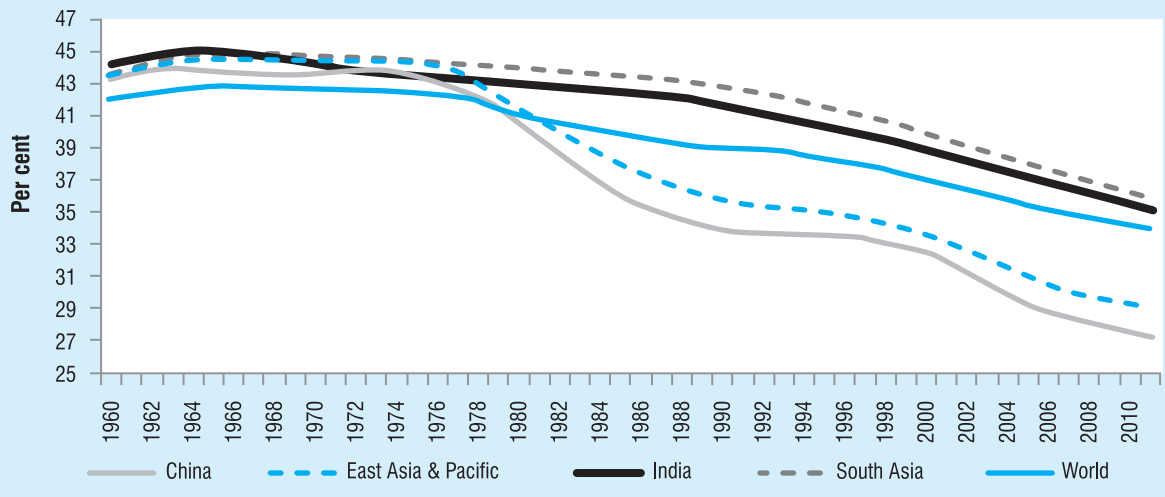
Seizing the Demographic Dividend

2 CHAPTER

Policymakers are usually focused on short-run economic management issues. But the short run has to be a bridge to the long run. The central long-run question facing India is where will good jobs come from? Productive jobs are vital for growth. And a good job is the best form of inclusion. More than half our population depends on agriculture, but the experience of other countries suggests that the number of people dependent on agriculture will have to shrink if per capita incomes in agriculture are to go up substantially. While industry is creating jobs, too many such jobs are low-productivity non-contractual jobs in the unorganized sector, offering low incomes, little protection, and no benefits. Service jobs are relatively high productivity, but employment growth in services has been slow in recent years. India's challenge is to create the conditions for faster growth of productive jobs outside of agriculture, especially in organized manufacturing and in services, even while improving productivity in agriculture. The benefit of rising to the challenge is decades of strong inclusive growth.

2.1 Growth optimists are confident in India's demographic dividend--the fact that India's dependency ratio, as measured by the share of the young and the elderly as a fraction of the population, will come down more sharply in the coming decades (see Figure 2.1). More working age people will mean more workers, especially in the productive age groups, more incomes, more savings, more capital per worker, and more growth. Also, because demographic change is associated with fertility declines, the transition period may be accompanied by greater female participation in the labour force (Bailey, 2006).

Figure 2.1: Population Dependency Ratio



Sources : **World Bank (2012) and authors' calculations.**
Note : **Population dependency ratio is defined as 100-[Population ages 15-64 (% of total)]. This definition follows IMF (2006).**

2.2 Every fast-growing Asian economy in recent years has accelerated as it underwent a demographic transition (see Figure 2.2). In India itself, Aiyar and Mody (2011) document that the high growth states (Tamil Nadu, Karnataka, and Gujarat) in the period 1991-2001 had a dependency ratio which was 8.7 percentage points lower than that of the low growth states (Bihar, Madhya Pradesh, and Uttar Pradesh) and an average annual growth rate that was 4.3 percentage points higher. Looking ahead, they argue, the low growth states will benefit more from the demographic dividend, as higher incomes and lower fertility alter demographics. Indeed, over the period 2001-11, the hitherto laggard states have grown at an average of around 5 per cent annually. The difference between their growth and the growth of the leaders in the period 2001-11 is just 1.5 percentage points. So demographic transition seems to be correlated with growth, with some reasons to believe that causality flows both ways--lower dependency ratios increase growth and higher growth reduces fertility and consequently dependency ratios.

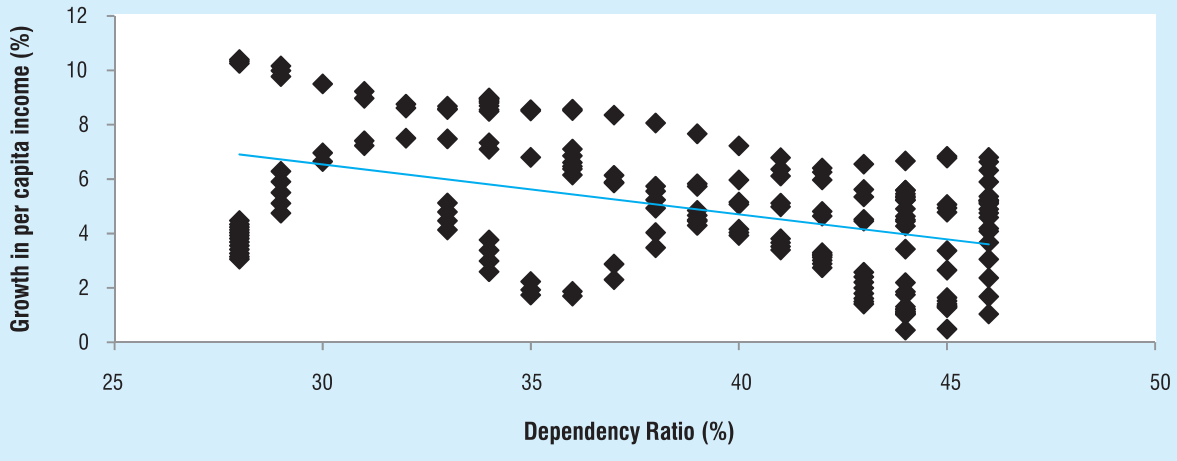
2.3 Growth optimists point to another reason for cheer. Cross-country evidence suggests that productivity is an increasing function of age, with the age group 40-49 being the most productive because of work experience (Feyrer 2007). Nearly half the additions to the Indian labour force over the period 2011-30 will be in the age group 30-49, even while the share of this group in China, Korea, and the United States will be declining. That India will be expanding its most productive cohorts even while most developed countries and some developing countries like China will be contracting theirs in the coming decades can be another source of advantage.

2.4 Growth pessimists are not convinced. A larger workforce translates into more workers only if there are productive jobs for it. Will there be enough productive jobs? One way to make progress in answering this question is to understand the commonalities as well as the differences between India's growth path and that of other populous fast-growing Asian economies. By comparing where India is today, with where those countries were at similar stages in their development, as well as by looking at what they did next, we might get a better perspective on what India might need to do. Of course, any such analysis has to be accompanied by two important caveats. First, countries differ and do not necessarily follow similar trajectories. Second, the global environment has changed. The opportunities India faces now are different from those that previous fast growers faced when they were at a similar stage of development. Blindly replicating their trajectory may be unwise.

Comparative Growth and Trade

2.5 In what follows, we start by analysing various economic outcomes for selected Asian countries around their dates of initial 'takeoff' into periods of

Figure 2.2: Growth in Per Capita Income and dependency Ratios: Selected Asian Economies



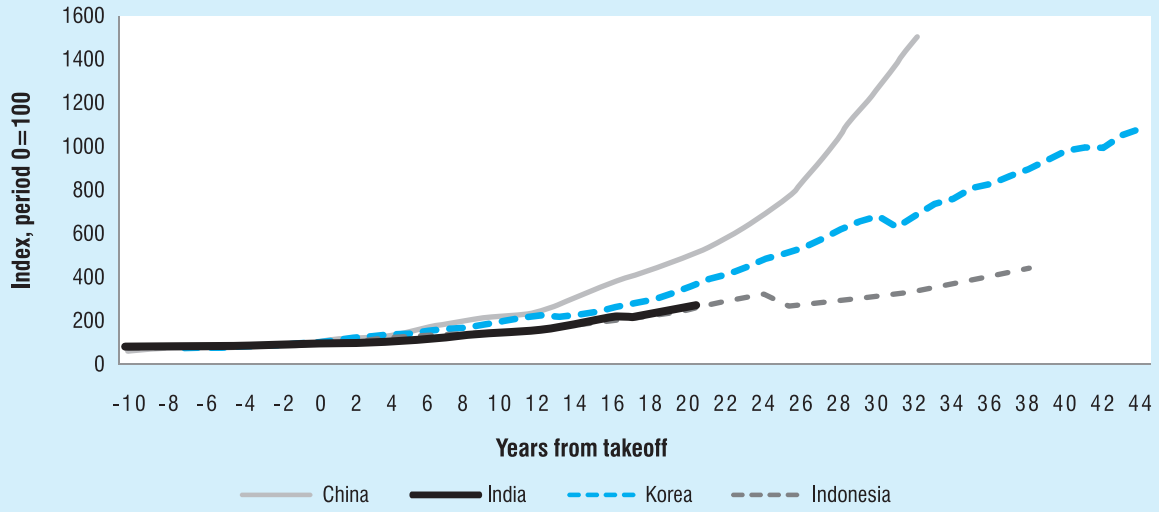
Sources **: World Bank (2012) and authors' calculations.**

Notes **: Population dependency ratio is defined as 100-[Population ages 15-64 (% of total)]. Per capita income is measured by Gross Domestic Product (GDP) per capita in 2000 US dollars. The scatter plot drops observations with negative per capita income growth. Selected Asian economies include China, India, Indonesia, and Korea.**

high growth. We identify the year of takeoff for comparator Asian countries based on IMF (2006)[1]. The dates are 1979, 1973, and 1967 for China, Indonesia, and Korea respectively. For India, we define the year of takeoff as 1991, when major economic reforms began. Figures 2.3-2.4 weave together the following narrative:

- Figure 2.3a shows that India was growing at similar rates as other Asian economies before takeoff. After takeoff, it kept pace with Indonesia, but China and Korea grew faster.
- In Figure 2.3b, we set date 0 as the year the country's per capita GDP in 2000 US dollars

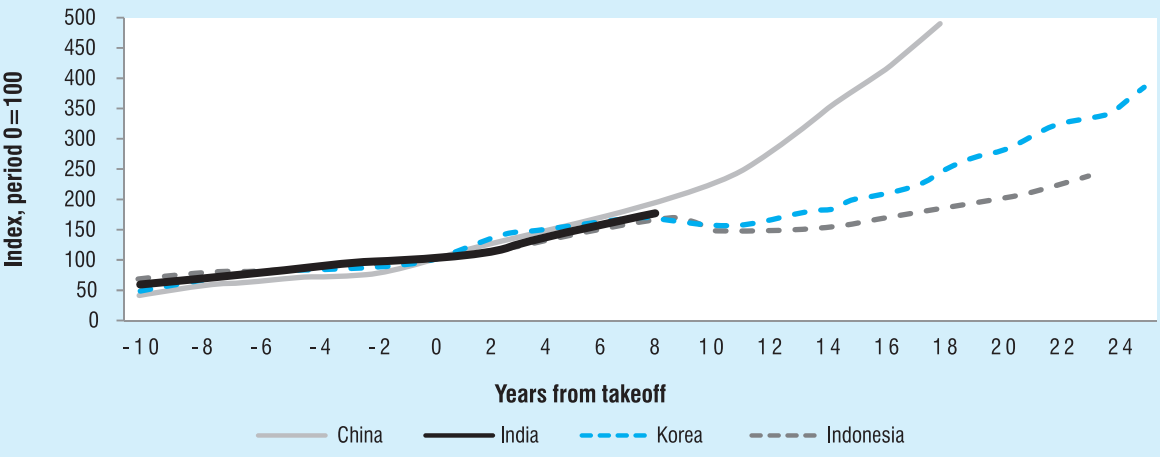
Figure 2.3a: Per Capita Income - Years From Takeoff



Sources **: World Bank (2012) and authors' calculations.**

Notes **: Takeoff year 0 is defined as 1979, 1991, 1973, and 1967 for China, India, Indonesia, and Korea respectively. Per capita income is measured by GDP per capita in 2000 US dollars.**

Figure 2.3b: Per Capita Income - Years From Takeoff (Alternative Definition-I)



Sources **: World Bank (2012) and authors' calculations.**

Notes **: Takeoff year 0 is defined as the year the country's per capita income crossed $500. The takeoff years are defined as 1993, 2003, 1988, and 1951 for China, India, Indonesia, and Korea respectively. Per capita income is measured by GDP per capita in 2000 US dollars.**

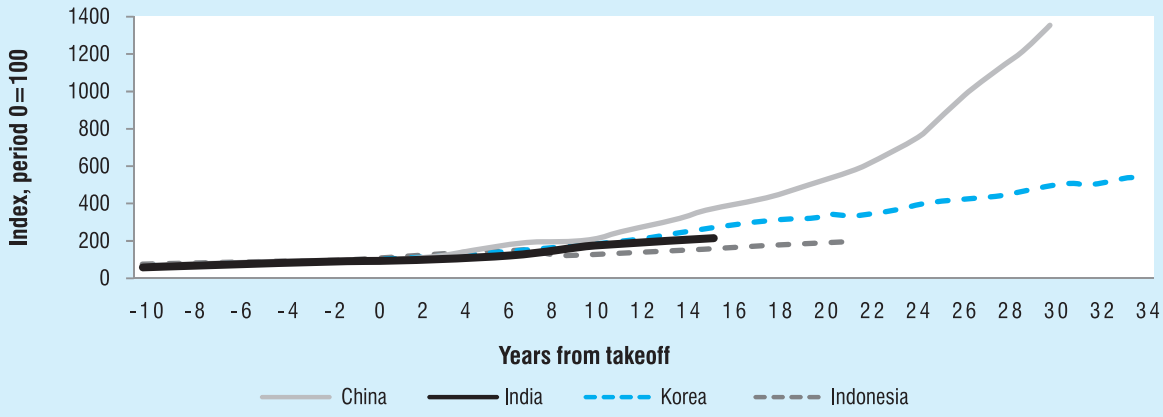
[1] **IMF (2006) defines the takeoff date for China as the year when major economic reforms began. For Newly Industrialized Economies (which includes Korea) and for ASEAN-4 (which includes Indonesia), the date is defined as the year when the 3-year moving average of constant price export growth first exceeded 10 per cent.**

crossed $500; in Figure 2.3c, the year that the country's dependency ratio fell below 40 per cent. China's growth is more robust under both these alternatives, while India's matches that of Indonesia. Korea's trajectory is similar to India's in the initial years after takeoff, though after 10 years the slope of its trajectory increases steeply.

- In Figure 2.4, we plot an index of a country's share of world trade, with year 0 based on our first takeoff definition (1979, 1973, 1967, and 1991 for China, Indonesia, Korea, and India respectively). Interestingly, India's growth in its share of world trade is similar to China's and greater than Indonesia's at similar periods after takeoff. India's openness is also evidenced by the trade to GDP ratio, which exceeded 55 per cent in 2011. By contrast, this ratio is only 31 per cent for the United States.

2.6 The takeaway from the evidence we have examined thus far is that India's growth performance has been similar to that of some fast-growing Asian economies at similar stages after takeoff, but not as spectacular as China's. Interestingly, despite being seen as a trade laggard, India has grown more open to trade at about China's pace.

