		0.5%							
Fishing										
Mining and Quarrying	92.3%	1.2%	1.7%	0.7%						
Manufacturing	4.0%	95.4%	94.5%	95.6%	98.8%	96.9%	87.1%	98.8%	98.9%	
Electricity, water and Gas	0.1%			1.2%			0.0%			
Construction	1.4%	0.5%			0.2%			0.1%	0.1%	
Trade, Hotels and Restaurants	0.0%	2.0%	2.7%	1.9%	0.1%		9.9%	0.1%	0.2%	
Transport & Storage	0.3%	0.2%	0.6%		0.0%		2.0%	0.7%	0.1%	
Banking & Insurance		0.1%								
Real Estate	0.5%								0.1%	
Public Administration	0.8%	0.7%		0.3%	0.1%	3.1%	0.1%	0.0%	0.1%	
Other Services	0.3%			0.1%	0.0%		0.4%	0.1%	0.2%	
All	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Source: Indicis estimates using NSSO 2004-05



Table: Percentage Distribution of Occupations Across Different Sectors (continued)

NCO 1 Description	PRODUCTION AND RELATED WORKERS, TRANSPORT EQUIPMENT OPERATORS AND LABOURERS										
	7 8 9	7 8 9	7 8 9	7 8 9	7 8 9	7 8 9	7 8 9	7 8 9	7 8 9	7 8 9	7 8 9
NCO 1 Digit	7 8 9	7 8 9	7 8 9	7 8 9	7 8 9	7 8 9	7 8 9	7 8 9	7 8 9	7 8 9	7 8 9
NCO2 Description	Shoe makers and Leather Goods Makers	Carpenters, Cabinet and Related Wood Workers	Stone Cutters and Carvers	Blacksmiths, Tool Makers and Machine Tool Operators	Machinery Fitters, Machine Assemblers and Precision Instrument Makers (except Electrical)	Electrical Fitters and Related Electrical and Electronic Workers	Broad-casting Station and Sound Equipment Operators and Cinema Projectionists	Plumbers, Welders, Sheet Metal and Structural Metal Preparers and Erectors	Jewellery and Precious Metal Workers and Metal Engravers (Except Printing)	Glass Formers, Potters and Related Workers	
NCO2 Number	80	81	82	83	84	85	86	87	88	89	
Agriculture	0.3%	0.6%		0.9%	0.2%	0.0%		0.6%	0.2%	0.1%	
Forestry and Allied		0.0%		0.0%							
Fishing					0.1%						
Mining and Quarrying		0.0%	32.3%	0.1%	1.6%	2.0%		0.3%		0.2%	
Manufacturing	72.2%	91.2%	62.7%	92.8%	22.8%	19.9%	2.6%	53.3%	97.6%	97.5%	
Electricity, water and Gas		0.0%		1.2%	0.7%	14.5%		2.5%			
Construction		7.2%	5.0%	0.0%	0.7%	18.0%		31.9%		0.9%	
Trade, Hotels and Restaurants	25.3%	0.1%	0.0%	3.6%	64.0%	31.1%	1.5%	3.5%	1.6%	0.4%	
Transport & Storage	0.5%	0.2%		0.3%	7.0%	6.7%	23.4%	2.0%	0.3%	0.7%	
Banking & Insurance				0.1%		0.0%					
Real Estate	0.1%	0.1%		0.3%	0.2%	1.5%	5.4%	0.1%			
Public Administration		0.5%		0.6%	2.9%	4.6%	0.4%	5.5%		0.1%	
Other Services	1.7%	0.1%		0.1%	0.1%	1.5%	66.9%	0.4%	0.4%	0.1%	
All	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Source: Indicus estimates using NSSO 2004-05



Table: Percentage Distribution of Occupations Across Different Sectors (continued)

NCO 1 Description	PRODUCTION AND RELATED WORKERS, TRANSPORT EQUIPMENT OPERATORS AND LABOURERS									
	7 8 9	7 8 9	7 8 9	7 8 9	7 8 9	7 8 9	7 8 9	7 8 9	7 8 9	7 8 9
NCO 1 Digit	7 8 9	7 8 9	7 8 9	7 8 9	7 8 9	7 8 9	7 8 9	7 8 9	7 8 9	7 8 9
NCO2 Description	Rubber and Plastic Product Makers	Paper and Paper Board Products Makers	Printing and Related Workers	Painters	Production and Related Workers, n.e.c.	Bricklayers and Other Constructions Workers	Stationary Engines and Related Equipment Operators, Oilers and Greasers	Material Handling and Related Equipment Operators, Loaders and Unloaders	Transport Equipment Operators	Labourers, n.e.c.
NCO2 Number	90	91	92	93	94	95	96	97	98	99
Agriculture		2.2%	0.1%	0.1%	0.4%	0.2%	3.1%	0.8%	0.9%	1.3%
Forestry and Allied								0.1%	0.0%	0.1%
Fishing							0.0%	0.2%	0.1%	0.1%
Mining and Quarrying		1.7%			0.5%	0.1%	2.8%	5.1%	0.5%	3.5%
Manufacturing	69.9%	92.8%	83.3%	5.8%	96.5%	3.4%	18.3%	29.0%	1.5%	19.8%
Electricity, water and Gas				0.1%	0.3%	0.0%	10.4%	0.2%	0.1%	0.6%
Construction		2.5%	0.2%	81.1%	0.1%	95.8%	1.0%	3.8%	0.6%	57.2%
Trade, Hotels and Restaurants	29.5%		0.6%	3.8%	1.0%	0.1%	6.3%	15.6%	0.9%	5.1%
Transport & Storage		0.1%	0.3%	1.0%	0.0%	0.1%	43.5%	39.9%	90.9%	4.8%
Banking & Insurance					0.0%			0.0%	0.1%	0.0%
Real Estate	0.6%	0.3%	12.2%	4.1%	0.2%	0.1%		1.0%	0.3%	0.9%
Public Administration	0.0%	0.4%	0.9%	0.4%	0.4%	0.2%	14.4%	1.9%	1.9%	0.6%
Other Services		0.0%	2.3%	3.5%	0.5%	0.1%	0.2%	2.4%	2.1%	6.1%
All	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Source: Indicus estimates using NSSO 2004-05

Table: Percentage Distribution of Occupations Across Different Sectors (continued)

NCO 1 Description NCO 1 Digit	WORKERS NOT CLASSIFIED BY OCCUPATIONS				
		X	X	X	X
NCO2 Description	New Workers Seeking Employment	Workers Reporting Occupations Unidentifiable or Inadequately Described	Workers not Reporting any Occupations	Missing	
NCO2 Number	X0	X1	X9		
Agriculture			1.5%	60.2%	
Forestry and Allied				0.0%	
Fishing					
Mining and Quarrying				0.7%	
Manufacturing			0.5%	8.3%	
Electricity, water and Gas				0.4%	
Construction		0.3%		2.3%	
Trade, Hotels and Restaurants		0.2%	5.0%	17.8%	
Transport & Storage		12.5%		3.2%	
Banking & Insurance		0.3%		0.2%	
Real Estate	2.4%	10.1%		1.6%	
Public Administration	56.3%	1.5%	2.6%	2.3%	
Other Services	41.3%	75.2%	90.4%	3.1%	
All	100%	100%	100%	100%	

