5

Industry

5.1 The Eleventh Plan's thrust on accelerated and inclusive growth requires rapid growth in the manufacturing sector with generation of quality employment. The Eleventh Plan had envisaged the manufacturing and general industrial sector growing at an average rate of 10–11 per cent, which was about 2 per cent more than that achieved in the Tenth Plan. Manufacturing grew at 9 per cent in 2007–08, the first year of the Tenth Plan, but slipped to 2.6 per cent in 2008–09 on account of the adverse effects of the global economic and financial crisis. In the first eleven months of 2009–10 there was a strong recovery with manufacturing output touching 10 per cent. Nevertheless, manufacturing output growth during the Plan period will still be far short of the double digit target set out in the Eleventh Plan.

5.2 Bringing about a more rapid growth in manufacturing remains a major challenge. The old fashioned 'protection' of Indian industry against competition is not an option as it will only reduce competitiveness and dynamism in the industry. The approach must be to identify the constraints that hold back growth and devise policies to overcome these constraints. It has to be recognized that some of the constraints that must be eased, such as land and labour matters that are often mentioned, are of a different nature than the licensing constraints that were addressed in the first round of industrial reforms. They are more complex and require partnership with people. This calls for a wider process of consultation and greater inclusiveness.

5.3 The strategy must take into account the fact that the industrial structure at present contains an entire spectrum of industrial units. At one end this includes modern corporations, many of which compare well with global companies and some of which are now acquiring or developing assets abroad. It also includes an extensive sector in the medium range with companies, which could easily grow in strength. At the other end it includes small and micro enterprises which often struggle to survive in an inhospitable environment. A successful industrial policy must encourage each of these segments to contribute its best while at the same time encouraging competition and openness.

INDUSTRIAL POLICY OF THE ELEVENTH PLAN

5.4 The major focus areas for improving the industrial climate during the Eleventh Plan were as follows:

- Creation of world-class infrastructure and devising regulatory mechanisms to reduce transaction costs
- Promotion and facilitation of industrial investments, particularly foreign direct investment (FDI), non-resident investment, and foreign technology transfers/collaborations
- Improvement in the business regulatory environment of the central and state governments
- Development of industrial infrastructure through PPP initiatives
- Removal of regional industrial imbalances

- Development of industry relevant skills
- Addressing environmental issues emerging out of industrial activities

5.5 During the first two years of the Eleventh Plan, the following important policy modifications were carried out:

i. The earlier restriction on location of industries in cities with a population of 1 million and above (1991 Census) has been done away with. Entrepreneurs are now free to select the location for setting up of an industry subject to permissibility in zone/land use regulations and environmental legislations.
ii. In order to instill healthy competition amongst producers, the list of items reserved for the small-scale sector is reviewed from time to time. At present only 21 items are reserved for the small-scale sector. Manufacturers other than small-scale ones may also manufacture these items provided they undertake an export obligation of 50 per cent of the annual production.
iii. The government has put in place a liberal and transparent regime, where FDI up to 100 per cent is allowed in most of the sectors and activities. Liberalization measures taken on this front during the first two years of Eleventh Plan are as follows:

    - FDI up to 49 per cent allowed in credit information companies and credit reference agencies excluded from the list of the Non-Banking Financial Company (NBFC) activities where FDI is allowed.
    - FDI up to 26 per cent and FII investment up to 23 per cent allowed in commodity exchanges, subject to no single investor holding more than 5 per cent equity and FII purchases being restricted to the secondary market only.
    - FDI up to 100 per cent under the automatic route allowed both in setting up and in established industrial parks, provided they meet with certain specified conditions.
    - FDI cap in the civil aviation sector relaxed—74 per cent FDI in non-scheduled airlines, chartered airlines, and cargo airlines and 100 per cent FDI in maintenance and repair organizations and other related activities allowed.
    - FDI policy in the petroleum and natural gas sector rationalized to do away with the condition of compulsory divestment of up to 26 per cent equity in favour of Indian partner(s)/public within five years, for the actual trading and marketing of petroleum products.
    - FDI up to 100 per cent (with prior government approval) allowed in mining and mineral separation of titanium-bearing minerals and ores, its value addition, and integrated activities.

PLAN OUTLAYS AND EXPENDITURE

5.6 Plan expenditure in the industrial sector is a small part of the total investment in this sector, which is now dominantly driven by the private sector. There are 11 departments and ministries that deal with different segments of the industry and the likely expenditure on the schemes of these ministries during the first four years of the Plan period would be about Rs 29,056 crore (Gross Budgetary Support or GBS), which is 69.6 per cent of the budgetary support for the Five Year Plan. The ministry-wise expenditure is given in Annexure 5.1