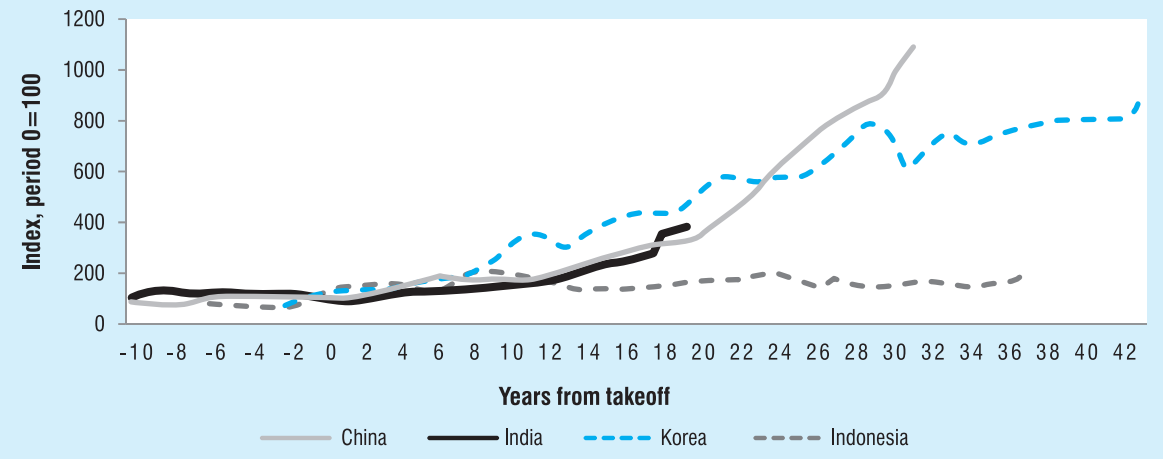
Figure 2.3c: Per Capita Income - Years From Takeoff (Alternative Definition-II)



Sources **: World Bank (2012) and authors' calculations.**

Notes **: Takeoff year 0 is defined as the year the country's dependency ratio fell below 40 per cent. The takeoff years are defined as 1981, 1996, 1990, and 1977 for China, India, Indonesia, and Korea respectively. Per capita income is measured by GDP per capita in 2000 US dollars.**

Figure 2.4: Share in World Trade - Years From Takeoff



Sources : **IMF (2011) and authors' calculations.**

Notes **: Takeoff year 0 is defined as 1979, 1991, 1973, and 1967 for China, India, Indonesia, and Korea respectively. Share in world trade is measured by the sum of a country's exports and imports of goods and services as a ratio of world trade (measured by the average of world exports and imports).**

Sources of Growth

2.7 What have been the sources of growth in India, and how does it compare with other fast growing Asian economies? Growth in per capita income is driven by growth in labour productivity (what the average worker produces), growth in working age population (fewer the people who are in the dependent age group in the population, greater the output), growth in the fraction of those who can work that actually look for work (labour force participation rate), and growth in those looking for work who actually find it (employment rate). Because accurate employment data are hard to find for developing countries, studies typically ignore the employment rate in decomposing the sources of growth.

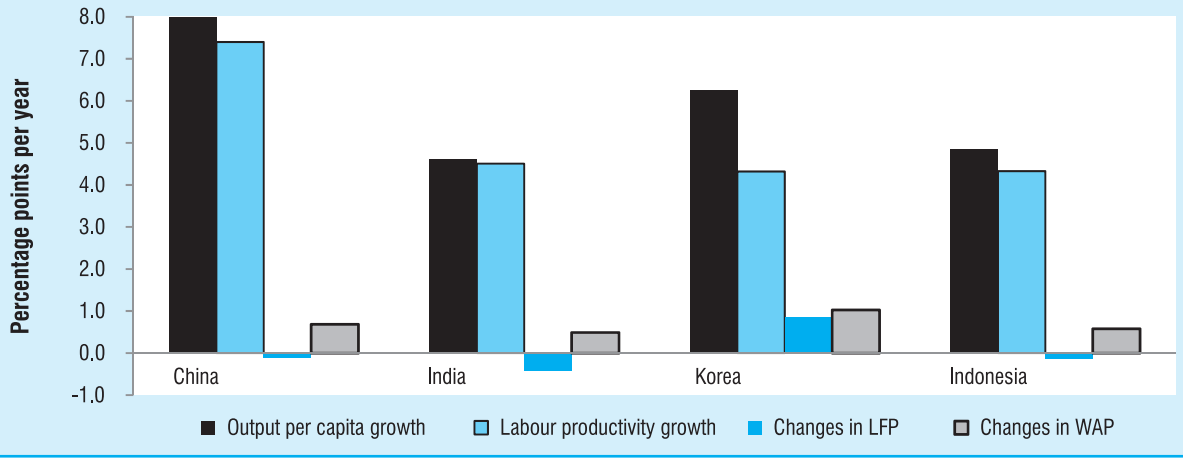
2.8 A decomposition of per capita income growth during the 20 years after takeoff (see Figure 2.5) suggests that across countries, much of the increase in per capita income comes from greater labour productivity. Interestingly, except for Korea, labour force participation (LFP) has fallen on an average annual basis, so it subtracts from growth. Finally, the increase in the share of working age population (WAP) seems to add only a little to growth. Since the increase in working age population is what we call the demographic dividend, the fact that it contributes so little to growth (on average, 0.5 percentage points for India in the 20 years since 1991) may seem a puzzle.

2.9 The resolution to the puzzle is quite simple. The increase in the fraction of people working is probably not the main consequence of the demographic dividend. Instead, the effects of the demographic dividend are channelled through the increase in labour productivity, which comes from more physical capital employed per worker (in turn resulting from greater saving and investment), more human capital per worker (which comes from more education as smaller families lead to greater spending on education per child), and greater total factor productivity (TFP). TFP measures how productive the job intrinsically is, capturing aspects such as the technology used, efficiency with which the work is carried out, and use of hard-to-measure aspects of work such as tacit knowledge, organizational capabilities, and trust.

2.10 It is therefore useful to see how much each of these factors contributed to labour productivity. As Figure 2.6 suggests, better human capital accounts for only a small part of the growth in labour productivity for Asian fast growers. Instead, the two biggest contributors are the growth in capital deployed per worker and growth in TFP. Indonesia and Korea relied much more on capital deepening. India did not have as much growth in capital per worker as these countries but had stronger growth in TFP. Finally, China grew both because of more capital deployed as well as strong increases in TFP.

2.11 Interestingly, as Figure 2.7 suggests, in the years beyond the 20th year after takeoff which India is now entering, capital deepening slowed for both Indonesia and Korea but it increased for China. More interestingly, TFP slipped considerably for Indonesia and was not large for Korea to begin with. However, it increased for China.

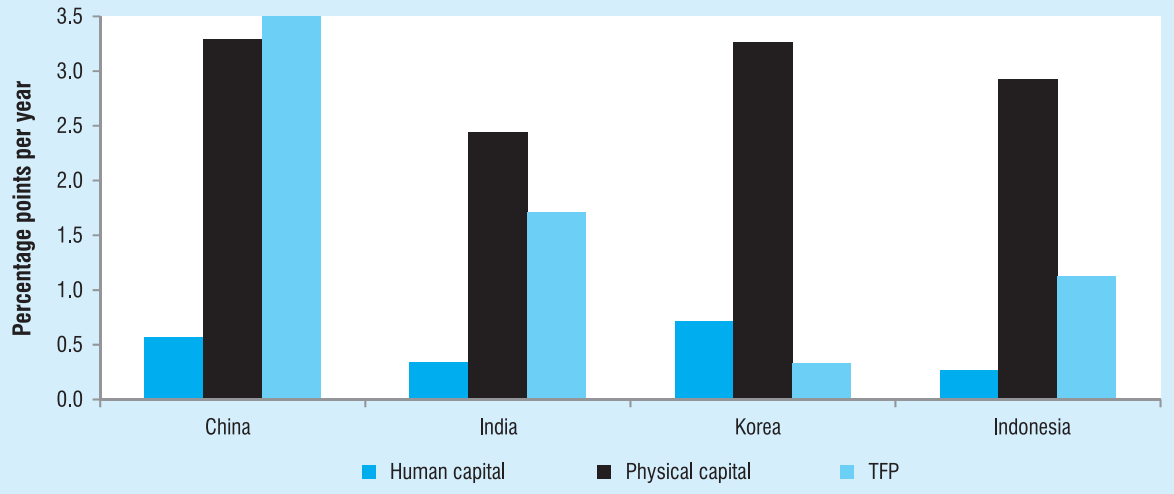
Figure 2.5: Sources of Growth in Output Per Capita-First 20 Years After Takeoff



Source **: Authors'calculations.**

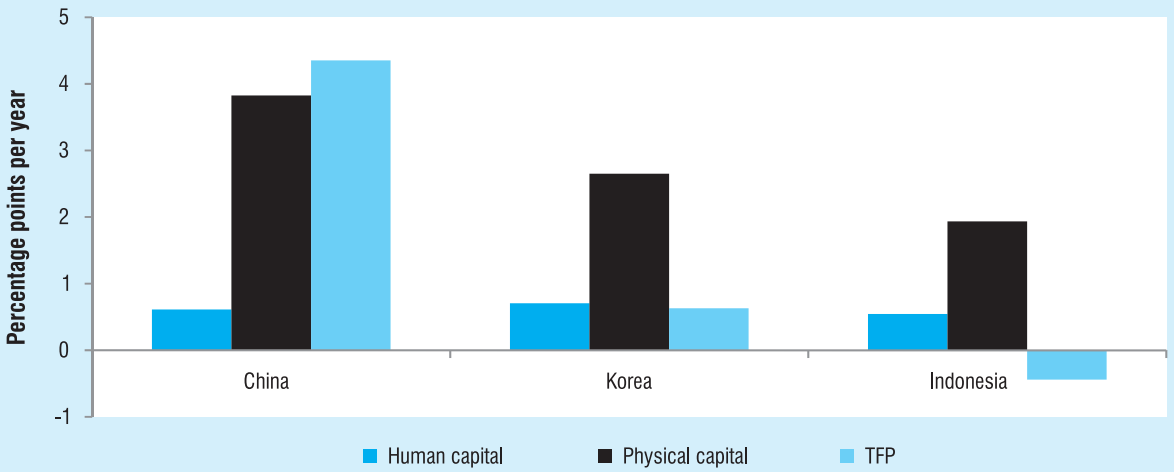
Note **: Takeoff year 0 is defined as 1979, 1991, 1973, and 1967 for China, India, Indonesia, and Korea respectively.**

Figure 2.6: Sources of Growth in Labour Productivity First 20 Years After Takeoff



Sources **: Authors' calculations from a standard growth decomposition exercise. Capital stock data are from Nehru and Dhareswar (1993) extended using perpetual inventory method and a depreciation rate of 5 per cent. Labour share is assumed to be 0.65. Human capital is related to average years of schooling assuming 7per cent returns to schooling (following Bosworth and Collins 2003).**
Note **: Takeoff year 0 is defined as 1979, 1991, 1973, and 1967 for China, India, Indonesia, and Korea respectively.**

Figure 2.7: Sources of Growth in Labour Productivity-Beyond First 20 years



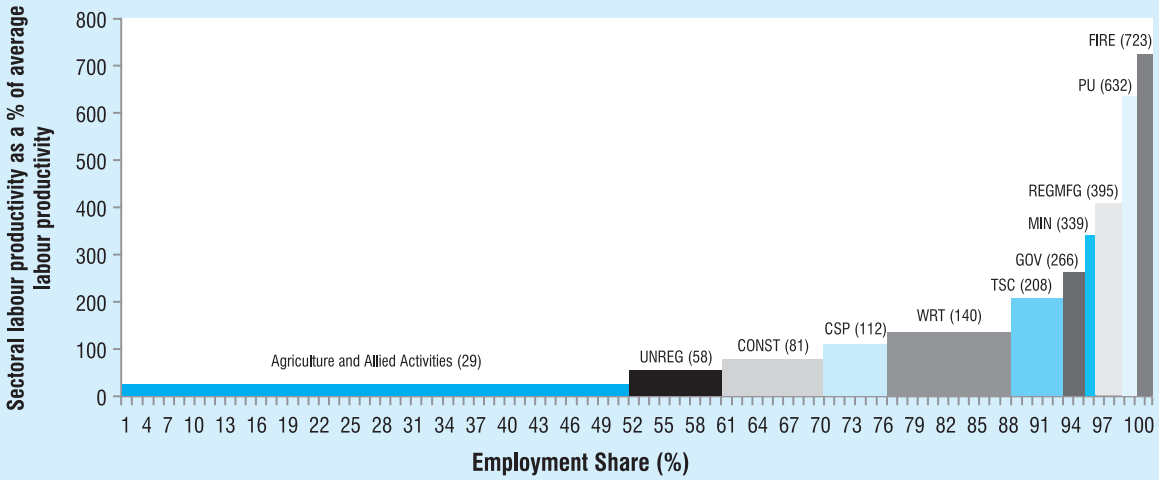
Sources **: Authors' calculations from a standard growth decomposition exercise. Capital stock data are from Nehru and Dhareswar (1993) extended using perpetual inventory method and a depreciation rate of 5 per cent. Labour share is assumed to be 0.65. Human capital is related to average years of schooling assuming 7per cent returns to schooling (following Bosworth and Collins 2003).**
Note **: Takeoff year 0 is defined as 1979, 1991, 1973, and 1967 for China, India, Indonesia, and Korea respectively.**

2.12 In sum, the underpinnings for continued strong Chinese growth in the years beyond the second decade after takeoff are a robust investment rate as well as substantial increases in the intrinsic productivity of jobs. If India were to follow a similar path, it would need to increase savings and investment, both of which will follow from the demographic transformation. But it will also have to increase the intrinsic productivity of jobs, that is TFP.

Increasing Labour Productivity and Sectoral Reallocation

2.13 IMF (2006) suggests that a significant portion of China's increase in TFP has come as workers migrate from low-productivity sectors like agriculture to high-productivity sectors like manufacturing. What lies ahead for India? To see how TFP in India can be increased, consider Figure 2.8 from Hasan et al.

Figure 2.8: Employment Shares and Labour Productivity Differentials across Sectors - 2009-10



Source **: Hasan et al. (2012).**

Notes **: UNREG: Unregistered manufacturing, CONST: Construction, CSP: Community, social and personal services, WRT: Wholesale—retail trade and restaurants—hotels, TSC: Transport, storage and communications, GOV: Government services, MIN: Mining and quarrying, REGMFG: Registered manufacturing, PU: Public utilities, FIRE: Finance, insurance and real estate.**

(2012). Eleven sectors of the Indian economy are arranged by labour productivity in 2009. The height of the rectangle indicates the productivity of the sector, while the width indicates the share of the labour force it employs. Agriculture is very low productivity but employs over half the labour force. In contrast, financial and brokerage services are the most productive sector in the economy, but employ a tiny share of the labour force.

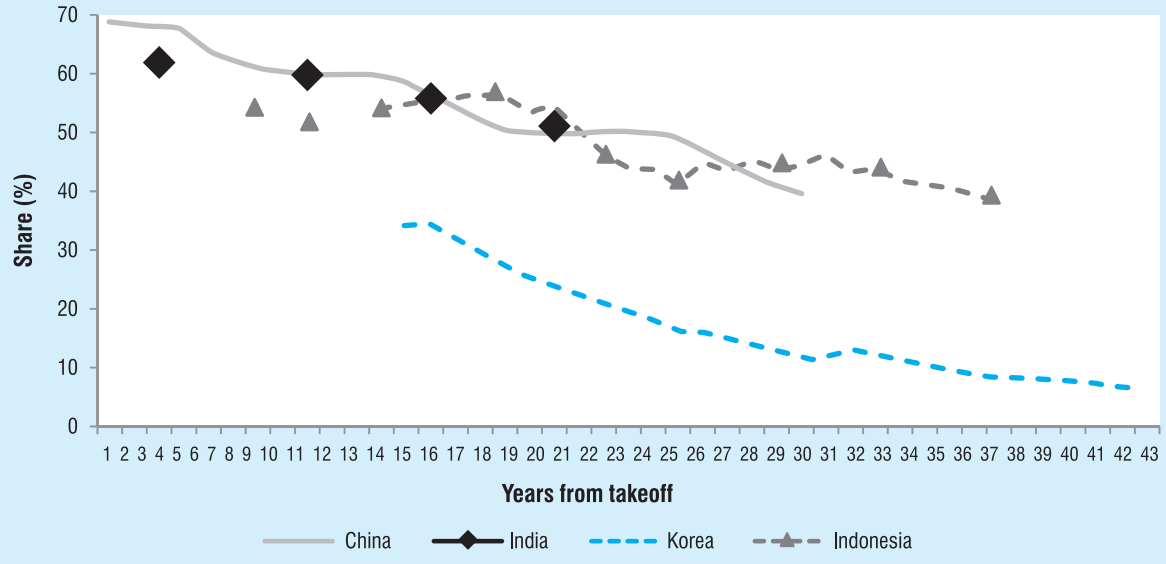
2.14 That so many continue to be dependent on agriculture is one reason that the government has focused on improving productivity in agriculture, even while attempting to support incomes of both farmers and workers through various programmes. Agricultural productivity remains low probably because too many agricultural workers work with relatively fixed and limited amounts of productive assets--land and capital (irrigation, technology, tractors, machinery, and the like). One way to increase labour productivity, therefore, is to increase investment (and thus capital per employee) across all sectors, including agriculture.