Source: Indicus estimates using NSSO 2004-05

Table: GDP at Factor Cost - Constant (1999-00) Prices

Sector / Year	2000-01	2009-10	Growth Rate 2000s	2019-20	Growth Rate 2010s
	(Rs. Crore)		(%)	(Rs. Crore)	(%)
Agriculture, Forestry & Fishing	445,403	593,698	3.4%	828,834	3.4%
Agriculture	407,176	545,560	3.5%	766,633	3.5%
Forestry & Logging	18,399	20,985	1.4%	24,160	1.4%
Fishing	19,828	27,153	3.4%	38,041	3.4%
Mining & Quarrying	42,589	67,908	5.6%	117,183	5.6%
Manufacturing	284,571	559,172	8.3%	1,238,737	8.3%
Registered	186,570	380,099	8.6%	864,673	8.6%
Unregistered	98,001	179,073	7.6%	374,065	7.6%
Electricity, Gas & Water Supply	45,439	69,304	5.1%	114,151	5.1%
Construction	108,362	271,073	11.6%	812,245	11.6%
Trade, Hotels & Restaurant	267,326	594,750	9.3%	1,459,002	9.4%
Trade	243,505	534,302	9.1%	1,281,051	9.1%
Hotels & Restaurants	23,821	60,449	11.4%	177,951	11.4%
Transport, Storage & Communication	148,324	520,890	15.3%	2,315,904	16.2%
Railways	21,996	42,932	7.9%	91,571	7.9%
Transport By Other Means	88,735	195,054	9.5%	481,713	9.5%
Storage	1,514	1,857	2.8%	2,446	2.8%
Communication	36,079	281,048	20.0%	1,740,174	20.0%
Financing, Insurance, Real Estate & Business Services	243,048	551,973	9.8%	1,446,780	10.1%
Banking & Insurance	103,571	276,293	11.8%	845,750	11.8%
Real Estate, Ownership Of Dwellings & Business Services	139,477	275,681	8.1%	601,030	8.1%
Community, Social & Personal Services	279,239	462,749	6.0%	843,504	6.2%
Public Administration & Defence	124,700	175,593	4.1%	261,439	4.1%
Other Services	154,539	287,156	7.3%	582,065	7.3%
All Sectors	1,864,301	3,691,518	8.1%	9,176,341	9.6%

Source : CSO and Indicus Estimates

Table 1 : Size of Labour force across General Education Levels

Year	1993-94	1999-2000	2004-05	2020
Source	NSS 50th round	NSS_55th Round	NSS 61st round	ESTIMATES
Educational Level	Individuals in 15-60 age group	Individuals in 15-60 age group	Individuals in 15-60 age group	Estimated Number Individuals in 15-60 age group
(in million)				
Not Literate	212.2	221.1	210.6	139.0
Literate without Formal schooling	1.3	1.1	2.7	8.2
Tlc	0.8	1.0	4.1	77.7
Others	2.9	3.8	5.9	17.2
Literate- Below Primary	44.5	47.4	45.4	31.7
Primary	53.6	61.7	77.7	113.6
Middle	61.6	84.8	100.2	186.4
Secondary	41.6	58.3	62.8	99.7
Higher Secondary	21.6	30.7	36.7	74.7
Diploma / Certificate course	.	.	7.7	15.7
Graduate and Above	19.3	28.8	34.9	81.6
Total	459.4	538.8	588.6	845.4

Source : NSSO and Indicus estimates

Table 2 : Size of Labour force across Technical Education

Year	1993-94	1999-2000	2004-05	2020
Source	NSS 50th round	NSS_55th Round	NSS 61st round	ESTIMATES
Educational Level	Individuals in 15-60 age group	Individuals in 15-60 age group	Individuals in 15-60 age group	Estimated Number Individuals in 15-60 age group
(in million)				
No Tech. Educ.	450.7	527.9	573.7	818.3
Tech. Deg (Agri/ Eng/Tech/Medicine)	.	1.8	1.8	1.5
Agri-Dip/Certif.	0.5	0.3	0.4	0.2
Eng/ Tech-Dip/Certif.	2.8	3.1	5.3	16.5
Medicine-Dip/Certif.	0.7	0.8	1.0	2.4
Crafts-Dip/Certif.	0.4	0.6	0.6	0.9
Other_Subjects-Dip/Certif.	4.6	4.9	5.2	5.7
Total	459.7	539.3	587.8	845.4

Source : NSSO and Indicus estimates

Annexures - II State Data

Table : Capital Formation and Gross State Domestic Product in Construction Sector

Year	Capital Formation			GSDP Construction
	1991	1995	2001	2007-08
(Rs.in Crore)				
Andaman & Nicobar Islands	101	222	386	
Andhra Pradesh	10,899	19,402	26,194	
Arunachal Pradesh	770	812	954	629
Assam	3,248	4,509	2,398	2,757
Bihar	6,936	9,757	11,943	10,486
Chandigarh	430	476	787	1,307
Chhattisgarh				2,535
Delhi	5,327	9,813	10,548	8,748
Goa	711	1,152	1,903	520
Gujarat	14,875	33,299	41,445	14,123
Haryana	4,876	9,803	13,114	9,986
Himachal Pradesh	1,861	2,878	7,338	5,070
Jammu & Kashmir	1,658	3,364	3,272	3,431
Jharkhand				4,270
Karnataka	10,137	17,393	28,341	16,349
Kerala	6,404	11,372	12,913	21,618
Madhya Pradesh	10,347	18,105	21,159	8,634
Maharashtra	31,296	56,648	62,529	16,371
Manipur	318	491	1,439	911
Meghalaya	324	433	5,001	630
Mizoram	219	288	463	343
Nagaland	429	693	791	
Orissa	7,075	9,992	6,563	4,475
Pondicherry	311	1,256	823	207
Punjab	4,874	10,437	10,060	11,640
Rajasthan	7,560	13,782	17,432	16,571
Sikkim	181	247	1,154	313
Tamil Nadu	14,132	25,050	30,090	18,298
Tripura	273	612	762	
Uttar Pradesh	15,269	30,116	37,392	25,034
West Bengal	8,634	13,710	13,110	26,225

Source : CSO

Table A : Number of IEMs Filed and implemented

Year	1991-01	1991-05	1991-09	1991-01	1991-05	1991-09
States	Numbers Filed (IEMs)	Numbers Filed (IEMs)	Numbers Filed (IEMs)	No. of Cases implemented (IEMs)	No. of Cases implemented (IEMs)	No. of Cases implemented (IEMs)
	Number					
Andaman & Nicobar Islands					0	0
Andhra Pradesh	2,864	4,109	5,652	334	477	769
Arunachal Pradesh	4	25	42	0	2	4
Assam	162	392	526	25	66	94
Bihar	137	161	304	36	50	12
Chandigarh	1,710	2,449	46	4	4	4
Chhattisgarh	514	1,427	2,331	42	58	66
Dadra & Nagar haveli	1,361	1,863	2,119	48	81	95
Daman & Diu	623	874	1,063	55	84	96
Delhi	460	488	530	45	46	48
Goa	415	557	669	63	99	106
Gujarat	5,715	7,496	9,142	850	1069	1446
Haryana	2,639	3,374	3,956	305	375	430
Himachal Pradesh	405	654	879	28	45	79
Jammu & Kashmir	82	402	621	9	11	19
Jharkhand	326	590	930	30	43	66
Karnataka	1,675	2,410	3,244	148	172	227
Kerala	449	530	612	73	76	81
Lakshadweep	1	1	1	0	0	0
Madhya Pradesh	1,888	2,238	3,065	308	353	356
Maharashtra	10,256	13,330	14,043	765	920	1285
Manipur	0	3	4		1	1
Meghalaya	85	208	266	4	13	26
Mizoram	0	0	0		0	0
Nagaland	6	13	15	0	0	0
Orissa	322	913	1,382	22	47	74
Pondicherry	461	617	723	27	43	49
Punjab	2,047	2,496	2,936	233	274	312
Rajasthan	2,202	2,789	3,236	288	363	402
Sikkim	11	19	72	0	2	14
Tamil Nadu	3,842	5,005	6,658	380	423	505
Tripura	12	31	38		4	5
Uttaranchal	284	823	1,719	18	34	140
Uttar Pradesh	3,917	5,410	6,551	389	510	576
West Bengal	5,919	8,928	4,429	227	426	634

Source : SIA Department of Industrial Policy and Promotion, Ministry of Commerce and Industry

Table B: Investment Amout Proposed and Implemented

Year	1991-01	1991-05	1991-09	1991-01	1991-05	1991-09
States	Value of proposed IEMs	Value of proposed IEMs	Value of proposed IEMs	Investment (implemen- ted IEMs)	Investment (implemen- ted IEMs)	Investment (implemen- ted IEMs)
(Rs. Crore)						
Andaman & Nicobar Islands	332	332	485	0	0	0
Andhra Pradesh	115,696	164,807	444,887	13,083	14,344	18,890
Arunachal Pradesh	68	287	612	0	9	9
Assam	7,032	9,121	20,819	997	1,227	1,342
Bihar	15,247	41,358	30,004	1,587	1,723	168
Chandigarh	448	459	742	258	258	258
Chhattisgarh	26,709	123,511	674,416	1,192	1,288	1,621
Dadra & Nagar haveli	19,277	27,499	37,491	1,021	1,336	1,613
Daman & Diu	3,953	5,752	10,320	2,219	2,256	2,347
Delhi	6,480	6,553	7,002	634	635	646
Goa	6,188	7,653	10,346	581	819	813
Gujarat	177,731	296,560	625,205	30,941	49,550	79,935
Haryana	32,634	48,570	79,337	9,305	10,909	17,053
Himachal Pradesh	9,403	15,087	24,067	348	930	1,788
Jammu & Kashmir	798	5,943	12,626	602	760	2,014
Jharkhand	10,779	36,532	371,181	1,522	1,658	2,061
Karnataka	52,587	91,901	385,998	8,237	8,788	9,931
Kerala	10,500	11,669	13,629	991	1,012	1,019
Lakshadweep	4	4	4	0	0	0
Madhya Pradesh	70,446	183,642	318,137	10,430	9,823	9,814
Maharashtra	216,763	271,936	523,135	26,389	27,952	33,645
Manipur	0	10	20		13	13
Meghalaya	708	2,238	9,388	8	56	73
Mizoram	0	0	0		0	0
Nagaland	207	16,244	16,325	0	0	0
Orissa	26,794	112,608	680,847	1,553	1,818	1,866
Pondicherry	7,399	8,633	11,500	228	314	331
Punjab	42,463	63,545	99,100	5,178	5,999	6,810
Rajasthan	38,892	46,536	94,444	10,686	11,403	13,299
Sikkim	33	294	3,112	0	15	15
Tamil Nadu	67,296	132,864	209,944	8,967	9,538	12,871
Tripura	1,827	2,134	2,436		2	72
Uttaranchal	5,696	13,058	47,789	109	270	2,285
Uttar Pradesh	81,266	132,693	196,486	16,381	18,808	25,237
West Bengal	35,589	70,715	287,827	26,061	28,486	30,223

Source: SIA Department of Industrial Policy and Promotion, Ministry of Commerce and Industry

Table A : GSDP at Current Prices

States / Year	1991	1995	2001	2005	2007-08
	(Rs. Crore)				
Andaman & Nicobar Islands	384	675	1,035	NA	
Andhra Pradesh	43,997	79,854	151,482	184,463	
Arunachal Pradesh	722	1,184	1,942	2,262	3,683
Assam	12,271	19,411	34,347	40,249	70,440
Bihar	31,677	44,232	79,822	96,185	114,722
Chandigarh	1,027	2,121	4,696	6,295	14,176
Chhattisgarh	11,482	17,177	29,545	38,549	68,036
Delhi	15,248	28,390	68,185	83,825	143,911
Goa	1,696	3,319	8,073	9,657	17,215
Gujarat	35,242	71,886	121,038	167,356	306,813
Haryana	16,468	29,789	60,561	73,961	153,087
Himachal Pradesh	3,501	6,698	14,969	18,062	32,220
Jammu & Kashmir	4,963	8,097	15,927	19,176	31,793
Jharkhand	12,975	19,749	32,706	39,773	69,253
Karnataka	30,470	56,215	109,016	132,498	238,348
Kerala	18,834	38,762	72,402	89,461	162,415
Madhya Pradesh	41,383	65,018	113,732	139,576	142,500
Maharashtra	84,463	157,818	266,904	333,145	590,995
Manipur	1,016	1,627	3,344	4,062	5,704
Meghalaya	1,169	1,995	4,139	4,816	7,605
Mizoram	546	937	1,924	NA	3,305
Nagaland	1,061	1,814	4,137	NA	
Orissa	14,243	27,118	42,095	53,830	106,466
Pondicherry	618	1,320	4,188	5,746	10,312
Punjab	23,668	38,615	70,916	81,147	138,467
Rajasthan	23,326	47,313	88,077	104,483	175,845
Sikkim	310	520	1,080	1,386	2,298
Tamil Nadu	43,026	78,205	143,555	168,457	304,989
Tripura	1,306	2,296	6,005	NA	
Uttaranchal	4,503	7,529	13,181	16,922	
Uttar Pradesh	64,949	113,778	194,485	232,103	344,346
West Bengal	39,681	73,865	153,865	189,728	303,705

Source : CSO

Table B : GSDP at Constant Prices

States / Year	1991	1995	2001	2005	2007-08
States	GSDP (93-94 constant prices)				GSDP (1999-2000 constant prices)
	(Rs. Crore)				
Andaman & Nicobar Islands	364	557	623	NA	
Andhra Pradesh	52,968	64,729	90,716	102,631	
Arunachal Pradesh	747	1,008	1,167	1,266	2,746
Assam	14,347	16,017	18,908	20,884	51,372
Bihar	23,083	39,125	54,001	59,849	88,290
Chandigarh	.	1,786	2,855	3,486	9,687
Chhattisgarh	.	14,796	18,284	21,701	45,086
Delhi	21,920	23,924	40,712	47,813	109,201
Goa	2,035	2,706	4,347	5,107	11,028
Gujarat	39,018	61,246	81,829	103,951	213,674
Haryana	21,074	24,276	35,180	40,131	104,189
Himachal Pradesh	4,344	5,568	8,106	9,185	24,817
Jammu & Kashmir	5,796	6,982	9,115	10,071	23,060
Jharkhand	.	17,344	22,723	25,442	51,794
Karnataka	37,248	46,167	72,054	80,550	172,573
Kerala	22,531	29,788	39,024	46,795	126,453
Madhya Pradesh	32,200	56,261	71,837	81,661	103,503
Maharashtra	89,397	129,567	164,252	190,151	416,248
Manipur	1,215	1,332	1,961	2,378	4,464
Meghalaya	1,484	1,732	2,573	2,879	5,628
Mizoram	.	.	1,034	NA	2,344
Nagaland	1,184	1,582	2,555	NA	
Orissa	17,235	20,060	25,091	28,686	73,462
Pondicherry	874	1,077	2,557	3,281	7,321
Punjab	27,508	32,433	42,303	46,049	138,467
Rajasthan	30,984	40,225	56,636	64,781	131,183
Sikkim	.	411	643	758	1,626
Tamil Nadu	50,226	67,195	89,011	94,960	218,538
Tripura	1,546	1,919	3,351	NA	
Uttaranchal			8,041	9,790	
Uttar Pradesh	76,910	88,244	118,084	131,494	254,422
West Bengal	48,241	61,290	91,836	105,806	303,705

Source : CSO

Table A : Statewise Total Road Length (in Kms)

States / Year	1991	1995	2001	2002	2009
Andaman & Nicobar Islands	900	871	1,183	1,180	1,481
Andhra Pradesh	153,149	171,785	192,057	196,172	207,624
Arunachal Pradesh	10,692	11,860	18,362	18,365	18,268
Assam	65,550	68,090	87,173	89,486	194,037
Bihar	85,410	87,854	87,547	87,551	73,834
Chandigarh	1,540	1,632	2,025	2,045	1,637
Chhattisgarh	-	-	33,858	35,372	82,975
Dadra & Nagar haveli	315	509	564	580	632
Daman & Diu	-	-	414	414	318
Delhi	20,853	24,512	25,785	25,785	29,812
Goa	7,360	7,303	9,563	9,672	10,240
Gujarat	80,884	85,768	137,384	137,617	143,660
Haryana	26,461	27,160	28,158	28,203	28,673
Himachal Pradesh	25,125	29,926	29,510	29,617	33,723
Jammu & Kashmir	13,101	12,590	23,301	23,429	22,984
Jharkhand	-	-	10,069	11,486	20,429
Karnataka	131,507	139,768	152,453	152,599	200,112
Kerala	135,569	139,320	150,495	150,851	143,276
Lakshadweep	-	-	141	150	160
Madhya Pradesh	140,027	211,025	196,228	196,340	175,926
Maharashtra	221,758	224,973	261,783	267,452	273,946
Manipur	6,664	10,530	11,434	11,434	13,839
Meghalaya	6,481	7,721	9,497	9,565	10,031
Mizoram	3,732	6,577	4,970	5,075	5,885
Nagaland	14,752	12,880	21,021	21,001	20,647
Orissa	195,943	211,794	236,993	237,034	218,994
Pondicherry	2,532	2,338	2,587	2,571	2,600
Punjab	54,261	57,039	61,525	61,530	45,767
Rajasthan	122,535	130,085	142,010	132,482	167,663
Sikkim	1,594	1,824	1,992	2,019	2,063
Tamil Nadu	196,681	140,194	163,111	166,061	170,823
Tripura	14,070	14,706	14,031	16,296	25,870
Uttaranchal	-	-	31,881	33,547	58,738
Uttar Pradesh	200,809	200,010	279,129	282,048	252,098
West Bengal	61,686	68,316	90,245	92,023	91,243