2.15 An equally effective way of increasing labor productivity might be to increase TFP--by moving some of those dependent on low-productivity agriculture to higher-productivity jobs in industry or services. This would also allow those who remain in agriculture to farm larger, more viable plots, employing more mechanized equipment to improve labour productivity. Clearly, more investment in worker-receiving sectors will be needed to keep up the capital per employee, but the typically greater TFP in those sectors will also mean much greater output per capita. Continuing reallocation of workers out of low-productivity sectors into higher-productivity sectors is akin to increasing TFP and can therefore be a growth engine[2].

2.16 How has India done on reallocating workers? We plot sectoral shares of employment and shares of value added in the years since takeoff. First take agriculture. India certainly has a bigger share of employment in agriculture today than the other Asian countries, but perhaps only because it has not had as many years since takeoff. Figures 2.9a and 2.9b suggest employment share and value added share in agriculture in India is coming down at a similar pace as in the other Asian economies (though Korea seems to have a lower share of people in agriculture from the time we have data). Extrapolating into the future, if India followed China's or Indonesia's path, about a 10 percentage point share of overall employment would move out of agriculture in the next 10 years, bringing the share of employment in agriculture down to about 40 per cent.

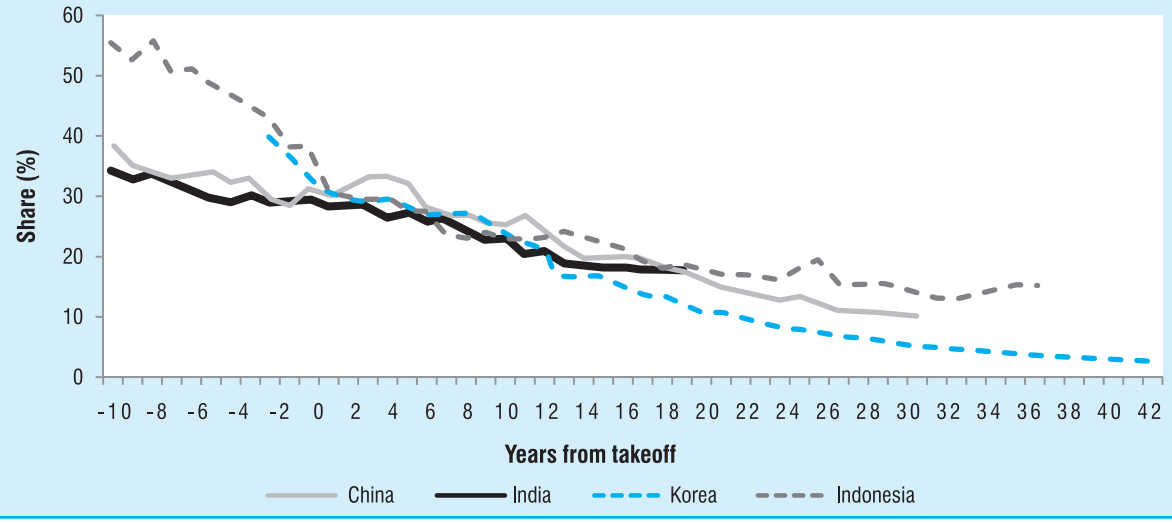
[2] **While this section focuses on the experience of Asian countries since takeoff, another interesting example from Africa is that of the *Mauritian miracle*, where clear sectoral shifts fuelled high growth (**Box 2.6**).**

Figure 2.9a: Share of Employment in Agriculture - Years From Takeoff



Sources **: World Bank (2012) and authors' calculations.**
Note **:Takeoff year 0 is defined as 1979, 1991, 1973, and 1967 for China, India, Indonesia, and Korea respectively.**

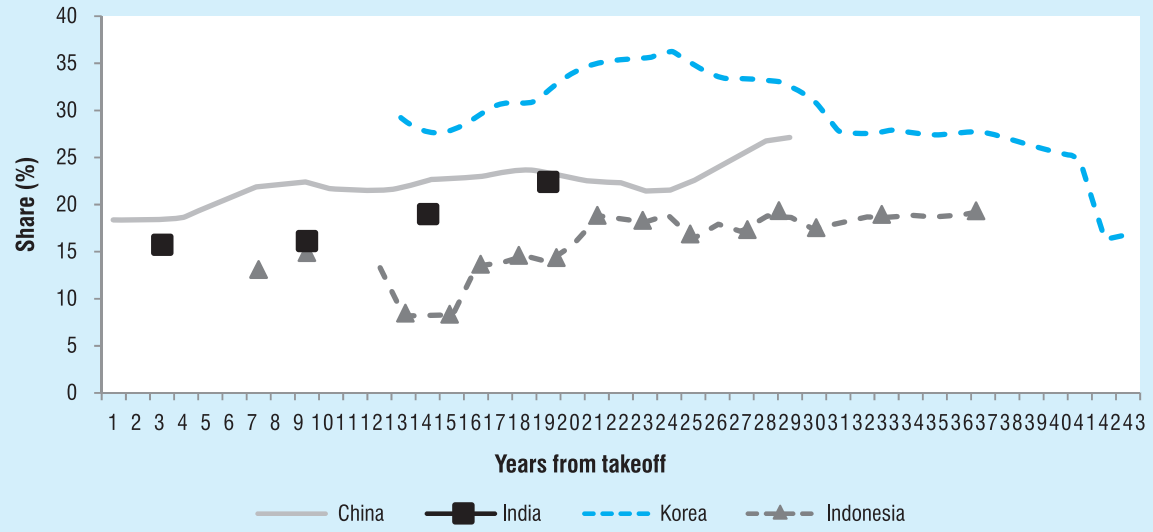
Figure 2.9b: Share of Value Added in Agriculture - Years From Takeoff



Sources **: World Bank (2012) and authors' calculations.**
Note **: Takeoff year 0 is defined as 1979, 1991, 1973, and 1967 for China, India, Indonesia, and Korea respectively.**

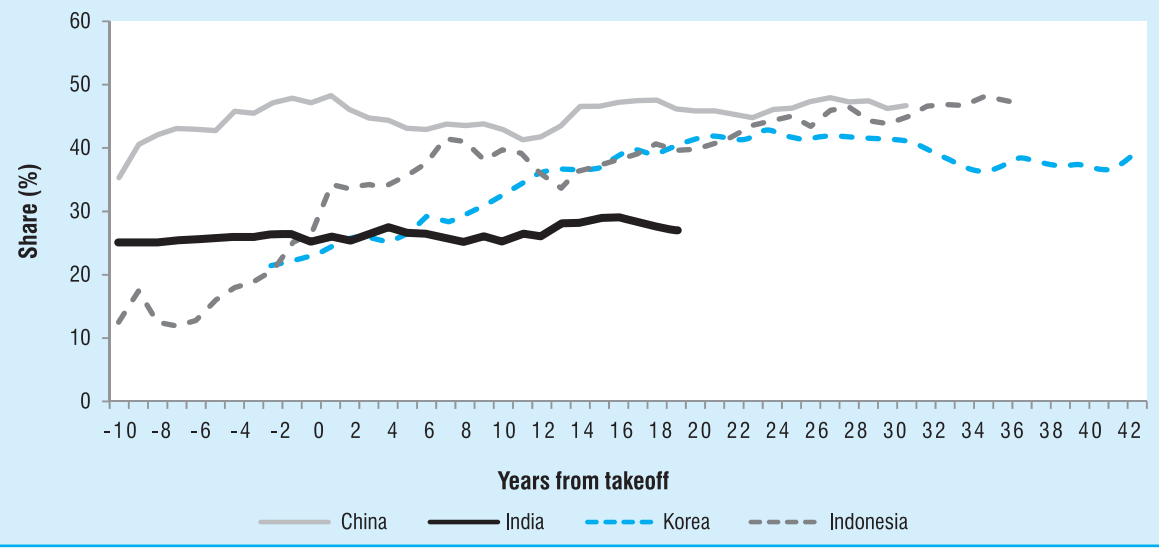
2.17 Turning next to industry, we see greater differences (see Figures 2.10 a and 2.10 b). While the growth in India's share of employment in industry seems to be on par with the growth of other Asian economies at similar stages (with the exception of Korea), the surprising fact is that India's share of value added in industry has not grown to keep pace with its share of employment--it has in fact recently fallen. Contrast this picture with China's where the share of value added in industry has always been very high relative to its share of employment, or Indonesia's and Korea's where the share of value added has kept increasing as the share of employment has increased (e.g. for Indonesia) or even decreased (e.g for Korea). The alarming conclusion is that while workers are being added to industry in India, the productivity of the jobs they are going into has not been high. In part, this is because the data we work with treats low-productivity construction as a part of industry, and the booming construction sector has accounted for a large share of the jobs created in industry. However, an additional

Figure 2.10a: Share of Employment in Industry - Years From Takeoff



Sources **: World Bank (2012) and authors' calculations.**
Note **; Takeoff year 0 is defined as 1979, 1991, 1973, and 1967 for China, India, Indonesia, and Korea respectively.**

Figure 2.10b: Share of Value Added in Industry - Years From Takeoff



Sources **: World Bank (2012) and authors' calculations.**
Note **: Takeoff year 0 is defined as 1979, 1991, 1973, and 1967 for China, India, Indonesia, and Korea respectively.**

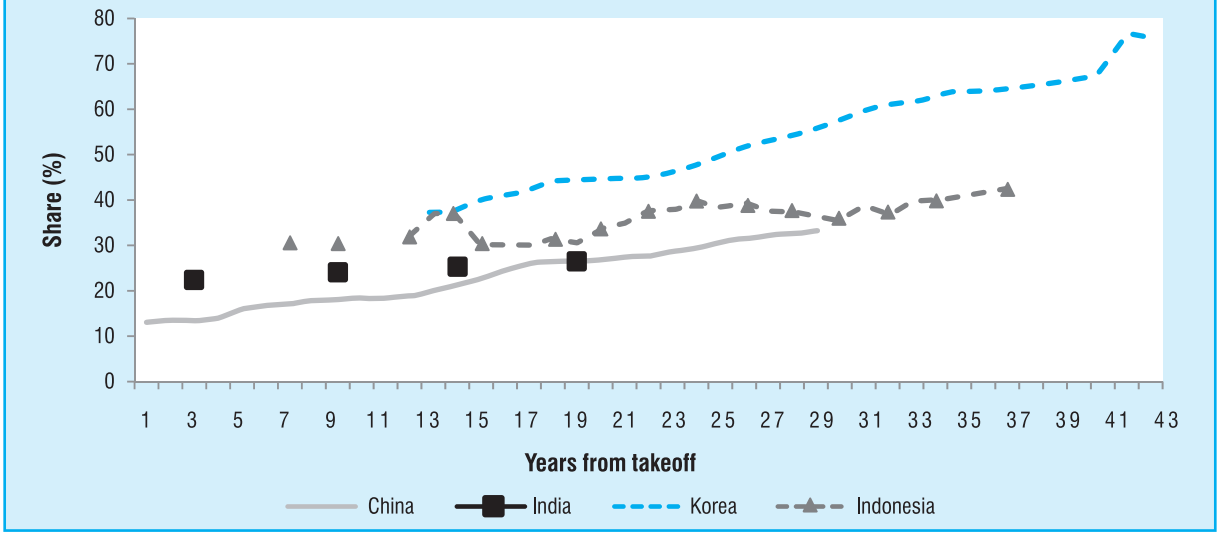
problem is that few of the jobs in industry are formal or being created by the comparatively more productive large firms (see discussion below).

2.18 Finally, consider services in Figures 2.11 a and 2.11 b. Here the picture for India is mixed. While the share of employment in services has been growing very slowly, the share of value added is significantly higher than in other Asian economies. Indeed, China has a similar share of employment in services at a similar time from takeoff even though its share of value added is much lower. A big factor in India's larger services share is that services started out at the time of take-off with a much larger share, but growth has also been strong.

2.19 These sectoral pictures across countries suggest several important messages:

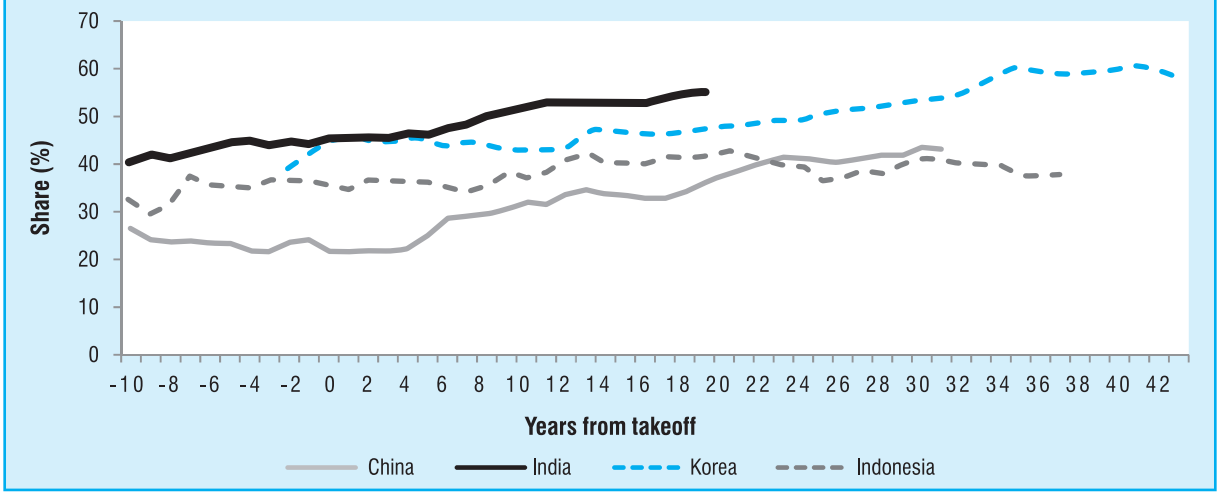
- Unlike the conventional wisdom, India does not have more people in agriculture than other Asian countries at similar stages of development. The share of workers dependent on agriculture has been shrinking at a similar pace.

Figure 2.11a: Share of Employment in Services - Years From Takeoff



Sources **: World Bank (2012) and authors' calculations.**
Note **: Takeoff year 0 is defined as 1979, 1991, 1973, and 1967 for China, India, Indonesia, and Korea respectively.**

Figure 2.11b: Share of Value Added in Services - Years From Takeoff



Sources **: World Bank (2012) and authors' calculations.**
Note **: Takeoff year 0 is defined as 1979, 1991, 1973, and 1967 for China, India, Indonesia, and Korea respectively.**

- However, the pace of shrinkage is set to increase if India is to follow the trajectory of these other countries.
- One problem is that while industry is creating jobs, these have been relatively low-productivity jobs. As a result, per capita income in India has not benefited as much from inter-sectoral migration of workers out of agriculture as other Asian countries have.
- A second problem is that the high-productivity services sector is not able to create employment commensurate with its growth in value added.

How many jobs will be missing?

2.20 Clearly, there is a coming transition of workers out of agriculture if we follow the path of other Asian countries. In addition, the demographic dividend will ensure more workers joining the labour force. How many workers will industry and services have to absorb in the next decade? How many will they absorb if they continue creating jobs as they have in the past? Could the demographic dividend turn into a demographic curse as some have argued?

2.21 In order to answer this question, we build a few simple scenarios using data from the World

Table 2.1 : How Many Jobs Will be Missing? Alternative Scenarios

	2000	2010	2020		
			[I] Baseline	[II] High Labor Force Participation	[III] Low Unemployment Rate
Share of employment in agriculture (%)	60	51	40	40	40
Share of employment in industry (%)	16	22			
Share of employment in services (%)	24	27			
Labor force participation rate (%)	60	56	56	**58**	56
Population (15+) (in millions)	688	850	1,010	1,010	1,010
Labor force (in millions)	409	473	561	586	561
Employment (in millions)	392	456	541	565	552
Employment/labor force (in %)	96	96	96	96	**98**
Employment in agriculture (in millions)	234	233	217	226	221
Employment in industry (in millions)	63	102	165	165	165
Employment in services (in millions)	94	121	154	154	154
Missing jobs (in millions)			**2.8**	**16.7**	**11.8**

Sources **: World Development Indicators, UN Population Division**
Notes **: LFP rate in WDI defined as labor force /population 15+**

Development Indicators (WDI) and UN Population Division. In the baseline (Table 2.1, column I), we assume that employment in industry and services will grow during 2010-20 at the same rate as during the previous decade. The share of employment in agriculture will fall to 40 per cent by 2020 (the same level as that of China in 2010). Population in the working age group will grow based on projections by the UN Population Division. We assume the labour force participation rate and the unemployment rate to be unchanged at 2010 levels. Under this baseline scenario, 2.8 million jobs will be missing by 2020. To put this in perspective, this will only be 0.5 per cent of the labour force. While any shortfall in jobs is problematic, there does not seem an immediate cause for alarm.