Source : Basic Road Statistics, Department of Road Transport and Highways, Ministry of Shipping, Road Transport and Highways

Table : Taxes on Commodity and Services at Current Prices

States / Year	1991-92	1995-96	2001-02	2003-04	2006-07
	Rs. Crore				
Andaman & Nicobar Islands					
Andhra Pradesh	2,820	3,678	10,596	13,387	20,610
Arunachal Pradesh	3	6	33	39	76
Assam	346	564	1,372	1,818	3,201
Bihar	1,179	1,739	4,057	5,142	3,503
Chhattisgarh	.	.	1,808	2,380	4,579
Delhi	.	1,984	4,614	5,614	8,112
Goa	107	252	535	719	1,169
Gujarat	2,651	4,844	8,526	9,327	16,333
Haryana	1,201	1,923	4,464	5,656	9,150
Himachal Pradesh	184	327	829	965	1,562
Jammu & Kashmir	159	278	830	1,097	0
Jharkhand	.	.	1,990	2,288	3,000
Karnataka	2,620	4,553	8,779	10,919	19,593
Kerala	1,471	2,971	5,456	7,994	10,313
Madhya Pradesh	1,924	3,208	5,835	8,427	8,921
Maharashtra	5,328	9,247	17,602	21,720	31,953
Manipur	11	22	37	51	104
Meghalaya	41	64	131	180	283
Mizoram	2	4	14	23	62
Nagaland	16	17	38	69	101
Orissa	613	1,025	2,233	2,763	5,505
Punjab	1,420	2,420	4,367	5,726	7,198
Rajasthan	1,388	2,456	5,074	6,432	10,145
Sikkim	11	20	57	54	123
Tamil Nadu	3,382	6,483	11,805	14,515	24,638
Tripura	22	39	136	156	300
Uttaranchal	.	.	800	1,054	1,947
Uttar Pradesh	3,009	4,668	9,613	13,312	18,282
West Bengal	1,889	2,964	5,021	6,578	9,217

Source : RBI State Finance

Table A : State-wise Corruption (Total Number of Cases under Investigation)

States / Year	1991	1995	2001	2003	2007
	Number				
Andaman & Nicobar Islands	0	0	0	10	14
Andhra Pradesh	168	245	511	681	360
Arunachal Pradesh	0	0	0	3	0
Assam	43	35	48	74	81
Bihar	215	240	249	312	353
Chandigarh	6	7	15	16	31
Chhattisgarh	.	N.A	.	122	108
Dadra & Nagar haveli	0	3	1	1	0
Daman & Diu	0	0	2	3	0
Delhi	130	192	181	158	203
Goa	1	1	14	21	17
Gujarat	290	245	329	313	340
Haryana	60	145	245	414	554
Himachal Pradesh	207	169	196	205	315
Jammu & Kashmir	390	397	356	363	200
Jharkhand	.	N.A	.	116	113
Karnataka	265	430	517	233	583
Kerala	238	265	591	707	649
Lakshadweep	4	7	1	1	0
Madhya Pradesh	852	528	632	602	98
Maharashtra	617	626	1,002	1,030	1133
Manipur	37	26	13	17	12
Meghalaya	1	1	1	0	5
Mizoram	1	2	2	0	12
Nagaland	0	0	4	4	11
Orissa	542	441	623	624	670
Pondicherry	8	4	9	10	9
Punjab	312	396	586	623	665
Rajasthan	601	518	1,572	1,491	1223
Sikkim	4	11	59	49	48
Tamil Nadu	337	154	174	268	443
Tripura	0	0	2	2	5
Uttaranchal	.	N.A	17	15	31
Uttar Pradesh	123	58	167	152	244
West Bengal	0	22	28	26	6

Source : Crime in India (1991,1995,2001,2003,2007) , NCRB

Table B : State-wise Violent Crimes (Total Number of 100+ Violent Crimes)

States / Year	1991	1995	2001	2003	2007
	Number				
Andaman & Nicobar Islands	142	168	139	166	193
Andhra Pradesh	16,265	16,860	11,591	11,707	12,529
Arunachal Pradesh	446	438	500	413	444
Assam	9,308	11,148	8,960	9,644	9,330
Bihar	35,886	34,632	31,322	32,772	23,139
Chandigarh	282	421	331	255	355
Chhattisgarh			4,320	3,933	4,985
Dadra & Nagar haveli	157	167	122	155	181
Daman & Diu	156	175	143	153	162
Delhi	4,921	6,294	4,302	3,549	4,581
Goa	571	591	306	303	320
Gujarat	15,980	13,259	7,024	7,014	6,799
Haryana	2,811	4,604	4,126	3,582	5,455
Himachal Pradesh	1,410	1,623	1,359	1,307	1,449
Jammu & Kashmir	2,997	3,819	5,164	4,879	3,689
Jharkhand			7,355	8,340	8,865
Karnataka	16,164	18,376	12,446	11,296	12,089
Kerala	11,218	11,313	11,652	9,948	10,658
Lakshadweep	110	104	104	108	104
Madhya Pradesh	21,966	21,519	20,625	18,518	15,380
Maharashtra	22,213	24,255	18,112	16,720	20,871
Manipur	672	867	847	722	1,182
Meghalaya	458	562	653	679	588
Mizoram	383	404	258	299	299
Nagaland	483	554	432	409	401
Orissa	6,215	8,154	6,925	6,855	8,594
Pondicherry	625	231	308	372	383
Punjab	6,833	2,489	3,001	2,844	3,699
Rajasthan	30,277	36,817	20,783	12,645	10,324
Sikkim	161	212	158	151	181
Tamil Nadu	19,003	16,508	12,563	10,367	9,484
Tripura	1,468	1,418	834	1,183	849
Uttaranchal			1,742	1,620	1,807
Uttar Pradesh	55,775	49,218	39,915	21,812	26,793
West Bengal	14,917	14,364	9,125	9,023	12,951

Source : Crime in India (1991,1995,2001,2003,2007) , NCRB

Table C : State-wise (Total reported Cognizable Crime under IPC)

States / Year	1991	1995	2001	2003	2007
	Number				
Andaman & Nicobar Islands	551	464	658	644	807
Andhra Pradesh	101,676	105,016	130,089	156,951	175087
Arunachal Pradesh	1,861	1,907	2,342	2,061	2286
Assam	35,144	36,494	36,877	38,195	45282
Bihar	119,932	115,598	113,879	124,466	109420
Chandigarh	1,629	2,032	3,397	2,806	3643
Chhattisgarh	.	.	38,460	38,449	45845
Dadra & Nagar haveli	437	436	350	338	425
Daman & Diu	257	283	239	269	260
Delhi	34,876	47,686	54,384	47,404	56065
Goa	3,805	3,545	2,341	2,244	2479
Gujarat	124,472	123,514	103,419	103,709	123195
Haryana	28,584	33,823	38,759	38,612	51597
Himachal Pradesh	9,209	11,147	11,499	12,011	14222
Jammu & Kashmir	15,545	15,018	19,505	21,233	21443
Jharkhand	.	.	25,447	32,203	38489
Karnataka	104,489	120,334	109,098	112,405	120606
Kerala	74,103	87,262	103,847	98,824	108530
Lakshadweep	54	31	36	31	56
Madhya Pradesh	218,431	197,445	220,201	229,527	202386
Maharashtra	192,295	194,163	171,233	164,306	195707
Manipur	2,100	2,596	2,489	2,537	3259
Meghalaya	1,726	1,773	1,687	1,669	2079
Mizoram	1,781	2,396	2,246	3,456	2083
Nagaland	1,641	1,395	1,234	976	1180
Orissa	52,081	50,995	46,661	47,281	54872
Pondicherry	5,017	2,402	4,068	4,517	5054
Punjab	16,081	11,145	27,774	28,756	35793
Rajasthan	113,617	148,266	155,185	145,579	148870
Sikkim	469	633	444	443	667
Tamil Nadu	133,284	126,761	154,801	157,186	172754
Tripura	5,594	3,731	2,801	3,514	4273
Uttaranchal	.	.	8,073	7,923	9599
Uttar Pradesh	208,561	177,992	186,202	102,996	150258
West Bengal	69,073	69,413	61,563	61,174	81102