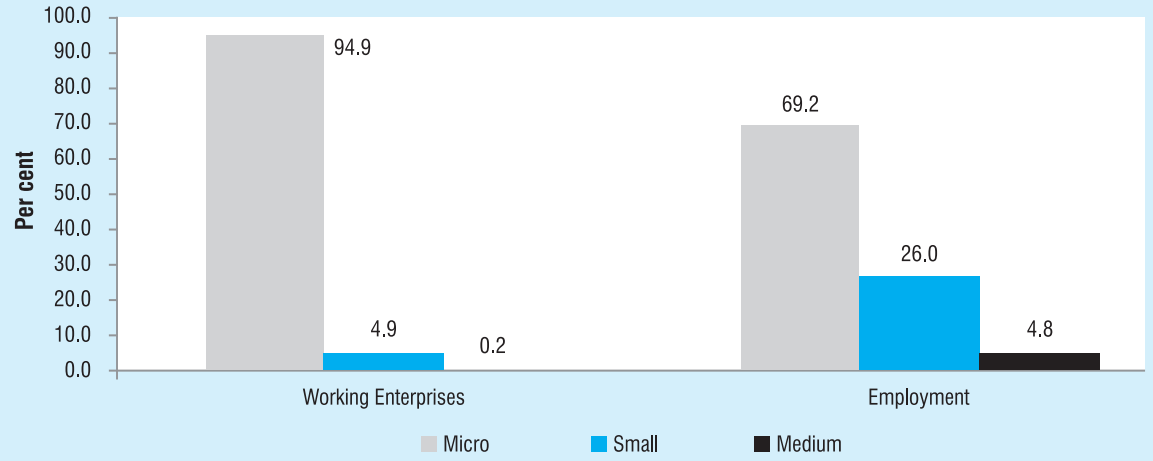
2.22 A large number of assumptions go into this estimate. For instance, labour force participation is pegged at the 56 per cent rate, the same as in 2010. If instead more women enter the labour force, reversing the declining trend since 2000, the labour force participation rate could plausibly increase to 58 per cent by 2020. This is lower than the 60 per cent rate in 2000, but even with this conservative assumption, the number of missing jobs increases to 16.7 million (see Table 2.1, Column II), roughly six times that in the baseline scenario, and 3.7 per cent of overall employment in 2010. Finally, if the official unemployment is projected to decrease, say by 2 percentage points, over the next decade, again that would imply the need to employ a larger number of workers (see Table 2.1, Column III). The number of missing jobs in 2020 under this higher expected employment scenario is estimated at 11.8 million or four times that in the baseline scenario.

2.23 The back-of-the-envelope calculations just done should be taken as just that--a starting point for more careful investigation. While a simple extrapolation of existing trends suggests India can absorb the labour exiting agriculture even if exits increase to the level experienced by China, there is no room for complacency. Minor changes in assumptions lead to tens of millions of additional jobs needed. So even while policymakers focus on making jobs more productive, India also needs more jobs than suggested by current trends so as to have a sufficient buffer.

Why is Business not Creating more Productive Jobs?

2.24 In India, too many small firms stay small and unproductive and are not allowed to die gracefully. Too many large profitable firms prefer relying on temporary contract labour and machines than on training workers for longer-term jobs. This section has two parts--in the first, we will examine the impediments to the formalization and growth of small businesses. In the second, we will examine the situation of labour, and why large formal businesses

Figure 2.12: Dominance of Micro Enterprises Among Registered MSMEs



Sources **: Fourth All India Census of Micro, Small and Medium Enterprises, 2006-07: Registered Sector; Planning Commission, 12th Five Year Plan Draft.**

may be so averse to hiring. We use the term 'business' advisedly because similar problems may exist in construction, manufacturing, and services, though to differing degrees.

Impediments to the emergence and growth of business

2.25 As a group, it is estimated that micro, small, and medium enterprises (MSMEs)[3] employ 81 million people in 36 million units across the country[4]. Yet, many of these firms are unable to grow and/or even shut down. Hsieh and Klenow (2011) indicate that as compared to surviving small firms in the United States, which grow spectacularly, surviving small firms in Mexico grow moderately, while surviving small firms in India shrink. Productivity is commensurately lower in India. Indeed, within the MSME group, there is a strong concentration of small enterprises and near non-existence of medium enterprises (see Figure 2.12). And that is the real challenge of the MSME sector--to be able to not just start up, but also continue to grow, thereby becoming a source of sustainable jobs and value creation.

2.26 Too many firms in India stay small, unregistered, unincorporated, largely informal, or in the unorganized sector because they can avoid regulations and taxes. These firms have little incentive to invest in upgrading skills of largely temporary workers or in investing in capital equipment that could bring them into the tax net, so their productivity stays low. Low productivity gives them little incentive to grow, completing the vicious circle. Figure 2.13 indicates some of the key challenges faced by these firms while starting up and at every level of growth.

Regulations

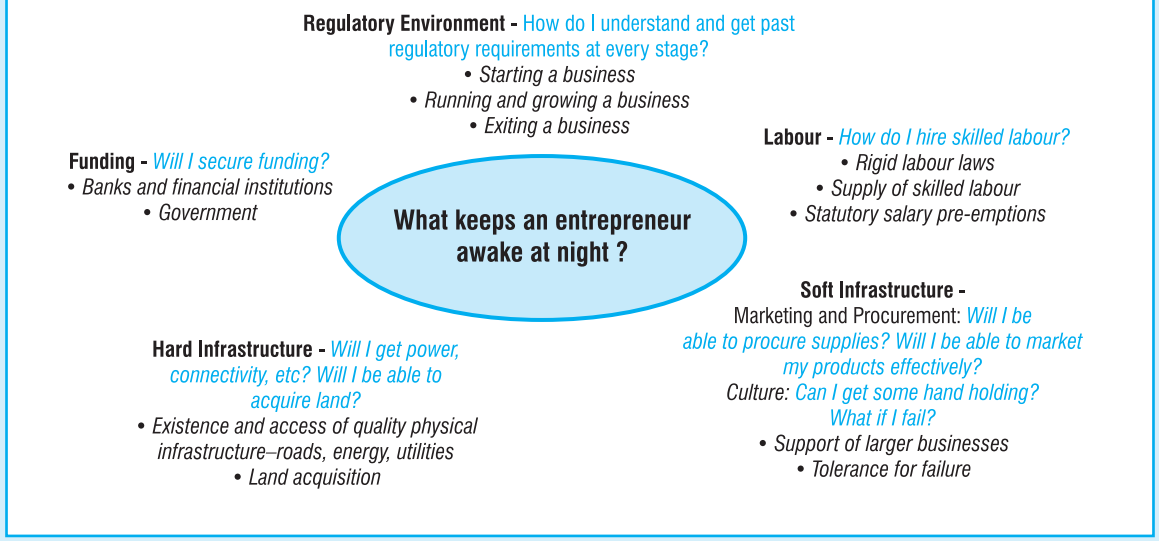
2.27 The regulatory environment plays an important role in the lifecycle--birth, growth, and death--of MSMEs. According to the World Bank's Doing Business 2013 data, India ranks 132 out of 185 countries in ease of doing business. Starting a business where India ranks 173, takes about 12 procedures, 27 days, and a paid up capital of 140 per cent of per capita income. By contrast, it takes only 7 procedures, 19 days, and 18 per cent of per capita income on average for our neighbours in South Asia.

2.28 After getting done with the initial procedures, entrepreneurs have to obtain a number of clearances when applying for building/occupancy permits and utility connections. These require separate visits to various authorities whose employees often inspect the site. It takes as long as 1.5 months to obtain an electricity connection in 7 out of the 17 benchmarked Indian cities. Many processes especially at state level remain complex, forcing companies to hire a consultant, thereby adding to the costs.

[3] The criterion of investment in plant and machinery is used to categorize MSMEs—micro enterprises have investment ceiling of 25 lakh, small enterprises of 5 crore, and medium enterprises of 10 crore.

[4] These data are from the Ministry of Micro, Small, and Medium Enterprises and include registered and unregistered units across manufacturing and services (including wholesale/retail trade, legal, educational, and social services, hotels and restaurants, transport, and storage and warehousing).

Figure 2.13: Challenges an Entrepreneur Faces



2.29 The MSME ecosystem needs an easier process of exit, where the claims of workers and financiers are quickly resolved and the assets of the failed firm put to better use. According to World Bank (2009), across 17 Indian cities, the insolvency process takes on average 7.9 years, costs 8.6 per cent of the estate value (mostly due to attorney fees, newspaper publication costs, liquidator's fees, and preservation costs), and the recovery rate is only 13.7 per cent. The process is slower even than in other South Asian countries where, in the same year, it took on average five years and creditors could expect to recover on average 19.9 per cent. Low asset recovery in failed firms feeds into lower levels of financing for Indian MSMEs.

2.30 The government has tried to compensate for some of these impediments by offering MSMEs

Figure 2.14: Government Incentives Dis-incentivizing Growth *(list not exhaustive)*

	SCHEME	DESCRIPTION	AVAILABLITY OF INCENTIVE BY SIZE OF ORGANIZATION			
			MICRO	SMALL	MEDIUM	LARGE
Non-Financial incentives	National Manufact. Competitiveness Programme	• Assistance aimed at improving processes, designs, technology	✓	✓	✓	✗
	Government Purchase and Price Preference Policy for MSEs	• 358 items reserved for exclusive purchase from MSEs. 20% of annual value of goods and services purchased to be procured from MSEs.	✓	✓	✗	✗
Financial incentives	Credit Linked Capital Subsidy Scheme for Technology Upgrade	• 15% capital subsidy for Tech. Upgrade on term loan from approved inst.	✓	✓	✗	✗
	Credit Guarantee Fund Scheme for MSE	• Credit guarantee for collateral free loan for loans upto Rs. 1 Cr.	✓	✓	✗	✗
	MSE-Cluster Development Programme	• Training, tech, etc.: grant of 75% of project cost • Tangible assets and infrastructure: grant of 80% of project cost	✓	✓	✗	✗
	Quality upgradation in MSEs - incentives for certification	• Reimburse 75% of ISO certification expenses (max. Rs. 75K one time)	✓	✓	✗	✗
	Micro Finance Programme	• SIDBI supporting NGOs/Micro Finance institution in providing loans	✓	✗	✗	✗

Source **: Ministry of Micro, Small, and Medium Enterprises**

incentives and concessions. But schemes and interventions based on tightly defined classifications create an incentive structure that might prevent firms from growing. Service tax exemptions for firms with less than Rs 10 lakh revenue and exemption from central excise duty for firms with an annual turnover of less than Rs 1.5 crore are examples of these schemes. The jump from 'small' to 'medium' enterprise especially entails loss of several perks (see Figure 2.14).

2.31 There are, however, also many good practices and enabling regulations strewn over different cities of India, which, if standardized and adopted across the country, can improve the business climate enormously. Indeed, World Bank (2009) has shown that if a hypothetical city called 'Indiana' were to adopt best practices found in several benchmarked cities (e.g. lowering number of procedures to start business to Patna levels, days to start a business to Mumbai levels, procedures around construction permits to Ahmedabad levels, days to enforce a contract to Guwahati levels, and recovery rate for closing a business to Hyderabad levels), it would rank a much improved 67 out of the 181 economies measured by Doing Business 2009.

Getting funding

2.32 Banks and other financial institutions are wary of lending to MSMEs because they lack adequate credit histories or collateral. A cluster-centric approach is one way of addressing this because it reduces transactions costs for the lender, while repeated interactions for a lender with cluster members increases the scope for building trust. While there have been efforts to facilitate these, their coverage is still small. Schemes such as credit guarantees by the Small Industry Development Board of India (SIDBI) have been useful, but there are gaps.

2.33 Angel investors, venture capital funds, and impact investors are still at a nascent stage and small compared to global peers. Most of these investments are biased towards services, especially technology and e-commerce. Government funds (through grants and seed funding programmes such as Technopreneur Promotion Programme and Technology Development Board) are often available after extensive paperwork and slow processing. Moreover, the experience from other countries is that new venture finance is often an activity better left to the private sector, with the government facilitating the way or piggy-backing on private funding rather than actually taking the lead.

2.34 Large banks with remote central offices tend to have bureaucratic procedures for loan approvals, and limit discretionary authority for branch officers. As a result, small and medium enterprises, which tend to have short and largely informal track records, find it hard to fulfil the norms for obtaining credit (see Berger et al., 2005). Moreover, conversations with bankers and business people suggest that large banks exert less effort in trying to help a small troubled firm than they would a larger client. As a result, in countries with more varied banking systems, small firms tend to migrate to smaller banks for assistance (see Berger et al., 2005). More small local banks in India could help MSMEs.

2.35 Finally, a vibrant corporate bond market could also help. Even though the MSMEs will typically not be able to issue bonds, the fact that large firms and infrastructure projects will be able to access (typically cheaper) bond financing for their long-term needs, will free up space on bank balance sheets for MSME loans.

Getting access to quality infrastructure

2.36 The absence of quality infrastructure—roads, utilities, real estate, logistics—increases transaction costs disproportionately for MSMEs which typically cannot create customized alternatives such as access roads and captive power plants which larger firms can. Lack of this supporting infrastructure causes greater cash burn and distraction of management from core business operations. One constraint in creating infrastructure or setting up businesses is land acquisition. A number of reforms are needed or on the anvil (see Box 2.1) to ensure that land is less of an impediment to growth.

2.37 Going forward there is hope that massive infrastructure projects like the Delhi-Mumbai Industrial Corridor (DMIC) (Box 2.2) will provide relatively light regulation, and heavy infrastructure, where businesses have easy access to the land they need and workers can live in a safe healthy township.

2.38 We have described the major non-labour impediments for a small business to become formal and grow large, as well as some steps the government is taking. There is evidence that these constraints affect industrial performance. Classifying industries according to their intensity of use of infrastructure, or dependence on external finance, Gupta et al. (2008) find that post delicensing, industries more dependent on infrastructure grew less as compared

Box 2.1 : Land Reforms

Land is probably the single most valuable asset in the country today. Not only could greater liquidity for land allow more resources to be redeployed efficiently in agriculture, it could ease the way for land-utilizing businesses to set up. Perhaps as important, it could allow land to serve as collateral for credit. Three important needed steps are: to map land carefully and assign conclusive title, to facilitate land leasing, and to create a fair but speedy process of land acquisition for public purposes.

The National Land Records Modernization Programme (NLRMP) which started in 2008 aims at updating and digitizing land records by the end of the Twelfth Plan. Eventually the intent is to move from presumptive title—where registration of a title does not imply the owner's title is legally valid—to conclusive title, where it does. Digitization will help enormously in lowering the costs of land transactions, while conclusive title will eliminate legal uncertainty and the need to use the government as an intermediary for acquiring land so as to 'cleanse' title. Given the importance of this programme, its rollout in various states needs to be accelerated. Easier and quicker land transactions will especially help small and medium enterprises that do not have the legal support or the management capacity that large enterprises have.

Widespread prohibition of land leasing raises the cost to rural-urban migration as villagers are unable to lease their land, and often have to leave the land untilled or leave a family member behind to work the land. Lifting these restrictions can help the landless (or more efficient landowners) get land from those who migrate, even while it will allow landowners with education and skills to move to industry or services. Compulsory registration of leaseholds and of the owner's title would provide tenants and landowners protection. Of course, for such a leasing market to take off, owners should be confident that long-term tenancy would not lead to their losing ownership. With a vibrant leasing market, and clear title, there should be little reason for not strengthening ownership rights.

For large projects with a public purpose—such as the proposed National Industrial and Manufacturing Zones, which will facilitate the setting up of small and medium enterprises—large-scale land acquisition may be necessary. Given that the people currently living on the identified land will suffer significant costs including the loss of property and livelihoods, a balance has to be drawn between the need for economic growth and the costs imposed on the displaced. The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Bill 2011, currently before Parliament, attempts to draw such a balance. As experience is gained with large-scale land acquisition, the institutions set up by the bill can be fine-tuned to achieve its aims.

Finally, encouragement needs to be given to land readjustment schemes, where when an area is identified for development, owners participate by giving up some of their land for infrastructure creation, but get back the rest, with the benefit that its value is enhanced by the infrastructure. Small and medium enterprise clusters can benefit especially from such schemes. Given that large-scale land acquisition is still at a nascent stage, central schemes should allow room for states to experiment and should be modified in light of state experiences.

Box 2.2 : The DMIC: An Integrated Approach to Industrial Growth and Development*

The DMIC is being developed by the Government of India with a view to using the high-capacity western Dedicated Freight Corridor as a backbone for creating a global manufacturing and investment destination. The project seeks to develop a series of futuristic infrastructure-endowed smart industrial cities that can compete with the best international manufacturing and industrial regions. The master plan has a vision for 24 manufacturing cities. Potential production sectors include general manufacturing, IT/ITES components, electronics, agro and food processing, heavy engineering, pharmaceuticals, biotechnology, and services. Investment is pegged at $90 billion. The DMIC was conceived by the Ministry of Economy, Trade, and Industry (METI) of Japan and the Ministry of Commerce and Industry (MoCI) of India.

Possible socio-economic impact: The DMIC Project Influence Area of 436,486 sq. km is about 13.8 per cent of India's geographical area. It extends over seven states and two union territories, viz. Delhi, Uttar Pradesh, Haryana, Rajasthan, Madhya Pradesh, Gujarat, Maharashtra, Daman and Diu, and Dadra and Nagar Haveli. Around 17 per cent of the country's total population will be affected. The project goals are to double employment potential in 7 years, triple industrial output in 9 years, quadruple exports from the region in 8-9 years, and target 13-14 per cent growth per annum for the manufacturing sector on a sustained basis over next three years.

Urban governance: The innovative urban governance framework corporatizes the urbanization process. The central government will create a corpus fund, the DMIC Project Implementation Revolving Fund, as a trust administered by a board of trustees. The fund will contribute debt and equity to the special purpose vehicles (SPVs) on a case-by-case basis. The state government will make land available. The city SPVs will be vested with the responsibilities of planning and development and the power to levy user fees. The SPVs are to be companies under the Companies Act. The valuation increases from urbanization and development will accrue to the city-level SPVs, and will be reinvested in the cities. The initial construction of the cities will be done through project managers with global experience, who will control, monitor, review, and supervise the detailed engineering.

Financing: The basic provision of trunk infrastructure is unlikely to be commercially viable. This would require government funding. Such internal infrastructure projects include land improvement, road works, earthworks, sewerage, storm water drainage, flood management, and solid waste management. Once such infrastructure is in place, the subsequent additions to the cities will be commercially viable and can be implemented through public private partnerships (PPPs). For major

(Contd....)

Box 2.2 : The DMIC: An Integrated Approach to Industrial Growth and Development* (Contd...)

Delhi-Mumbai Industrial Corridor and its influence area

Source: **Delhi-Mumbai Industrial Corridor Development Corporation Limited**

infrastructure activities such as power plants, integrated townships, and highways, PPP projects are planned. Various sources of finance including multilateral, bilateral, and domestic government funding are planned.

Physical infrastructure: At the heart of the infrastructure is the Multi-modal High Axle Load Dedicated Freight Corridor (DFC), a high-capacity railway system. It will cover 1483 km and will have nine junction stations along which other railroad networks will connect allowing the system to extend its reach across a wide swathe. Other infrastructure plans include logistic hubs, feeder roads, power generation facilities, up-gradation of existing ports and airports, developing greenfield ports, environment protection mechanisms, and social infrastructure.

Industrial infrastructure: The project seeks to upgrade existing industrial clusters and also develop new industrial facilities. These will be developed on the concept of node-based development based on Investment Regions (IRs) and Industrial Areas (IAs). These are proposed as self-sustaining industrial townships with world-class infrastructure including domestic/international air connectivity, reliable power, and competitive business environment. IRs will have a minimum area of 200 sq. km and IAs 100 sq. km. In all 24 manufacturing cities (IRs and IAs) are planned. Seven major manufacturing cities are being planned for the first phase. These will serve as the key nodes for overall growth and development.

Skill development: The skill-building strategy underlying the DMIC is based on a hub-and-spoke model. There will be one Skill Development Centre in every state with subsidiary institutions linked to it. Curricula will be based on the types of industries located in the region and identified regional strengths.

Land acquisition: Land acquisition appears to be a major challenge. Different state governments are adopting diverse approaches for dealing with the issue. Gujarat has a land-pooling model whereby 50 per cent of the land is acquired while the remaining 50per cent is left with the original owners giving them a stake in the upsides generated by land monetization. Maharashtra allows for negotiated purchase involving various stakeholders. In Haryana and Rajasthan, trunk and industrial infrastructure are created by the state governments but private developers directly participate in the other activities. The value increase is captured by the states through development fees. Furthermore, in the initial DMIC master-planning process, the attempt was made to identify large, easy-to-acquire land parcels that were either barren or government owned.

Environmental clearances: The master-planning process has been applied for a general Terms of Reference clearance, which has already been obtained. This has reduced the compliance load for individual project clearances. The individual projects will now need to get their draft impact assessments cleared by the respective state pollution control authorities.

Power infrastructure: Power for the industrial and residential zones is an essential requirement. The provision of world class power infrastructure will require 24X7 good quality supply. The major power inputs will come from six gas-based projects of around 1000-1200MW each. Other power options include the use of renewable energy sources integrated through a smart grid.

Water management: The DMIC passes through relatively arid parts of the country. The various industrial hubs are to have integrated water resource management plans drawing upon lessons from countries such as Singapore. It is proposed to make each manufacturing city self-reliant and sustainable in terms of its water requirements. Recycling is a major strategy in all the industrial nodes.

*Prepared by Supriyo De. Thanks are due to Amitabh Kant, Chief Executive Officer and Managing Director and Abhishek Chaudhary, Vice-President, Delhi-Mumbai Industrial Corridor Development Corporation Limited for valuable insights.

to industries which are not as dependent on infrastructure; and the gain in manufacturing-sector output in these industries has been especially small in states with inferior infrastructure. They further show that industries more dependent on external finance have witnessed slower growth as opposed to those less dependent on external finance, and have fared much worse in terms of new factories, employment generation, as well as new investment. There is therefore need to take steps for improving infrastructure, access to finance, as well as the overall business environment. Box 2.3 summarizes steps that could be taken to improve the business environment.

Labour Practices as Possible Impediments to Growth

2.39 Thus far we have not examined labour practices directly. India has a number of labour practices that, economists have argued, further impede the creation of productive jobs in the large-scale organized sector. There exists considerable variation in hiring practices across firms of different sizes in India. Dougherty (2008) uses a methodology similar to Davis et al. (1998) and data up to 2004 to estimate the employment dynamics in the organized manufacturing sector in India. The study finds that the job creation rate is much bigger for small firms than for large ones; on the other hand the job destruction rate is higher in large firms, with the result that the net employment rate in large firms is negative and strikingly smaller than in small firms.

2.40 Similarly, organized industry creates few jobs compared to unorganized industry (which is dominated by small firms) (see Figure 2.15). Growth in unorganized industry jobs in 2009-10 is primarily explained by a dramatic growth in construction. Based on data from National Sample Survey Organization (NSSO) surveys, employment in construction increased by 70 per cent between 2004 and 2009. One recent development is also the

Box 2.3 : The Nuts and Bolts of Improving Business Climate for Small Businesses*

There are several regulatory changes that can be made to improve the business climate for MSMEs.

Formulate a common policy on business development and regulation: There are a vast number of business regulations that often overlap and sometimes contradict each other. A common policy and an institutional architecture overseeing all business regulations will help consolidate and enact changes.

Help business facilitation: Establish independent facilitation and coordination agencies as PPP service companies with mandate from the state government, staffed with specialists and responsible for getting work done through various departments for starting up and running of businesses. These agencies will also help arrange services such as financing, finding raw material suppliers, and marketing products. They will charge a fee for some of the services provided, and be financially self-sufficient.

Simplify registrations for starting up: Create a one-stop online registration system for time-bound registrations for starting a business. The applicant will need to file a single application on the website, with the required information being picked up by each government department. Over time, this process can be extended to other activities such as trading across borders and paying taxes. This will require detailed mapping exercises and setting up of a 'best practices' framework.

Ease burden of compliance as the firm grows: Enable compliance ratings of MSMEs (through ISO-like common standards) and allow easier compliance norms to firms with higher ratings. Easier norms can take the form of simpler procedures (such as self-certification) across government departments. For instance, a company with a good history of tax compliance should be treated as a good citizen when it deals with the pollution control board. Over time, high compliance ratings could also act as a signal to financiers and enable easier access to credit.

Allow for easy exits: The arduous process of exit for unsuccessful companies needs to be made simpler, faster, and cheaper.

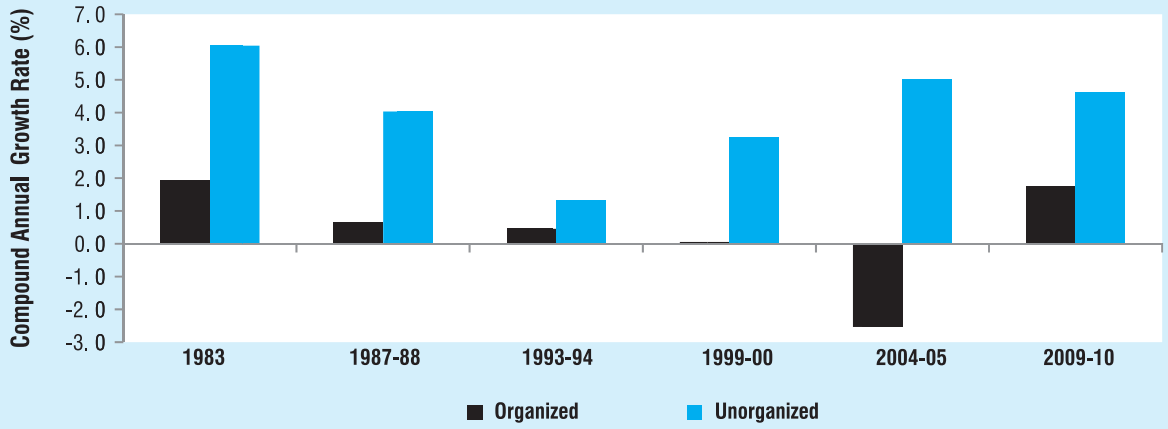
Transform employment exchanges to enable effective job matching: Transform the 1,000-odd employment exchanges across states into career centres offering counselling, assessments, apprenticeships, training, and jobs.

Improve value/benefits from statutory pre-emptions: Currently for low wage workers in formal employment, the plethora of statutory pre-emptions, especially for provident fund and health insurance, can lead to very low net salary and act as disincentive to formal employment. The value and benefits received from these pre-emptions can be improved by encouraging competition between different pension and health schemes.

Reduce attractiveness of staying small: Growing bigger is unattractive because some of the benefits targeted at MSMEs are withdrawn even while new regulations and obligations kick in. Innovative approaches are needed for giving MSMEs the incentive to grow. For instance, new regulations could be kept in abeyance for a period after the MSME crosses the size threshold that would require it to meet the regulation.

* **Prepared by Pranjul Bhandari.**

Figure 2.15: Growth of Organized and Unorganized Sector Employment in Industry



Source **: Economic Survey (various years); Employment and Unemployment Situation in India (various years), NSSO, Ministry of Statistics and Programme Implementation (MOSPI); Census of India.**

Notes **: Industry includes manufacturing, construction, mining, and utilities. Organized-sector employment is obtained from the Economic Survey. The organized sector consists of non-agricultural establishments in the private sector that have 10 workers or more, and all establishments irrespective of size in the public sector. For the other subsectors within industry, the organized sector essentially refers to all companies and government administrations. Unorganized-sector employment is estimated by deducting estimates of organized employment from total employed workforce. Total employment is generated by multiplying the worker population ratio (from the NSSO Employment-Unemployment Surveys) by the estimated population of India as per Census sources.**

significant pickup in growth in organized industry-sector jobs in 2009-10. However, two points may be of note. First, this growth is characterized by adding mostly to 'informal' jobs within the formal sector with little increase in productivity (see Box 2.5 for details). Second, despite the recent pickup in organized-sector job growth, unorganized-sector employment still constitutes more than 95 per cent of overall industry employment; specifically within manufacturing, unorganized-sector employment comprises 70 per cent of overall employment (see Box 2.4 for details).

2.41 Why is large organized manufacturing not creating more jobs? There are several possible explanations. First, strict labour laws may have hindered the growth of organized large-scale manufacturing (see the evidence in Box 2.4 suggesting labour regulations may be key impediments to manufacturing growth). The labour laws India has on the books are more rigid than in most countries--the employment protection legislation (EPL) laws are stricter than in all but two OECD countries. However, very few workers are actually covered by these laws. Indeed, India may suffer the consequences of strong worker protection (low flexibility for employers and strong reluctance to offer workers formal jobs) without giving most workers the benefits. Although the direct impact of India's labour regulations has been a subject of intense debate, there is a substantial body of evidence described in Box 2.4, using variation across states' stance on regulations, which suggests that rigid labour regulations have played a significant role in explaining low organized manufacturing output and employment and high informal manufacturing output.

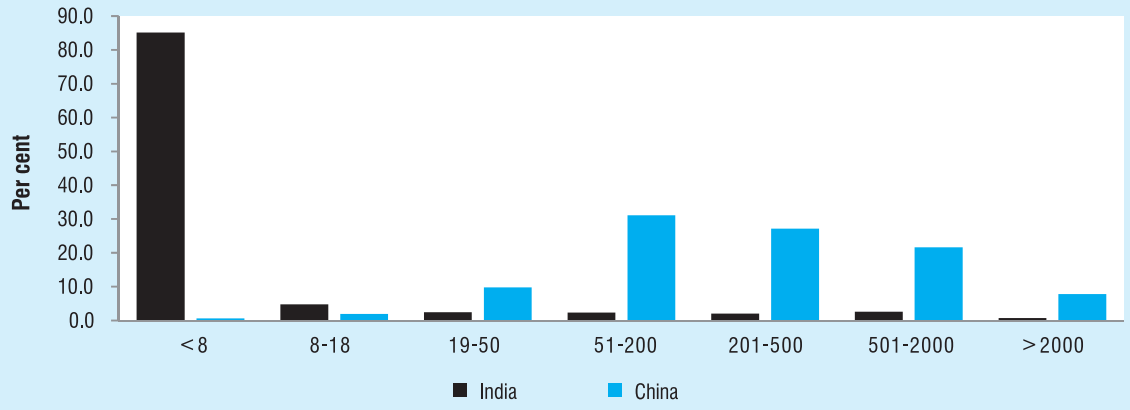
2.42 Some economists however, dispute the evidence that establishes the importance of labour regulations in determining economic outcomes. In the case of India, for example, one of the first and most frequently cited studies on the topic, Besley and Burgess (2004), has come under criticism, most extensively from Bhattacharjea (2006). While more work has been done that addresses some of these criticisms, the evidence on the effects of labour regulations outside of India is also mixed. According to World Bank (2013), 'A careful review of the actual effects of labor policies in developing countries yields a mixed picture. Most studies find that impacts are modest— certainly more modest than the intensity of the debate would suggest.'

2.43 If indeed labour laws constrain firms, they would respond in predictable ways, (i) relying more on capital instead of labour, (ii) resorting to informal arrangements / limiting their scale in order to remain outside of the formal sector altogether, and/or (iii) hiring contractual labor. The increased use of capital-intensive techniques is reflected in a steeply rising capital/labour ratio for the organized economy

Box 2.4 : Labour Regulations : Impediment to Growth and Size of Indian firms in Manufacturing*

A rapid expansion of the manufacturing sector has been a key element of the growth experience of successful developing countries, especially labour-abundant ones. In this context, the Indian manufacturing sector exhibits many peculiarities: first, as also documented earlier in the chapter, it contributes a rather small and stagnant share to GDP; second, its composition is more skewed towards skill- and capital-intensive activities compared to countries at similar levels of development;[1] third, only a small share of employment in manufacturing is in organized manufacturing (the unorganized manufacturing sector accounted for almost 70 per cent of total manufacturing employment in 2009-10[2]); and fourth, employment is heavily concentrated in small firms (Figure 1). The degree of concentration is much higher than in other Asian countries. For example, the share of micro and small enterprises in manufacturing employment is 84 per cent for India versus 27.5 per cent for Malaysia and 24.8 per cent for China.