Source : Crime in India (1991,1995,2001,2003,2007) , NCRB

Table A : State-wise Literacy Rate

States / Year	1991	1995*	2001	2005*	2009*
	(Percentage)				
Andaman & Nicobar Islands	73	77	81	85	89
Andhra Pradesh	44	52	60	69	78
Arunachal Pradesh	42	48	54	61	68
Assam	53	58	63	68	73
Bihar	39	43	47	51	56
Chandigarh	78	80	82	84	86
Chhattisgarh			65	76	90
Dadra & Nagar haveli	41			66	76
Daman & Diu	71			81	85
Delhi	75	78	82	84	87
Goa	76	79	82	85	88
Gujarat	61	65	69	74	79
Haryana	56	62	68	74	80
Himachal Pradesh	64	70	76	83	90
Jammu & Kashmir			56		
Jharkhand			54	59	66
Karnataka	56	61	67	72	77
Kerala	90	90	91	91	92
Lakshadweep	82	82	N.A	89	91
Madhya Pradesh	44	54	64	74	85
Maharashtra	65	71	77	82	89
Manipur	60			75	81
Meghalaya	49	56	63	69	76
Mizoram	82	86	89	92	95
Nagaland	62	64	67	69	71
Orissa	49	56	63	70	77
Pondicherry	75	78	81	84	87
Punjab	59	64	70	75	81
Rajasthan	39	50	60	72	87
Sikkim	57	63	69	74	81
Tamil Nadu	63	68	73	78	84
Tripura	60	67	73	79	86
Uttaranchal			N.A	78	85
Uttar Pradesh	42	49	56	64	73
West Bengal	58	63	69	74	79

Source : Census of India and Indicus Estimates

Note : * Estimates

Table B : State-wise Population Graduated from Secondary and above

States / Year	1993-94	1995*	1999-2000	2005*	2009*
	(in '000)				
Andaman & Nicobar Islands	40	42	44	49	112
Andhra Pradesh	5,373	6,450	9,292	16,070	12,805
Arunachal Pradesh	44	52	71	113	354
Assam	2,048	2,204	2,552	3,179	4,750
Bihar	5,885	6,576	8,209	11,450	7,332
Chandigarh	178	210	290	474	605
Chhattisgarh	-	-	-	-	-
Dadra & Nagar haveli	8	10	19	46	43
Daman & Diu	19	21	27	37	23
Delhi	2,588	3,041	4,199	6,813	5,604
Goa	252	289	380	574	574
Gujarat	5,334	5,804	6,873	8,857	12,629
Haryana	2,303	2,560	3,161	4,338	7,493
Himachal Pradesh	677	788	1,069	1,690	2,321
Jammu & Kashmir	336	489	1,036	3,199	1,905
Jharkhand	-	-	-	-	-
Karnataka	5,124	5,867	7,690	11,541	12,400
Kerala	4,286	4,787	5,971	8,319	10,978
Lakshadweep	4	4	5	6	29
Madhya Pradesh	5,370	5,896	7,108	9,408	6,228
Maharashtra	10,633	12,205	16,081	24,320	27,509
Manipur	297	319	366	450	843
Meghalaya	105	116	142	191	434
Mizoram	57	64	81	116	318
Nagaland	113	120	136	163	378
Orissa	2,128	2,408	3,082	4,463	6,821
Pondicherry	150	162	189	240	270
Punjab	3,048	3,395	4,214	5,826	7,545
Rajasthan	2,802	3,207	4,200	6,296	8,102
Sikkim	38	40	46	56	104
Tamil Nadu	7,320	8,164	10,154	14,084	13,928
Tripura	248	259	284	325	637
Uttaranchal	-	-	-	-	-
Uttar Pradesh	12,046	13,609	17,370	25,046	25,207
West Bengal	6,289	6,823	8,031	10,255	14,787

Source : NSSO and Indicus Estimates

Note : * Estimates

Table A :State-wise Work Force Participation Rate

States	1991	1995*	2005*	2009*
	(Percentage)			
Andaman & Nicobar Islands	35.2	36.4	39.5	40.9
Andhra Pradesh	45.1	45.3	46.1	46.4
Arunachal Pradesh	46.2	45.3	43.1	42.3
Assam	36.1	36.0	35.7	35.5
Bihar	30.6	31.8	35.0	36.4
Chandigarh	34.9	36.1	39.0	40.3
Chhattisgarh	47.7	47.2	46.0	45.5
Dadra & Nagar haveli	53.2	52.6	51.2	50.6
Daman & Diu	37.6	40.8	49.9	54.0
Delhi	31.6	32.1	33.3	33.8
Goa	35.3	36.6	40.3	41.9
Gujarat	40.2	40.9	42.7	43.4
Haryana	31.0	34.2	43.7	48.2
Himachal Pradesh	42.8	45.3	52.1	55.0
Jammu & Kashmir	-	-	-	-
Jharkhand	36.8	37.1	37.8	38.1
Karnataka	42.0	43.0	45.6	46.7
Kerala	31.4	31.8	32.7	33.0
Lakshadweep	26.4	26.0	24.9	24.5
Madhya Pradesh	41.1	41.7	43.4	44.1
Maharashtra	43.0	42.8	42.3	42.1
Manipur	42.2	42.8	44.2	44.8
Meghalaya	42.7	42.3	41.5	41.2
Mizoram	48.9	50.3	54.1	55.7
Nagaland	42.7	42.6	42.6	42.5
Orissa	37.5	38.0	39.3	39.8
Pondicherry	33.1	33.9	36.0	36.9
Punjab	30.9	33.4	40.5	43.7
Rajasthan	38.9	40.1	43.4	44.8
Sikkim	41.5	44.2	51.8	55.2
Tamil Nadu	43.3	43.9	45.2	45.8
Tripura	31.1	33.1	38.5	40.9
Uttaranchal	39.6	38.5	35.9	34.9
Uttar Pradesh	31.8	32.1	32.8	33.0
West Bengal	32.2	34.0	38.8	40.9

Source : Census of India 1991 and Indicus Estimates

Note : * Estimates

Table : State-wise Pupil Teacher Ratio

States / Year	1991-92	1995-96	2001-02	2002-03	2006-07
	Ratio				
Andaman & Nicobar Islands	20	20	19	19	23
Andhra Pradesh	47	47	38	32	33
Arunachal Pradesh	24	23	30	29	28
Assam	27	29	32	21	8
Bihar	39	30	23	30	28
Chandigarh	45	25	30	26	30
Chhattisgarh			28	32	12
Dadra & Nagar haveli	22	23	32	32	38
Daman & Diu	30	25	38	34	63
Delhi	18	21	22	29	33
Goa	19	20	18	23	19
Gujarat	30	30	43	36	38
Haryana	28	27	29	30	29
Himachal Pradesh	35	28	28	24	8
Jammu & Kashmir	16	10	20	25	14
Jharkhand			25	32	26
Karnataka	29	36	58	35	80
Kerala	51	52	19	30	27
Lakshadweep	12	12	21	19	23
Madhya Pradesh	30	33	27	28	23
Maharashtra	36	35	41	39	42
Manipur	15	19	24	20	23
Meghalaya	14	23	30	23	38
Mizoram	10	14	19	22	13
Nagaland	17	58	39	27	32
Orissa	58	45	51	21	22
Pondicherry	29	30	28	32	28
Punjab	31	30	29	27	31
Rajasthan	29	30	29	29	27
Sikkim	23	21	18	19	12
Tamil Nadu	39	39	34	33	32
Tripura	23	23	22	23	26
Uttaranchal			20	29	25
Uttar Pradesh	56	56	43	50	44
West Bengal	39	39	47	50	55

Source : Selected Educational Statistics, Ministry of Human Resource Development, Govt. of India.

Table : State-wise Number of Shops and Establishments

States / Year	1991	1995	2001	2002	2005
	Number				
Andaman & Nicobar Islands	811		1,312	1,324	
Andhra Pradesh	263,648	296,931	388,493	369,869	385,968
Assam				64,633	70,330
Bihar	14,794				230,276
Chandigarh	3,716	13,003	16,169	17,866	18,708
Goa	26,952	225,225	37,361	39,039	45,860
Gujarat	763,194	769,233	947,342	943,798	1,083,221
Haryana	145,607	154,019	178,329	180,567	169,852
Himachal Pradesh	25,584	20,485	35,226	36,795	44,608
Jammu & Kashmir			155,367	138,121	161,497
Karnataka	150,793	172,687	215,550	230,141	240,999
Kerala	216,985		263,343	263,035	241,537
Madhya Pradesh	294,797	383,132			
Maharashtra	414,181	457,798	1,452,208	1,244,803	1,480,610
Manipur	1,523	1,198	1,567	1,632	2,173
Meghalaya	902		2,025	1,360	2,812
Orissa	13,904	16,493	20,203	20,637	22,025
Pondicherry	14,518	16,945	17,704	17,877	
Punjab	247,603	285,607	300,080	250,234	243,242
Rajasthan	341,223	389,792	442,597	439,385	486,771
Tamil Nadu	312,811	251,170	312,345	363,737	360,701
Tripura	1,507	1,860	30,365	31,761	22,262
Uttaranchal					54,349
Uttar Pradesh			329,157	346,007	601,291
West Bengal	464,310	541,745	574,647	581,046	610,285

Source : Indian Labour Statistics (1991-93,95,2004 & 2007) Labour Bureau

Table : Total Number of Persons Engaged in Organised Manufacturing Sector

States / Year	1991-92	1995-96	2001-02	2002-03	2005-06
	Number				
Andaman & Nicobar Islands	5,434	8,590	.	393	338
Andhra Pradesh	847,555	1,189,697	897,714	1,007,463	972,634
Assam	121,835	147,783	110,944	110,879	128,662
Bihar	358,469	336,307	219,020	210,681	67,447
Chandigarh	11,543	13,711	.	8,243	10,752
Chhattisgarh	.	.	93,777	93,794	112,254
Dadra & Nagar haveli	5,311	6,831	53,926	53,723	64,820
Daman & Diu	3,118	10,612	47,035	53,810	79,434
Delhi	144,555	171,396	118,351	127,935	127,999
Goa	19,508	20,975	28,727	35,061	39,046
Gujarat	690,053	956,644	712,804	717,055	887,511
Haryana	265,144	337,987	287,253	299,765	396,155
Himachal Pradesh	53,788	67,593	36,263	34,023	56,838
Jammu & Kashmir	14,040	23,960	24,473	24,881	40,609
Jharkhand	.	.	156,402	156,497	148,300
Karnataka	426,473	512,058	487,732	485,917	641,864
Kerala	278,684	324,439	305,184	270,548	336,997
Madhya Pradesh	397,115	524,697	302,812	302,668	217,758
Maharashtra	1,192,668	1,518,013	1,162,542	1,170,461	1,245,096
Manipur	1,502	3,353	.	1,225	1,970
Meghalaya	5,726	6,683	.	2,461	4,332
Nagaland	4,237	5,605	.	2,784	2,862
Orissa	170,105	196,101	115,652	118,187	144,554
Pondicherry	22,968	26,540	37,708	42,273	42,597
Punjab	384,188	472,798	348,668	351,102	439,246
Rajasthan	248,541	293,878	231,875	244,265	290,941
Tamil Nadu	993,229	1,237,400	1,095,941	1,125,497	1,355,789
Tripura	9,070	8,602	.	12,147	19,221
Uttaranchal	.	.	40,880	41,485	71,097
Uttar Pradesh	753,662	797,290	554,070	583,645	648,449
West Bengal	765,069	825,154	545,447	538,858	516,107

Source : Annual Survey of Industries (ASI)

Table A : Average Wage of Registered Workers

States / Year	1991-92	1995-96	2001-02	2002-03	2005-06
	(Rs per Year)				
Andaman & Nicobar Islands	23,206	35,402	.	47,837	76,627
Andhra Pradesh	15,823	28,566	41,554	41,973	54,225
Assam	12,826	22,041	37,571	43,166	47,307
Bihar	27,252	39,446	69,450	66,591	43,370
Chandigarh	28,909	42,951	.	98,617	105,283
Chhattisgarh	.	.	114,273	118,636	
Dadra & Nagar haveli	20,825	31,050	60,160	63,342	75,116
Daman & Diu	17,543	30,456	52,907	57,298	77,297
Delhi	27,377	45,437	69,571	75,608	87,266
Goa	31,823	54,508	88,634	89,116	118,061
Gujarat	22,980	43,380	69,571	73,698	85,932
Haryana	24,452	45,663	77,008	80,744	91,352
Himachal Pradesh	27,095	40,861	62,662	66,969	91,075
Jammu & Kashmir	17,165	31,181	47,093	48,664	52,173
Jharkhand	.	.	125,500	137,707	152,232
Karnataka	25,803	48,277	71,261	77,901	87,645
Kerala	23,391	35,523	49,318	53,239	56,822
Madhya Pradesh	25,300	49,900	67,582	69,512	82,861
Maharashtra	38,611	66,076	92,185	96,393	121,542
Manipur	15,246	27,050	.	18,939	20,609
Meghalaya	37,094	53,763	.	35,433	67,844
Nagaland	20,982	22,765	.	20,366	28,721
Orissa	28,354	44,389	84,627	85,357	97,146
Pondicherry	25,022	39,386	60,276	61,902	90,802
Punjab	18,332	34,800	49,127	52,078	58,603
Rajasthan	28,410	44,941	57,694	59,190	69,409
Tamil Nadu	23,898	37,316	50,520	55,564	64,407
Tripura	12,712	20,065	.	19,050	18,818
Uttaranchal	.	.	106,399	108,557	94,184
Uttar Pradesh	21,778	43,021	61,034	66,562	74,874
West Bengal	28,767	46,265	70,276	74,306	80,528

Source : Indicus Estimates using ASI data

Table B : State-wise Minimum Wages

States / Year	1991	1995	2001	2004	2006-07
	(Rs. Per day)				
Andaman & Nicobar Islands	22	51	79	112	146
Andhra Pradesh	26	31	66	78	143
Arunachal Pradesh	20	26	41	41	60
Assam	23	29	42	57	77
Bihar	21	28	48	55	83
Chandigarh	52	52	82	100	144
Chhattisgarh				66	106
Dadra & Nagar haveli	19	35	55	84	109
Daman & Diu	20	35	55	55	104
Delhi	34	59	100	110	149
Goa	15	26	77	77	99
Gujarat	29	35	73	75	73
Haryana	35	52	75	88	145
Himachal Pradesh	22	26	51	65	106
Jammu & Kashmir	15	30	45	45	100
Jharkhand				65	97
Karnataka	19	29	50	77	88
Kerala	26	58	87	118	99
Lakshadweep	18	30	47	52	78
Madhya Pradesh	19	33	53	69	99
Maharashtra	16	39	78	107	71
Manipur	25	34	64	66	76
Meghalaya	25	35	50	70	77
Mizoram	28	35	70	84	120
Nagaland	15	25	45	50	70
Orissa	25	25	43	53	80
Pondicherry	15	30	42	55	82
Punjab	36	46	77	83	106
Rajasthan	17	30	62	74	107
Sikkim					115
Tamil Nadu	27	39	80	89	91
Tripura	10	22	39	52	59
Uttaranchal				82	85
Uttar Pradesh	29	29	69	82	89
West Bengal	14	40	112	133	77

Source : Minimum Wages in India, 2002, Ministry of Labour, Govt. of India.