Figure 1: Distribution of Employment by Enterprise Size-Groups in Apparel Industry (Percent of Total Apparel Industry Employment)



Source: ADB (2009). Key Indicators of Asia and the Pacific.

These characteristics of Indian manufacturing are quite puzzling in that product market reforms since the early 1990s—including dramatic trade liberalization and virtual abolishment of the industrial licensing regime—have been primarily focused on removing various constraints on the manufacturing sector. How then does one explain the peculiarities of the Indian manufacturing sector? Several theories have been put forward to explain this puzzle, ranging from strict labour laws that have hindered growth, especially of labour-intensive industries, infrastructure bottlenecks that have prevented industries from taking advantage of reforms, and credit constraints due to weaknesses in the financial sector which may be holding back small and medium sized firms from expanding.

India's labour regulations have been criticized on many grounds including sheer size and scope , their complexity, and inconsistencies across regulations. There are 45 different national- and state-level labour legislations in India (Panagariya 2008). The labour laws apply only to the organized sector. As the size of a factory grows, it increasingly becomes subject to more legislation. A few specific pieces of the legislation are particularly constraining. According to Chapter VB of the Industrial Disputes Act (IDA), it is necessary for firms employing more than 100 workers to obtain the permission of state governments in order to retrench or lay off workers. While the IDA does not prohibit retrenchment, states have often been unwilling to grant permission. Section 9A of the IDA lays out the procedures that must be followed by employers before changing the terms and conditions of work, which introduces additional rigidities for firms in using their existing workers effectively.[3] In particular, worker consent is required in order to modify job descriptions or move workers from one plant to another in response to changing market conditions.

How do these regulations affect the manufacturing sector quantitatively? Besley and Burgess (2004) find that industrial performance has been weaker in states with pro-worker labour laws. There have also been several recent studies that establish the importance of labour regulations.[4] Estimates using plant-level data suggest that firms in labour intensive industries and in states with flexible labour laws have 14 per cent higher TFP than their counterparts in states with more stringent labour laws. Moreover, the impact of delicensing has been highly uneven across industries within India's organized manufacturing sector. In particular, labour-intensive industries have experienced smaller gains from reforms. In addition, states with relatively inflexible labour regulations have experienced slower growth of labour-intensive industries and employment (Figure 2). Further, the difference in the performance of labour-intensive industries in states with flexible labour laws and states with inflexible labour laws has increased over time. Labour laws may also be an important factor responsible for the skewed distribution of size in Indian industries (Figure 3). Firms in states with more inflexible labour regulations tend to be smaller, especially in the labour-intensive subsectors of manufacturing.

A contrarian view is that Indian businesses have learnt to get around the laws by hiring contractual labour, outsourcing non-core activities, etc.; it is thus argued that labour regulations are not a binding constraint to industrial performance and employment growth. Indeed, in surveys of firms, businesses do not list labour laws among the top constraining factors. One

(Contd....)

Box 2.4 : Labour Regulations : Impediment to Growth and Size of Indian firms in Manufacturing*

way of reconciling this response with the systematic empirical evidence discussed here is that firms have learned to adapt to the labour laws – by either not hiring permanent workers or by staying below the threshold of these laws – and therefore they do not see them as a constraint. As pointed out in Krueger (2007), the counterfactual of whether labour laws would constrain firms that would emerge in the absence of strict labour laws cannot be captured in the surveys. Moreover, the adverse consequences of the labour laws can be inferred from the low rate of job creation in the formal sector, low productivity in the informal sector, and small firm size, especially in labour-intensive industries and states with more inflexible labour laws.

Figure 2: Real Output in Labor Intensive Industries

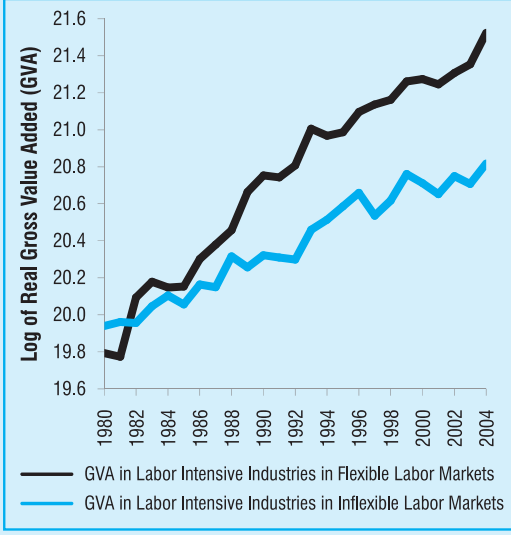
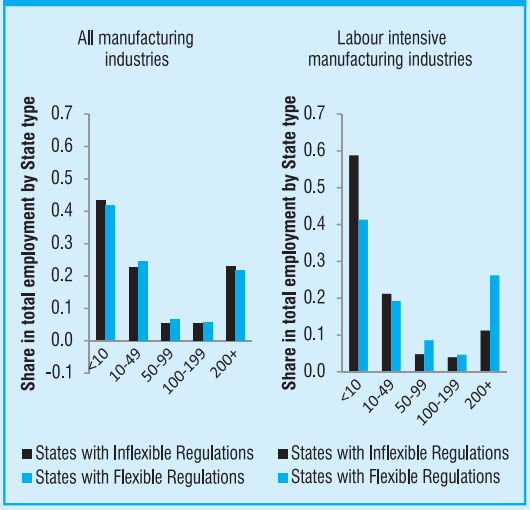


Figure 3: Employment Share by Firm Size and Labour Regulation, 2005



*Prepared by Poonam Gupta and Rana Hasan. The Box draws heavily on Gupta and Kumar (2011), and Hasan and Jandoc (2012).

1 See for example Panagariya (2004), Kochhar et al. (2006), and Hasan et al. (2012).

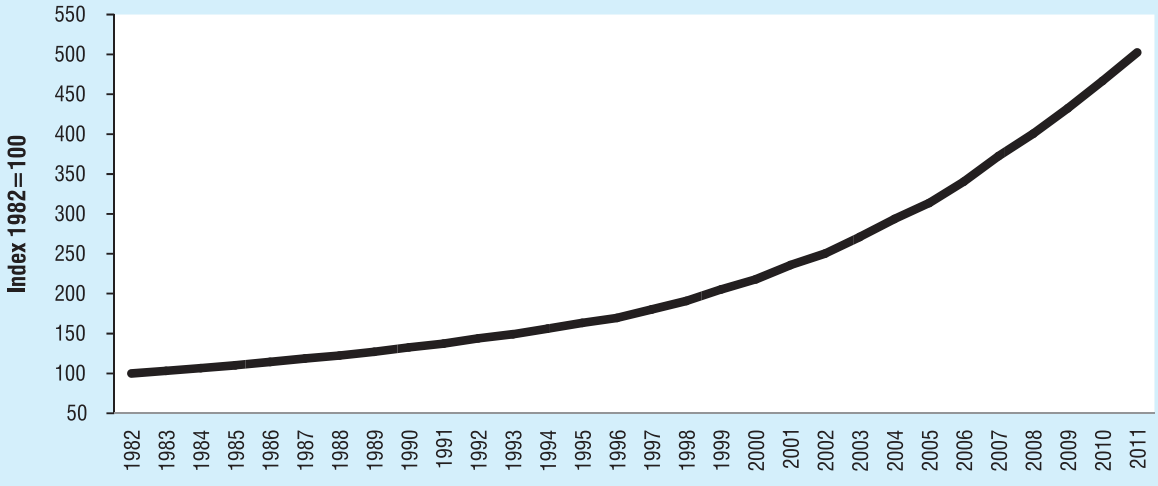
2 Report of the Working Group on Employment, Planning and Policy for the Twelfth Five Year Plan.

3 An employer must give a notice of three weeks in writing to the workers of any change in the working conditions including change in shift work, grade classification, rules of discipline, technological change that may affect the demand for labour, and changes in process or department. See Datta-Chaudhuri (1996) and Debroy (2010) for details.

4 See for example, Dougherty et al. (2011) and Gupta et al. (2009).

(Figure 2.16). This raises the obvious question whether it is justifiable for a relatively labour abundant country like India with low wages to be increasingly resorting to more capital-intensive technology. Of course, as we have argued earlier, countries would use more capital per worker as they get richer, but the capital intensity is higher and has increased at a much faster rate for large firms than for small firms

Figure 2.16: Capital-labour ratio: India



Source: Mishra (2013).

in India, even while they have created fewer jobs (Dougherty 2008).

2.44 As argued earlier, firms would also resort to informality if labour laws were overly constraining. The extent of informality in India stands out relative to countries at similar levels of development (see Box 2.5 on the extent, causes, and consequences of informal employment in India). Roughly 85 per cent of the workforce in India is engaged in the informal sector (all unincorporated enterprises operated on a proprietary or partnership basis and with less than 10 employees). The prevalence of informal employment (workers in either the informal sector or in the formal sector but lacking employment or social security benefits) is even higher; 95 per cent of jobs are informal and 80 per cent of non-agriculture wage workers work without a contract.

2.45 Before suggesting the way forward, it is important to emphasize the advantage of formal employment via contracts for worker training and learning, especially if contracts have a significant probability of being rolled over into the long term. Experience is important for skill development. With a paucity of technical/vocational training institutions (say like the German model) in India, on-the-job learning is one of the easiest and most viable models of human capital accumulation. Employment that is likely to endure provides incentives to the firm for nurturing skill building and to the worker for developing skills. These contracts necessitate backloading of pay and incentives--compensation increases with

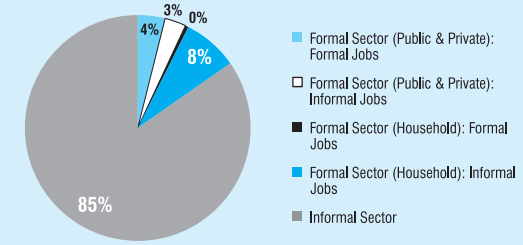
Box 2.5 : Informality of Employment in India: Stylized Facts and Policy Implications*

Extent of Informality

Despite impressive economic growth over the past 20 years, the vast majority of Indian workers continue to toil in informal employment. Roughly 85 per cent of the workforce is engaged in the *informal sector*.[1] Even after excluding the agricultural sector, the share of the workforce in the informal sector remains at 70 per cent.

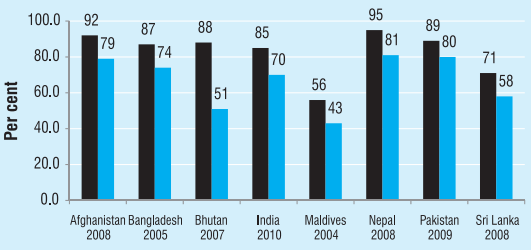
The prevalence of *informal employment* – workers in either the informal or formal sector who lack employment or social security benefits – is even higher. While precise estimates of the extent of informal work arrangements are hard to come by, a detailed study by the National Statistical Commission reveals that as of 2004-5, 95 per cent of jobs are informal and these are not limited to the informal sector (Figure 1). Even in the public sector, a third of all jobs in India are informal (Kolli and Sinharay, 2011).[2] Among wage employees outside of agriculture, more than three-quarters have no written contract, 70 per cent are not eligible for any paid leave, and 74 per cent are not covered by social security benefits. Along all of these measures of informality, India saw an uptick over time.[3]

Figure 1: India: Prevalence of Jobs in the Informal Sector and Informal Employment, 2004-05



Source: National Statistical Commission, 2012

Figure 2: Percentage of Informal Sector Employment in South Asia



Source: Nayar et al, 2012, Figure 3.11

While high levels of informality are not uncommon in South Asia (Figure 2), India (along with the rest of the region) stands out from an international perspective. Using lack of pension coverage as a proxy for informal employment, 91 per cent of the labour force in South Asia is informal, surpassed only by Africa (Nayar et. al. 2012). Compared to countries at a similar level of development, India's very low usage of written contracts for its non-agricultural employees, 80 per cent of whom work without a contract, also stands out (Figure 3). This figure is higher than for, for example, China, Pakistan, Ghana, and South Africa. This is despite the fact that India's share of employment in the informal sector is roughly in line with that of its peers (Figure 4) and confirms the significant prevalence of informal arrangements within the formal sector.

(Contd....)

Box 2.5 : Informality of Employment in India: Stylized Facts and Policy Implications* (Contd...)

Figure 3: Share of Non-Agricultural Wage Employees Working Without a Contract: 2009-10

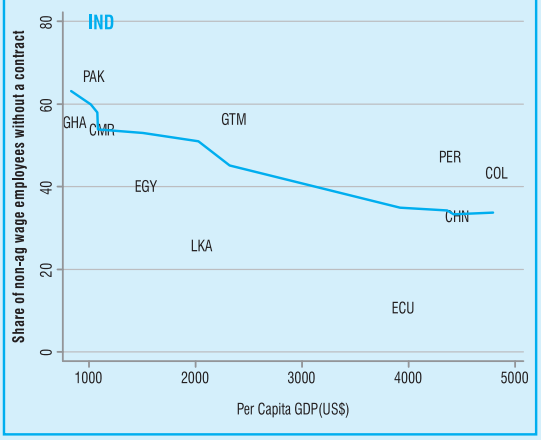
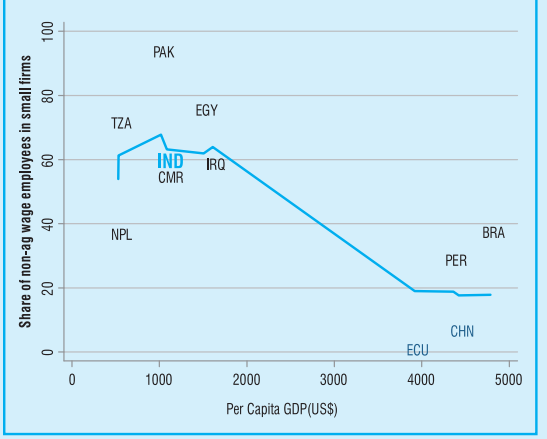


Figure 4: Share of Non-Agriculture Wage Workers In Unincorporated Firms of Less Than 10 People, 2009-10



Source : **Authors' calculations, based on World Bank data.**

Causes of Informality

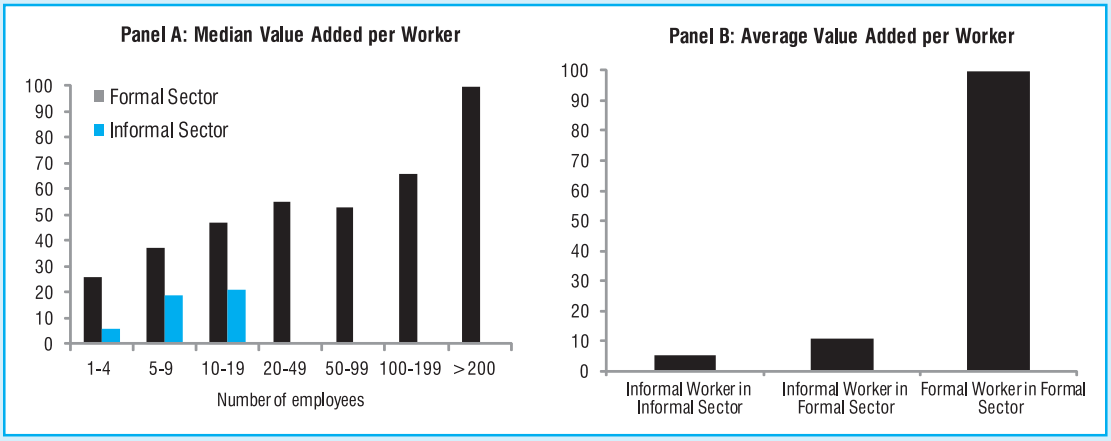
Informal employment results both from workers being excluded from formal jobs and from workers or firms voluntarily opting out of formal employment. The 'exclusion' view of informality emphasizes the dual nature of labour markets, in which a highly productive formal sector coexists with a subsistence informal sector, which absorbs excess labour. Constraints to the expansion of the formal sector (such as insufficient capital accumulation and natural resources as in the Lewis [1954] model, or overly burdensome costs of registering as in De Soto [1989] lead to persistent informal employment.

According to the 'voluntary' view, firms and workers decide on whether to become formal by comparing the perceived costs of being formal with its perceived benefits. In this setting, labour institutions, taxation, and regulations primarily explain the prevalence of informal employment, by effectively increasing the costs of formality. At a cross-country level, countries with more burdensome entry regulations have larger informal sectors (Djankov et al. 2002). India's labour laws may also lead firms to resort to informal arrangements, rely more on capital instead of labour, or limit their scale in order to remain outside of the formal sector altogether (see Box 2.4 on labour regulations in India).

Consequences of Informality

India's high rate of informality is a drag on its economic development and a source of considerable inequity. Productivity differences between workers in the formal and informal sectors are large (Figure 5, Panel A), suggesting that moving a worker from an informal to a formal firm would bring about sizeable gains from improved allocation of resources. In fact, rough

Figure 5: Value Added Per Worker: By Sector and Type of Employment



Source : **World Bank (2012)** *More and Better Jobs in South Asia*,**' Chapter 1, Overview, Figure 1.13, p. 13 for Panel A and authors' calculations based on National Statistical Commission (2012) for Panel B.**

(Contd....)

Box 2.5 : Informality of Employment in India: Stylized Facts and Policy Implications* (Contd...)

estimates suggest that an informal job in the formal sector has double the value added than an informal job in the informal sector. And importantly, the value added per worker in a formal job within the formal sector is almost ten times that in an informal job in the formal sector (Figure 5, Panel B). Therefore, loosely speaking, the benefits of moving into contracts within the formal sector are likely to be substantial and significantly higher than the gains from moving an informal-sector worker into an informal job within the formal sector.[4]

Besides earning less, informal workers are also more vulnerable to violations of basic human rights such as reasonable working conditions and safety at work. With little job security and limited access to safety nets, most of the informally employed remain extremely vulnerable to shocks such as illnesses and loss of income. Not surprisingly, a strong correlation exists between informality and poverty in India (NCEUS 2009).

From the point of view of firms, informal work arrangements bring benefits: lower price and greater flexibility in adjusting the quantity of labour in response to fluctuating demand. Yet, these benefits are partly offset by costs, such as low worker loyalty and inadequate incentive to invest in worker skill building. Moreover, any net benefits need to be weighed against the social costs to the workers and the economy as a whole.

Finally, persistently high levels of informality come at a significant fiscal cost in terms of forgone fiscal revenue (Levy 2008). In 2004-5, the unorganized sector contributed roughly half of India's GDP (National Statistical Commission 2012, p. 30), implying a significant expansion of the tax base if the informal sector were to join the formal economy. The high prevalence of informality also hampers the ability of economic policies to have direct and quick impact on the economy.

*** Prepared by Prachi Mishra, David Newhouse, and Petia Topalova.**

1 As of 2009-10. The informal sector is defined by the National Commission for Enterprises in the Unorganized Sector as all *unincorporated* enterprises operated on a proprietary or partnership basis and with less than 10 employees.

2 The incidence of informal jobs in the formal sector is highest among the non-informal household sector, where Kolli and Sinharay (2011) estimate 95 per cent of jobs to be informal.

3 Estimates are from National Sample Survey (2012).

4 These rough estimates provide an upper bound of the difference in value added across formal and informal jobs, since informal workers may not be as productive as formal-sector workers for reasons unrelated to their employment status, such as lack of education or skills. The causality could also go the other way if firms that are less productive are more likely to employ informal workers.

experience--so that workers do not avail of the training and leave. In contrast, informal and temporary contracts are in fact flat and sometimes even frontloaded, absolutely the inverse of the desired architecture. Long-lasting employment does not mean tenure for life, which is the other extreme of the contract space commonly found in India. Permanent employment not only limits firm flexibility, it also reduces some workers' incentives to learn or exercise effort. An intermediate structure that exists in most countries is contracts that allow termination in situations of firm distress or for poor worker performance, but with carefully designed and effective redressal mechanisms if the employee is fired without cause, as well as compensation for severance and unemployment benefits.

2.46 Regardless of what one believes about causes, the fact is that India is not creating enough productive jobs. Moreover, India has the dubious distinction of having some of the most comprehensive labour laws in the world, even while having one of the largest fractions of the working population unprotected. Not only do informal workers have lower productivity and earn less, but they are also more vulnerable to violations of basic workers' rights such as reasonable working conditions and safety at work. Paradoxically, Boxes 2.4 and 2.5 suggest that it may be the stringent protection that is afforded by existing regulations that is responsible for both the paucity of good jobs as well as the inadequate protection that most workers have. In India reforms are typically implemented only after they have been subject to a lot of debate and after some sort of political consensus is reached on them. It is therefore imperative that consensus building on labour market reforms should start soon. India needs many more firms in the formal sector, especially firms that continue growing and creating productive jobs. Box 2.6 presents the case of Mauritius and discusses how this country undertook reforms that improved employment.

2.47 It may take time to build political consensus for fundamental reforms. In the meantime, states could be allowed more flexibility to experiment without coming into conflict with central statutes. As best practices evolve, success in job growth will resolve theoretical debates more easily than a thousand papers. If indeed rigid labour laws are determined to

Box 2.6 : The Mauritian Miracle*

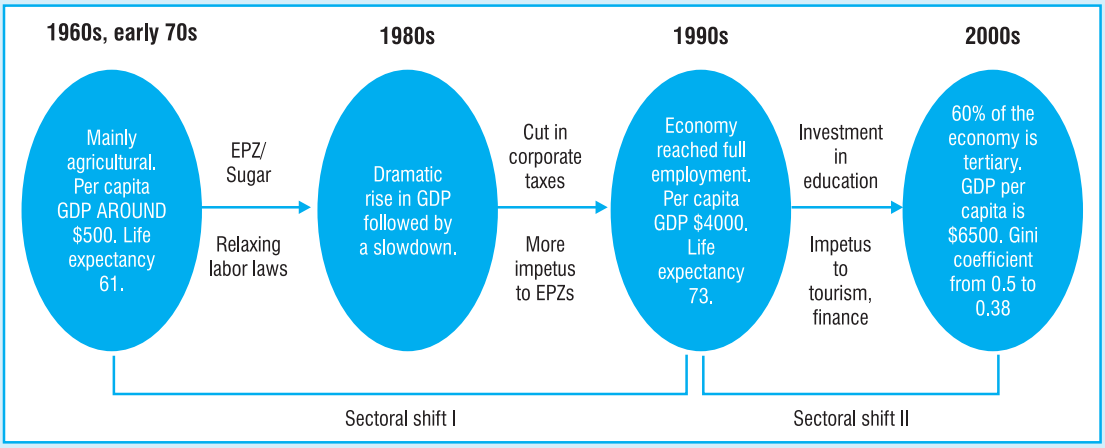
As Mauritius was assuming self-rule from the British, two noted intellectuals (and to be Nobel laureates), James Meade (economics) and V.S. Naipaul (literature) prophesied a bleak future for this small island. In the 1960s, Mauritius was heavily dependent on one crop—sugar, was prone to terms-of-trade shocks, and was undergoing rapid increase in population. What followed though was counter to their predictions. Between 1977 and 2006, real GDP grew by an average of 5.2 per cent per annum. Per capita GDP growth averaged 4.2 per cent versus 0.7 per cent for the rest of Africa. From 1970 to 2008, life expectancy increased from 62 to 73 and infant mortality dropped from 64 per 1000 births to 15.

What explains this performance? A leading factor in the first two decades of turnaround is the creation and efficient management of EPZs. Some major characteristics of the Mauritius EPZ were:

1. It was not a geographical zone. Any firm could opt into the regulatory scheme.
2. As Romer (1992) notes, the main policies were ease of inputs and materials imports, no restriction on repatriation of profits, a 10-year income tax holiday for foreign investors, a policy of centralized wage setting, and an implicit assurance that labour unrest would be minimized and wage increases moderate.
3. It allowed firms to constantly adjust labour force through layoffs and realistic compensation packages and allowed greater flexibility in work hours.
4. It had relaxed laws so that women could participate to a greater extent.

Figure 1 below delineates the effect of these on structural transition. The first stage was motivated by a productive structural shift and ensuring full employment. By 1990, about one-third of the labour force on the island, 90,000 people, was employed in the EPZs. Jobs added in the EPZs accounted for two-thirds of the total increase in employment between 1970 and 1990. Increased per capita incomes from this transition eventually fuelled more human capital build-up, allowing further diversification into services.

Figure 1: Structural Changes in Mauritius and their Consequences



* **Prepared by Rohit Lamba**

be the key constraining factor in the creation of productive jobs, win-win reforms are easily available. Existing permanent workers can continue till retirement with their privileges left untouched. The remaining workers could be encouraged to move into contractual employment that can be terminated, but which gives the worker some protections including severance pay, unemployment insurance, and the right to reverse unfair dismissal through appeal.

2.48 In the meantime, the government should continue to create a minimum safety net for informal workers (in the informal sector and in informal work arrangements in the formal sector) by, for example, extending the reach of national-level schemes such as the Rashtriya Swasthya Bima Yojana and the New Pension Scheme and introducing unemployment insurance schemes (e.g. Supplementary Unemployment Benefits Fund to be created by automotive companies).

Why Are Services Not Creating Jobs?

2.49 As has been discussed earlier, while the share of employment in services was relatively high at take-

off, its growth has since then been slow. At the same time, the share in value added, which was high at take-off, has continued to rise quickly. This implies that while productivity in the sector has been high, the services sector is not creating many jobs--the opposite of the problem with industry.

2.50 Some impediments to business creation such as regulatory hurdles and access to funding and infrastructure may be common between services and industry. Labour regulations are also likely to constrain creation of jobs in services. For example, 27 per cent of retail stores in India report labour regulations as a problem for their businesses (Amin 2008)[5]. But what stands out for the services sector is the importance of education and skilling. Suitable higher education is important for high-end services such as information technology, software development, and finance. Mid-level services such as retail trade, hotels, and restaurant services also require adequate skilling of the labour force.

2.51 Schemes such as the formal apprenticeship programme of the government, which places employers at the heart of education, can play a powerful role in imparting job-relevant skills and also retraining, preparing, and upgrading the labour force. In its current form, the Act and the rules governing apprenticeships are outdated and rigid from both the perspective of employers and employees. Box 2.7 discusses the current Act/rules and suggests changes that need to be made.

2.52 The challenge is to address both quality and quantity issues in skill development and training so as to correct the mismatch between employers who do not get people with requisite skills and millions of job seekers who do not get employment. To this end, the National Skill Development Mission aims to impart employment-oriented vocational training to 8 crore people over the next five years by working with state governments/State Skill Missions and incorporating

Box 2.7 : Formal Apprenticeships: An Idea Whose Time Has Come*

Why is Apprenticeship important?

Equipping the labor force with productive skills lies at the heart of tapping the demographic dividend. Apprenticeships are an effective way of ensuring that entry-level workers have the skills required to join the formal workforce by 'learning on the job' and even 'earning while learning'. It has been amongst the oldest social institutions in India. However, it needs to be formalized and scaled up.

In the current environment, India's educational system is overburdened by sheer demand for quality education. According to TeamLease (2012), 80 per cent of India's higher education system of 2030 is yet to be built and is grappling with the threefold problem of cost, quality, and scale. This is compounded by the inability of much of the current education system to produce 'work-ready' labour. In fact, the disconnect between the formal educational system and requirements of the employers becomes even more acute in times of rapid structural and technological change.

In this environment, company-led apprenticeship programmes, that place employers at the heart of education, can play a powerful role in imparting job-relevant skills and also repairing, preparing, and upgrading the labour force. They can aid five important transitions that the labour force is currently making--from agriculture to non-agriculture, from rural to urban, from the unorganized sector to the organized, from school to work, and from subsistence self-employment to wage employment.

Several countries have benefited greatly from focused programmes on skilling the workforce on the job, including Japan, US, UK, and Germany. Germany, in particular, has a well-known dual education system that combines classroom/online courses at a vocational school with workplace experience at a company. School authorities are responsible for the former while the company is responsible for the latter. More than 75 per cent of Germans below the age of 22 have attended an apprenticeship programme.

Training apprentices also benefits corporates. A 2005 Task Force Report on Apprentices in the UK, demonstrated that the benefits of apprenticeships were numerous, including increased productivity, lower net costs of training (versus training non apprentices), greater staff retention, and a more highly motivated workforce.

What does India already have?

Apprenticeship programmes in India are governed by The Apprentice Act 1961 and the Apprenticeship Rules 1992. The organizational structure and rules and regulations overseeing it are complex and burdensome. The Ministry of Labour and Employment oversees 'trade apprentices' through six regional offices. The Ministry of Human Resource Development oversees 'graduate, technician, and technician (vocational) apprentices' through four boards located in different cities. There are strict norms on permissions, trades permitted, training duration, stipend levels, apprentice/employee ratio, and training facilities. It is onerous to create new apprenticeship positions, and there are several vacancies even in positions that have already been created. As a consequence, India only has under 3,00,000 formal apprentices.

(Contd....)

[5] **Labour regulations for India's retail sector are contained in the Shops and Establishment Act (SEA), which includes minimum wages, regulation of hours of work, and rules for employment and termination of service.**

Box 2.7 : Formal Apprenticeships: An Idea Whose Time Has Come* (Contd...)

One of the reasons for tightly regulating apprenticeships was to prevent companies from hiring cheap labour under the guise of an apprenticeship programme. A simpler set of provisions to streamline regulation and incentivize corporates while protecting the interest and well-being of apprentices may now be needed.

How can it be made to work?

The rules and regulations overseeing apprenticeships need to be changed such that employers and prospective apprentices can choose each other freely by just requiring information on what will be learnt on the job and a minimum wage. Some recommendations including those from the 2009 Planning Commission taskforce are described below:

1. Simpler regulation: A single window mechanism is needed to clear company applications for pan-India apprenticeship programmes. Currently, companies need to approach each state apprenticeship adviser separately. Partnerships between companies and industry federations should be facilitated by giving timely permissions.
2. Wider reach: Apprentices are only allowed in specified trades. Majority of graduates are not currently covered under formal Apprenticeships. In addition, the procedure to include new trades especially services, which are largely excluded, is complex and can take many months. A fully deregulated list is needed for apprenticeships to remain dynamic and in line with the changing needs of the workplace.
3. Flexibility to companies: Currently many schemes are required to be unnecessarily long (up to four years), and have rigid requirements on worker to apprentice ratio. Moreover, the penal provisions for companies, even for small violations of the rules, are very severe. Certain relaxation of rules can help give flexibility to companies. For example, the duration of apprenticeship training can be allowed to vary across trades and companies. Short-duration programmes (less than 12 months) can be freed from much of the oversight provided they pay minimum wages. Relaxing the rigid requirements on the ratio of apprentices to workers could also accelerate capacity creation.
4. Dual system of training: Partnerships between companies and educational institutions should be encouraged. Like the German model, corporates can be allowed to outsource theoretical training, and educational institutions can be allowed to outsource practical training.
5. Active exchanges: There should be active exchanges and portals, matching prospective apprentices to employers.

* **Prepared by Pranjul Bhandari.**

the private sector (through PPPs and for-profit vocational training) and NGOs. Basic education is also an important input for enhancing human capital. Recent government initiatives to expand access to quality primary education are important; however, more needs to be done (see Box 2.8).

Box 2.8 : Using Evidence for Better Policy:The Case of Primary Education in India*

Investments in education both contribute to aggregate economic growth as well as enable citizens to broadly participate in the growth process through improved productivity, employment, and wages, and are therefore a critical component of the ;inclusive growth' agenda of the Government of India. The past decade has seen substantial increases in education investments under the Sarva Shiksha Abhiyan (SSA), and this additional spending has led to considerable progress in improving primary school access, infrastructure, pupil-teacher ratios, teacher salaries, and student enrollment. Nevertheless, student learning levels and trajectories are disturbingly low, with nationally representative studies showing that over 60 per cent of children aged 6-14 are unable to read at second-grade level. Further, these figures have shown no sign of improving over time (and may even be deteriorating--see ASER study discussed in Box 13.4).