Table : State-wise Expenditure on Education

States / Year	1991	1995	2001	2003	2006
	(Rs. Crore)				
Andhra Pradesh	1,150	1,715	3,794	5,073	6,036
Arunachal Pradesh	47	76	165	166	248
Assam	560	974	1,871	3,327	2,751
Bihar	1,273	2,013	4,303	4,878	5,253
Chhattisgarh	.	.	695	1,227	1,408
Delhi	.	492	1,081	1,330	1,805
Goa	75	119	238	280	405
Gujarat	1,068	1,871	3,258	3,829	4,727
Haryana	363	651	1,476	1,815	2,292
Himachal Pradesh	199	354	878	988	1,325
Jammu & Kashmir	224	433	888	951	1,205
Jharkhand	.	.	1,270	1,343	2,118
Karnataka	961	1,703	3,501	3,988	5,703
Kerala	836	1,435	2,471	2,923	3,917
Madhya Pradesh	1,012	1,650	2,805	3,985	3,674
Maharashtra	2,097	3,666	9,382	8,589	12,316
Manipur	103	150	289	292	386
Meghalaya	72	117	249	416	276
Mizoram	53	84	211	184	301
Nagaland	53	129	211	231	335
Orissa	548	943	1,733	1,924	2,474
Punjab	569	895	1,832	2,283	2,318
Rajasthan	880	1,698	3,431	4,048	4,917
Sikkim	26	48	121	152	212
Tamil Nadu	1,454	2,181	4,293	5,060	6,061
Tripura	118	173	425	510	499
Uttaranchal	.	.	684	1,153	1,414
Uttar Pradesh	2,012	3,383	6,726	7,677	10,704
West Bengal	1,323	1,957	4,543	4,770	6,254

Source : RBI State Finance

Table : State-wise Revenue Expenditure

States / Year	1991	1995	2001	2003	2006
	(Rs. Crore)				
Andhra Pradesh	6,452	10,614	24,726	31,427	41,438
Arunachal Pradesh	288	507	1,030	1,059	1,897
Assam	2,148	3,576	6,846	11,173	11,457
Bihar	5,739	8,456	18,560	21,523	20,585
Chhattisgarh	.	.	4,914	7,670	8,802
Delhi	.	1,877	5,044	5,273	7,756
Goa	332	785	2,101	2,527	2,468
Gujarat	5,238	8,766	22,718	24,062	29,232
Haryana	2,274	5,362	8,656	10,731	16,362
Himachal Pradesh	983	1,904	4,576	5,820	7,644
Jammu & Kashmir	1,521	2,516	6,123	6,474	10,067
Jharkhand	.	.	5,999	7,039	11,234
Karnataka	4,954	8,481	18,606	21,980	33,435
Kerala	3,216	5,826	11,662	15,365	20,825
Madhya Pradesh	5,421	9,131	19,283	24,149	22,363
Maharashtra	10,049	17,168	38,282	42,835	61,385
Manipur	378	619	1,338	1,520	2,415
Meghalaya	368	580	1,157	1,586	1,332
Mizoram	321	565	1,128	1,099	1,717
Nagaland	489	845	1,451	1,646	2,222
Orissa	2,635	4,698	9,878	12,521	15,772
Punjab	4,197	5,635	12,710	16,653	18,544
Rajasthan	4,080	8,332	15,949	19,098	24,954
Sikkim	155	881	1,664	1,902	1,888
Tamil Nadu	8,680	10,911	21,557	26,599	38,265
Tripura	548	787	1,813	2,110	2,483
Uttaranchal	.	.	2,833	5,668	6,477
Uttar Pradesh	10,399	17,556	34,612	46,427	55,699
West Bengal	5,324	8,626	23,395	27,058	34,161

Source : RBI State Finance

Note : Revenue Account (Actual)

Table A : Number of Seats available in Engineering

States / Year	1995*	2000	2005-06
	Number		
Andaman & Nicobar Islands	.	.	0
Andhra Pradesh	4,715	25,435	97,942
Arunachal Pradesh	226	210	198
Assam	447	660	901
Bihar	2,588	2,635	5,156
Chandigarh	154	530	1,423
Chhattisgarh	.	.	5,120
Dadra & Nagar haveli	.	.	0
Daman & Diu	.	.	0
Delhi	824	2,420	5,727
Goa	124	334	740
Gujarat	1,934	5,885	14,336
Haryana	2,154	6,125	14,132
Himachal Pradesh	103	410	1,242
Jammu & Kashmir	1,244	1,360	1,461
Jharkhand	.	.	2,483
Karnataka	12,272	26,337	48,515
Kerala	769	5,385	25,543
Lakshadweep	.	.	.
Madhya Pradesh	1,818	7,735	29,750
Maharashtra	23,474	35,835	50,267
Manipur	198	150	120
Meghalaya	.	.	240
Mizoram	120	120	120
Nagaland	.	.	0
Orissa	3,028	6,360	11,517
Pondicherry	95	580	2,466
Punjab	766	4,050	15,345
Rajasthan	355	2,964	16,198
Sikkim	98	220	420
Tamil Nadu	132,107	31,895	10,232
Tripura	129	160	190
Uttaranchal	.	.	3,011
Uttar Pradesh	3,435	12,886	40,121
West Bengal	1,523	5,077	13,305

Source : AICTE- Handbook for Approval Process

Note : * Estimated

Table A : Number of Seats available in Pharmacy

States / Year	1995	2000	2005-06
	Number		
Andaman & Nicobar Islands	.	.	0
Andhra Pradesh	358	1,182	4,955
Arunachal Pradesh	.	.	0
Assam	11	20	40
Bihar	139	105	135
Chandigarh	29	50	98
Chhattisgarh	.	.	248
Dadra & Nagar haveli	.	.	0
Daman & Diu	.	.	0
Delhi	144	225	384
Goa	60	60	60
Gujarat	208	625	2,345
Haryana	49	190	956
Himachal Pradesh	.	235	40
Jammu & Kashmir	.	.	60
Jharkhand	.	.	60
Karnataka	1,809	2,520	3,750
Kerala	21	138	1,350
Lakshadweep	.	.	.
Madhya Pradesh	119	520	3,298
Maharashtra	1,448	2,420	4,482
Manipur	.	.	0
Meghalaya	.	.	0
Mizoram	.	.	30
Nagaland	.	.	0
Orissa	276	460	850
Pondicherry	.	.	60
Punjab	10	90	1,208
Rajasthan	.	.	1,291
Sikkim	60	60	60
Tamil Nadu	901	1,570	3,058
Tripura	30	30	30
Uttaranchal	.	.	390
Uttar Pradesh	460	1,125	3,678
West Bengal	27	100	490

Source : AICTE- Handbook for Approval Process

Table C : Number of Seats available in I.T.I.s

States / Year	1992	1995	2000	2005	2007
	Number				
Andaman & Nicobar Islands	176	204	198	220	241
Andhra Pradesh	47,000	60,524	105,975	23,679	105,308
Arunachal Pradesh	332	348	374	368	512
Assam	4,232	4,416	4,620	4,536	5,776
Bihar	14,184	14,740	16,224	13,060	19,224
Chandigarh	912	848	904	1,016	804
Chhattisgarh	.	.	.	8,536	11,080
Dadra & Nagar haveli	192	180	228	228	228
Daman & Diu	288	416	388	388	388
Delhi	8,152	8,624	10,200	9,316	13,032
Goa	2,992	3,076	2,912	2,652	3,321
Gujarat	26,410	26,828	62,218	69,508	72,804
Haryana	14,466	14,560	14,537	13,381	18,936
Himachal Pradesh	3,408	3,332	3,859	5,377	6,972
Jammu & Kashmir	3,532	3,820	4,044	4,332	4,380
Jharkhand	.	.	.	2,564	9,600
Karnataka	20,600	24,220	40,398	19,948	69,416
Kerala	47,220	48,524	53,921	15,616	60,531
Lakshadweep	64	64	96	96	96
Madhya Pradesh	17,040	16,685	23,146	28,074	21,396
Maharashtra	47,500	45,400	96,940	65,694	92,568
Manipur	496	488	540	540	540
Meghalaya	556	676	926	622	942
Mizoram	240	264	294	294	294
Nagaland	404	404	404	404	928
Orissa	6,188	8,976	15,688	6,720	38,310
Pondicherry	496	716	1,572	1,256	1,716
Punjab	17,728	17,084	15,723	14,191	29,923
Rajasthan	6,968	7,736	9,148	9,072	18,553
Sikkim	144	140	140	140	212
Tamil Nadu	32,900	43,152	76,400	23,772	75,748
Tripura	528	508	400	416	816
Uttaranchal	.	.	.	5,928	8,287
Uttar Pradesh	53,300	55,984	45,252	44,524	44,256
West Bengal	10,300	11,040	12,048	11,924	12,372

Source : Indian Labour Year Book (1993-94, 1997, 2002) Lok Sabha Unstarred Question, No. 3749, Dated 23.08.2004. Ministry of Labour and Employment, Govt. of India.