The past decade has also seen a number of high-quality empirical studies on the causes and correlates of better learning outcomes based on large samples of data and careful attention paid to identification of causal relationships. This research has identified interventions/inputs that do not appear to contribute meaningfully to improved education outcomes, as well as interventions that are highly effective. In particular, the research over the past decade suggests that increasing inputs to primary education in a 'business-as-usual' way is unlikely to improve student learning meaningfully unless accompanied by significant changes in pedagogy and/or improvements in school governance. It is therefore imperative that education policy shifts its emphasis from simply providing more school inputs in a 'business-as-usual' way and focuses on improving education outcomes.

School Inputs

Analysis of both administrative and survey data shows considerable improvements in most input-based measures of schooling quality. But there is very little impact of these improvements in school facilities on learning outcomes. This is not to suggest that school infrastructure does not matter for improving learning outcomes (they may be necessary but not sufficient), but the results highlight that infrastructure by itself is unlikely to have a significant impact on improving learning levels and trajectories. Similarly, while there may be good social and humanitarian reasons for mid-day meal programmes (including nutrition and child welfare), there is no evidence to suggest that they improve learning outcomes.

(Contd....)

Box 2.8 : Using Evidence for Better Policy:The Case of Primary Education in India* (Contd...)

Even more striking is the fact that no credible study on education in India has found any significant positive relationship between teachers possessing formal teacher training credentials and their effectiveness for improving student learning. Similarly, there is no correlation between teacher salary and its effectiveness for improving student learning, and at best there are very modest positive effects of reducing pupil-teacher ratios on learning outcomes. As discussed further, these very stark findings most likely reflect weaknesses in pedagogy and governance which are key barriers in translating increased spending into better outcomes.

The results summarized so far can be quite discouraging. Fortunately, the news is not all bad, because the evidence of the past decade also points consistently to interventions that have been highly effective for improving learning outcomes, and are able to do so in much more cost-effective ways than the status-quo patterns of spending.

Pedagogy

A key determinant of how schooling inputs translate into learning outcomes is the structure of pedagogy and classroom instruction. Getting aspects of instruction right is particularly challenging in a context such as that of India where several millions of first-generation learners have joined a rapidly expanding national schooling system. In particular, standard curricula, textbooks, and teaching practices that may have been designed for a time when access to education was more limited may not fare as well under the new circumstances, since the default pedagogy is one of 'completing the textbook', which increasingly does not reflect the learning levels of children in the classroom, who are considerably further behind where the textbook expects them to be.

Evidence that 'business-as-usual' pedagogy can be improved is found in several randomized evaluations finding large positive impacts of supplemental remedial instruction in early grades that are targeted to the child's current level of learning (as opposed to simply following the textbook). These positive results have been found consistently in programmes run by non-profit organizations in several locations (including UP, Bihar, Uttaranchal, Gujarat, Maharashtra, and Andhra Pradesh). Second, the estimated impact from these interventions (whose instructional time is typically only a small fraction of the duration of the scheduled school year) is considerable--often exceeding the learning gains from a full year of schooling. Third, these interventions are typically delivered by modestly paid community teachers, who mostly do not have formal teacher training credentials. Finally, these supplemental remedial instruction programmes are highly cost effective and deliver significant learning gains at much lower costs than the large investments in standard inputs.

Governance

Beyond pedagogy, another explanation for the low correlation between increases in spending on educational inputs and improved learning outcomes may be the weak governance of the education system and limited effort on the part of teachers and administrators to improve student learning levels. The most striking symptom of weak governance is the high rate of teacher absence in government-run schools. While teacher absence rates were over 25 per cent across India in 2003, an all-India panel survey that covered the same villages surveyed in 2003 found that teacher absence in rural India was still around 24 per cent in rural India in 2010. The fiscal cost of teacher absence was estimated at around Rs 7,500 crore per year suggesting that governance challenges remain paramount. There is evidence that even modest improvements in governance can yield significant returns. Improving monitoring and supervision of schools is significantly correlated with reductions in teacher absence, and investing in improved governance by increasing the frequency of monitoring could yield an eight- to tenfold return on investment in terms of reducing the fiscal cost of teacher absence.

The evidence also points to the importance of motivating teachers by rewarding good performance. Rigorous evaluations of carefully designed systems of teacher performance pay in Andhra Pradesh show substantial improvements in student learning in response to even very modest amounts of performance-linked pay for teachers (that was typically not more than 3 per cent of annual pay). Evidence from a long-term follow up shows that teacher performance pay was 15 to 20 more times more effective for raising student learning than reductions in pupil-teacher ratios. More broadly, these results suggest that the performance of front-line government employees depends less on the level of pay and more on its structure.

From Evidence to Policy

Three immediate policy implications of this body of research are summarized below[1].

1) Make learning outcomes an explicit goal of primary education policy and invest in regular and independent high-quality measurement of learning outcomes: While independently measuring and administratively focusing on learning outcomes will not by itself lead to improvement, it will serve to focus the energies of the education system on the outcome that actually matters to millions of first-generation learners, which is functional literacy and numeracy.

2) Launch a national campaign of supplemental instruction targeted to the current level of learning of children (as opposed to teaching to the textbook) delivered by locally hired teacher assistants, with a goal of reaching minimum absolute standards of learning for all children: There is urgent need for a mission-like focus on delivering universal functional literacy and numeracy that allow children to 'read to learn'. The evidence strongly supports scaling up supplemental instruction programmes using locally hired short-term teaching assistants that are targeted to the level of learning of the child, and the cost-effectiveness of this intervention also makes it easily scalable.

(Contd....)

Box 2.8 : Using Evidence for Better Policy:The Case of Primary Education in India* (Contd...)

3) Pay urgent attention to issues of teacher governance including better monitoring and supervision as well as teacher performance measurement and management: A basic principle of effective management of organizations is to have clear goals and to reward employees for contributing towards meeting those goals. The extent to which the status quo does not do this effectively is highlighted in the large positive impacts found from even very modest improvements in the alignment of employee rewards with organizational goals. There can be potentially large returns of implementing these ideas in education and beyond.

The next ten years will see the largest ever number of citizens in the school system at any point in Indian history (or future), and it is critical that this generation that represents the demographic dividend be equipped with the literacy, numeracy, and skills needed to participate fully in a rapidly modernizing world. In a fiscally constrained environment, it is also imperative to use evidence to implement cost-effective policies that maximize the social returns on any given level of public investment. The growing body of high-quality research on primary education in the past decade provides opportunity for putting this principle into practice.

*** Prepared by Karthik Muralidharan.**
[1]See Muralidharan (2012) for a more detailed discussion and for references to the studies summarized here.

Consequences and Conclusion

2.53 Recent economic history is replete with examples of economies that were supposed to have great potential but ultimately did not achieve rapid economic growth and improvements in standards of living. At the same time, we have instances of economies classified as basket cases that achieved rapid turnarounds. India's achievement in the post-reform period and South Korea's rapid transformation surely fall in this latter category. But India's continuing on a rapid growth path is not preordained. Besides favourable circumstances, it requires deft policymaking and a broad vision of the future, possible risks, and opportunities. We stand at a crossroads where we need to develop a clear strategy for continued inclusive growth. Let us consider what might happen under different scenarios. These are hypothetical scenarios, and based on informed estimates, but reflect the forces that will be at play.

Business as usual: Some improvement in infrastructure but only slow improvement in education, and no change in institutional structure such as business regulation and labour laws. Some movement from agriculture to low skill services such as construction and household work, as well as to informal manufacturing, but too few quality jobs. GDP growth settles into a comfortable 6-7 per cent, the new "normal". There is growing presence of unprotected workers in manufacturing and the possibility of rising labour frictions. There is immense pressure on education to make students job-worthy, but with organized manufacturing playing little role in training workers and imparting skills on the job, there is a continuing mismatch between employer needs and worker capabilities. Growth is slower than it could be and inequality higher than it ought to be.

Reforms: Vast improvements in infrastructure, education, as well as in business regulation and labour laws. As fewer workers depend on agriculture, larger holdings and more investment in capital and technology create a much healthier agricultural sector, with significant rural entrepreneurship surrounding activities like horticulture, dairy products, and meat. The manufacturing sector becomes a training ground for workers, absorbing more students with a middle or high school education. India moves into niches vacated by China such as semi-skilled manufacturing, even while enhancing its advantage in skilled manufacturing and services. India experiences faster and more equitable growth. Social frictions are minimized as both agriculture and manufacturing create better livelihoods.

Decline: No improvement in infrastructure, education, or institutions: As fewer jobs are created outside of agriculture, more stay in agriculture, increasing the pressure on land and lowering incomes. Small agricultural plots do not provide enough income, nor can they be leased out. More families break up, with males seeking work elsewhere, and labour participation increases. There is large-scale migration to overburdened cities. More supports are given to agriculture and transfers are made to rural areas so as to prevent further migration. The strain on government finances increases. Income inequality between good service jobs in cities and marginal

agricultural jobs in rural areas increases tremendously. Social strains grow.

2.54 These scenarios are clearly caricatures and should be seen as indicative rather than conclusive in any way. The key policy message from this chapter is that India has to focus on an agenda to create productive jobs outside of agriculture, which will help us reap the demographic dividend and also improve livelihoods in agriculture. We need to examine carefully whether regulations constrain businesses excessively and, if so, strip away the excess regulation while ensuring adequate protection and minimum safety nets for workers. Building infrastructure and expanding access to finance will also help. While the government is clearly engaged in this process, some further steps need greater debate and action. Hopefully, this chapter will help inform that debate.

References

Amin, Mohammad (2008), 'Labor Regulation and Employment in India's Retail Stores', Social Protection and Labor Discussion Paper Number 0816, World Bank.

Asian Development Bank (2009), Key Indicators 2009: Enterprises in Asia: Fostering Dynamism in SMEs, Manila.

Aiyar, S. and A. Mody (2011), 'The Demographic Dividend: Evidence from the Indian States', IMF Working Paper.

Bailey, M.J. (2006), 'More Power to the Pill: The Impact of Contraceptive Freedom on Women's Life Cycle Labor Supply', Quarterly Journal of Economics, 121:289-320.

Berger, Allen, Nathan Miller, Mitchell Petersen, Rajan, Raghuram, and Jeremy Stein (2005), 'Does Function Follow Organisational Form? Evidence from the Lending Practices of Large and Small Banks' Journal of Financial Economics,76: 237-69.

Besley, T. and R. Burgess (2004), 'Can Regulation Hinder Economic Performance? Evidence from India.' Quarterly Journal of Economics, 119 (1): 91-134

Bhattacharjea, A (2006), 'Labour market regulation and industrial performance in India: A critical review of the empirical evidence.' Indian Journal of Labour Economics 49 (2): 211–232.

Bosworth, M. and S. M. Collins (2003), 'The Empirics of Growth: An Update', Brookings Papers on Economic Activity.

Datta-Chaudhuri, M. (1996). 'Labor markets as social institutions in India', IRIS-India Working Paper No. 10, University of Maryland-College Park.

Davis, Steve, John C. Haltiwanger, and Scott Schuhh (1998), Job Creation and Destruction, MIT Press, Cambridge.

Debroy, B. (2010), 'Segmentation and Unification in the People's Republic of China's Labor Market: Lessons for India' in K. Gerhaeusser, Y. Iwasaki, and V. B. Tulasidhar (eds.), Resurging Asian Giants: Lessons from the People's Republic of China and India. Manila: Asian Development Bank, pp. 167-200.

De Soto, H. (1989), The Other Path, Harper and Row Publishers, New York.

Djankov, S., R. La Porta, F. Lopez-de-Silanes, and A. Schleifer (2002), 'The Regulation of Entry', Quarterly Journal of Economics, 117(1):1-37.

Dougherty, S. (2008), 'Labor Regulation and Employment Dynamics at the State Level in India', OECD Economics Department Working papers No. 624.

Dougherty, S., V. C. Frisancho Robles, and K. Krishna (2011), 'Employment Protection Legislation and Plant-Level Productivity in India', NBER Working Paper No. 17693.

Feyrer, J. (2007), 'Demographics and Productivity, Review of Economics and Statistics, 89 (1): 100-9.

Gupta, P. and U. Kumar (2011), 'Explaining the Growth of Manufacturing in India: Role of Labor Regulations and Infrastructure', Handbook on Indian Economy, Oxford University Press, Delhi.

Gupta, P., R. Hasan, and U. Kumar (2008), 'Big Reforms but Small Payoffs: Explaining the Weak Record of Growth in Indian Manufacturing', In S. Bery, B. Bosworth, and A. Panagariya (eds.), India Policy Forum, vol. 5, Sage, Delhi: 59-108.

Hasan, R., K. Robert, and L. Jandoc (2012), 'Labor Regulations and the Firm Size Distribution in Indian Manufacturing', Columbia Program on Indian Economic Policies, Working Paper No. 2012-3.

Hasan, R., D. Mitra, and A. Sundaram (2012), 'What Explains the High Capital Intensity of Indian Manufacturing?' Indian Growth and Development Review.

Hasan, R., S. Lamba, and A. Sen Gupta (2012), 'Growth, Structural Change, and Poverty Reduction in India', Working Paper, India Resident Mission, Asian Development Bank.

Hsieh, C. and P. J. Klenow (2011), 'The Life Cycle of Plants in India and Mexico', Chicago Booth Research Working Paper No. 11-38.

IMF, World Economic Outlook (2006), 'Asia Rising: Patterns of Economic Development and Growth', Chapter 3.

IMF, World Economic Outlook Database (2011), September 2011.

Kochhar, K., U. Kumar, R. Rajan, A. Subramanian, and I. Tokatlidis (2006), "India's Pattern of Development: What Happened, What Follows?', Journal of Monetary Economics 53: 981-1019.

Kolli, R. and A. Sinharay(2011), 'Share of Informal Sector and Informal Employment in GDP and Employment', Journal of Income

and Wealth, 33(2), July-December 2011.

Krueger, A. O. (2007), 'The Missing Middle', Stanford Center for International Development Working Paper No. 343.

Lewis, A. (1954), 'Economic Development with Unlimited Supplies of Labour', The Manchester School of Economic and Social Studies, May.

Levy, S. (2008), Good Intentions, Bad Outcomes: Social Policy, Informality and Economic Growth in Mexico, Washington: Brookings Institution Press.

Ministry of Labour and Employment, Government of India (2002), Second National Commission on Labour, Report.

Mishra, P. (2013), 'Has India's Growth Story Withered?', Economic and Political Weekly, forthcoming.

Muralidharan, K. (2012), 'Priorities for Primary Education Policy in India's 12th Five-year Plan', in NCAER-Brookings India Policy Forum 2012-2013, NCAER, New Delhi.

National Sample Survey (2012), 'Informal Sector and Conditions of Employment in India', Report No. 539, January 2012.

National Statistical Commission (2012), 'Report of the Committee on Unorganised Sector Statistics', Government of India, February 2012.

Nayar, R., P. Gottret, P. Mitra, G. Betcherman, Y. Lee, I. Santos, M. Dahal, M. Shrestha (2012), More and Better Jobs in South Asia, World Bank.

National Commission for Enterprises in the Unorganised Sectors, (2009), The Challenge of Employment in India: An Informal Economy Perspective, New Delhi.

Nehru, V. and A. Dhareswar (1993), 'A New Database on Physical Capital Stock: Sources, Methodology and Results', Revisita de AnalisisEconomico, 8 (1): 37-59.

Panagariya, A. (2008), India: The Emerging Giant, New York: Oxford University Press.

Panagariya, A. (2004), 'India's Trade Reform', in S. Bery, B. Bosworth, and A. Panagariya (eds.), India Policy Forum, vol. 1, pp. 1-57, New Delhi.

Romer, P. (1992), 'Two Strategies for Economic Development: Using Ideas and Producing Ideas', Proceedings of the World Bank Annual Conference on Development Economics.

TeamLease (2012), 'India Labor Report (2012), Massifying Indian Higher Education: The Access and Employability Case for Community Colleges', TeamLease and Indian Institute of Job Training.

United Nations Population Division,(2010), Revision of World Population Prospects.

World Bank (2013), World Development Report.

World Bank (2013), Doing Business: Measuring Business Regulations.

World Bank (2009), Doing Business in India.

World Bank (2012), World Development Indicators, July.