Table : Student Enrolment in Class (XI-XII)

States / Year	1991-92	1995-96	2001-02	2002-03	2006-07
	Number				
Andaman & Nicobar Islands	3,552	4,059	5,524	6,093	6,946
Andhra Pradesh	410,430	684,348	1,089,661	1,105,571	1,398,616
Arunachal Pradesh	5,333	6,546	11,143	13,252	15,330
Assam	183,776	283,412	329,888	192,586	186,485
Bihar	422,028	361,639	299,144	653,637	475,452
Chandigarh	26,130	9,221	17,420	21,831	23,184
Chhattisgarh	.	.	226,008	186,703	227,163
Dadra & Nagar haveli	955	689	1,696	1,850	2,189
Daman & Diu	1,420	1,017	2,303	2,065	2,639
Delhi	146,385	147,796	220,654	230,891	318,637
Goa	19,493	24,500	22,868	21,793	24,463
Gujarat	348,000	406,170	606,600	623,379	625,579
Haryana	209,028	108,709	349,282	376,927	378,690
Himachal Pradesh	47,810	59,815	123,318	142,687	165,691
Jammu & Kashmir	47,123	60,357	114,224	119,362	144,225
Jharkhand	.	.	12,279	200,583	47,629
Karnataka	384,625	398,315	608,036	485,519	903,321
Kerala	146,847	256,608	401,851	436,047	588,995
Lakshadweep	567	401	804	961	2,046
Madhya Pradesh	295,163	1,012,731	782,103	680,633	922,786
Maharashtra	823,434	1,044,756	1,521,865	1,597,493	1,820,063
Manipur	21,880	23,844	16,982	37,826	24,683
Meghalaya	11,271	12,634	20,420	29,456	31,734
Mizoram	.	7,234	8,975	11,341	11,762
Nagaland	3,752	7,462	10,831	8,239	19,579
Orissa	160,209	402,360	493,000	272,671	503,878
Pondicherry	9,811	13,004	16,767	18,695	23,692
Punjab	183,811	240,302	302,584	331,868	344,123
Rajasthan	293,920	491,000	440,332	474,380	635,357
Sikkim	2,417	3,554	4,577	6,178	7,227
Tamil Nadu	507,979	647,199	898,429	984,516	1,152,073
Tripura	17,288	22,307	27,583	29,861	36,679
Uttaranchal	.	.	112,230	143,914	179,418
Uttar Pradesh	1,040,891	1,167,552	1,116,091	1,821,960	1,903,264
West Bengal	424,416	491,321	588,274	678,797	886,810

Source : Selected Educational Statistics (1991-92,1995-96,2001-02,2002-03,2006-07)

About TeamLease

TeamLease is India's largest staffing company. It is a liquidity provider in labour markets that enables the better matching of demand and supply by connecting people, to the right company, at the right time. We currently have over 47,000 employees in over 425 locations across the country.

TeamLease has a range of temp and perm solutions for companies and individuals. Our primary services include temporary staffing, payrolling and permanent recruitment. These are supplemented by strong vertical practices for ITES, Retail, Telecom and Financial Services that understand their industries deeply and offer special solutions. Clients, associates and candidates are serviced through our network of offices, web and phone support. Our proprietary web based TeamLease Temp Network (TLnet) is hosted at www.teamlease.com. TLnet has three components; ALCS (Associate Life Cycle System), CLCS (Candidate Life Cycle System) and our Intranet.

TeamLease, as a market leader, has a responsibility and self-interest in dispelling the faulty conception of temporary staffing as precarious employment. Our research efforts include a quarterly TeamLease Employment Outlook, annual TeamLease Temp Salary Primer and the TeamLease Staffing White Paper.

About IIJT : A TeamLease Venture

Indian Institute of Job Training (www.ijjt.net) is one of India's fastest growing vocation training providers with a national network of over 250 centres and a current capacity of 1 lakh students in courses that include infotech, sales, retail, finance and ICT. The organization excels in grooming trainees into industry ready professionals by enriching their knowledge in specific domains along with a full module of soft skill training. The courses are developed based on **TNEF (TeamLease National Employment Framework)** one of the most extensive frameworks in India, which maps various sectors, industries, functions, sub functions, profiles etc. culminating in Ideal Candidate profiles.

At IIJT the key metric is the job outcome. We are in the business of making people employable and employment outcomes of our students are how we evaluate ourselves.

About Indicus

Indicus Analytics (<http://www.indicus.net>) is a specialized economics research firm based in New Delhi. It has been providing research inputs to institutions such as The World Bank, Harvard University, The Finance Commission, and many other national and international institutions.

Its areas of analysis include modeling, indexation, monitoring and evaluation, socio-economic surveys, and analytical studies. Indicus research covers the whole range of areas including: (i) Socio-economy and Infrastructure (ii) States Performance, Governance, Policy and Law (iii) Labour, Poverty and Demography, and (iv) Macro-economy and Trade.



Build Your Skills. Build Your Future

Agartala
Ahmedabad
Aligarh
Alipurduar
Allahabad
Alwar
Amroha
Anpara
Arambagh
Asansol
Aundh
Azamgarh
Bagula
Bareilly
Basti
Behrampur
Behror
Bengaluru
Bhagalpur
Bharatpur
Bhathinda
Bhilai
Bhilwada
Bhiwani
Bhopal
Bijnore
Bokaro
Bongaigaon
Bulandshahr
Burdwan
Chandannagar
Chandigarh
Chandrakona
Chindwara
Contai
Coochbehar
Darbhanga
Dehradun
Delhi
Deoria
Dhanbad
Dharamshala
Dimapur
Domjur
Durgapur
Faizabad
Faridabad
Gandhinagar
Ghaziabad
Gorakhpur
Gulburga
Gurgaon
Guwahati
Gwalior
Habra
Hajipur
Haldwani
Hapur
Haridwar
Hassan
Himmatnagar
Hissar
Hyderabad
Imphal
Jaipur
Jalgaon
Jammu
Jamshedpur

Jhalawar
Jhunjhunu
Jind
Jodhpur
Jorhat
Kadapa
Kalna
Kanpur
Karad
Karnal
Khatima
Kohima
Kolhapur
Kolkata
Kota
Kotdwar
Kothrud
Kotputli
Kurnool
Kurukshetra
Lucknow
Mahaboobnagar
Mainpuri
Malda
Maligoan
Memari
Mumbai
Mussorie
Muzaffarnagar
Muzaffarpur
Nagpur
Nashik
Noida
Palwal
Panipat
Pithoragarh
Pune
Puttur
Rajsamand
Ramnagar
Ranchi
Ratlam
Rewari
Roorkee
Sahranpur
Sangli
Satara
Satna
Sikar
Silchar
Siliguri
Sirsa
Solapur
Sonarpur
Sonepat
Sreerampore
Sri Ganganagar
Srinagar
Sultanpur
Surat
Swai Madhopur
Udaipur
Uluberia
Una
Uttarpara
Varanasi
Vijayawada
Yamuna Nagar

For more information

info@teamlease.com

1800 2666777

www.teamlease.com

www.ijit.net