5.7 The Eleventh Plan's focus on inclusive growth resulted in great attention to micro and small enterprises. These generate most of the employment in industry since they are less capital-intensive, entrepreneurial, and dispersed. The Ministry of Small, Medium, and Micro Enterprises is dedicated to the growth of this sector. One of the flagship schemes of this ministry is the Prime Minister's Employment Generation Programme (PMEGP) through which it is expected that additional self-employment opportunities of around 37 lakh will be generated during the Eleventh Plan. Another important scheme of the ministry is the Micro and Small Enterprises Cluster Development Programme (MSE-CDP), which is to be undertaken in around 400 clusters in the country. The Programme envisages interventions for capacity building, skill development, technology upgradation, market support, setting up of common facilities centres, and so on, on a cluster basis in labour-intensive industries. A number

of initiatives for skill development and improvement of business skills and management practices are also being undertaken by the ministry through its various autonomous institutions and development institutes to cater to the needs of small industry. The National Manufacturing Competitiveness Programme is also being implemented through the ministry for developing the competitiveness of Indian MSMEs. The major components are related to quality improvement technology, upgradation, marketing and information, and communication technology.

INDUSTRIAL SECTOR: THE PATH AHEAD

5.8 While specific schemes of many of the industry-related ministries have some impact on industrial productivity and competition, a real take-off to high industrial growth calls for broader policy action on several fronts.

Better Infrastructure

5.9 There is no doubt that India's manufacturing competitiveness is adversely affected by weaknesses in infrastructure, especially in energy and transportation. (These are discussed in detail in Chapters 15 and 16). The point underscored in this chapter is that poor infrastructure hurts small and medium industry the most since this is the category that cannot afford its own infrastructure. Large capital intensive industries are less affected by poor power supply because they can set up their own power plants and obtain power more economically compared with sourcing power from utilities. Smaller units, on the other hand, are forced to rely on diesel powered generating sets which provide power at three or even four times the unit cost of power from the utilities. Similar considerations apply to other infrastructure, such as roads and ports if only because large capital-intensive units can locate themselves where the infrastructure is good whereas smaller units by their nature are dispersed and need good infrastructure everywhere.

Micro and Small Enterprises

5.10 The role that the Micro and Small Enterprises (MSEs) sector plays not only in the inclusiveness of industrial growth, but in the quantum of growth too, has to be noted. It contributes 8 per cent of the country's GDP, accounts for 45 per cent of the manufacturing sector's output, and 40 per cent of its exports. Therefore, the Prime Minister appointed a high level task force in 2009 to examine ways to overcome the handicaps in the growth of this sector. The task force's recommendations are now being implemented (see Box 5.1). They address the critical issues that organizations in this sector face—credit flow, improvement of skills, access to markets and raw materials, and coping with a multiplicity of regulations and inspectors. High level committees have also been set up to monitor the progress of these recommendations.

Industrial Clusters and Collaborative Enterprises

5.11 The need to improve the performance of the huge numbers of small-scale business enterprises presents an organizational challenge. Their performance suffers due to their small scale and insufficient capital. They are too small to afford the investments required for improving human capital, quality, and marketing that are necessary for improving their competitiveness and performance. Therefore, there is a need to aggregate these small units into clusters of various forms whereby they can share infrastructure for human resource development, quality management, marketing, and so on.

5.12 The benefits of aggregation, to overcome the handicap of small scale as well as poor infrastructure, have induced several ministries, covering many different industrial sectors to promote clustering in many forms to improve competitiveness of the Indian enterprises. This strategy is evident in the approaches of ministries, such as those promoting textiles, handicrafts and handlooms, food processing, chemicals, pharmaceuticals, machine tools, auto components, and medium, small, and micro enterprises in general.

5.13 Reviews of the progress made by the ministries against their plans, and discussions about how the Plan objectives may be better achieved, have pointed to some common themes across industries. One of these is the strategy of aggregation of units to achieve benefits of scale. The ministries have also pointed to some common challenges in implementing this strategy, a principal one being collaboration. Clusters

Box 5.1
Summary of Recommendations of the Prime Minister's Task Force on Micro, Small, and Medium Enterprises

Measures that need immediate action

i. Strict adherence to stipulated credit targets by commercial banks for the micro enterprises.
ii. A separate fund with Small Industries Development Bank of India (SIDBI), using the shortfalls against the MSE credit targets set for commercial banks.
iii. A Public Procurement Policy for MSMEs as envisaged in the Micro, Small, and Medium Enterprises Development Act, 2006.
iv. Offset policy of the government should give priority to MSMEs.
v. Additional public spending to the tune of Rs 5,000–5,500 crore over the next 3–5 years to specifically target deficiencies in the existing infrastructure and institutional set-up.

Medium-term institutional measures

i. Improve the institutional set-up at the national level for the promotion and development of MSMEs.
ii. A Standing Review Committee to monitor flow of credit to the MSME sector.
iii. Micro-Finance Institutions (MFIs) to finance micro enterprises.
iv. District Industries Centres (DICs) should be strengthened.

Legal and regulatory structures

i. The establishment of an SME exchange.
ii. Legal options for the securitization of trade credit receivables and for the promotion of factoring services.
iii. Wider adoption of new formats like limited liability partnerships and single person companies.
iv. The insolvency legislation should be comprehensively reviewed.
v. Labour laws should be simplified, especially those applicable to enterprises in the MSME sector.

obtain the benefit of scale through aggregation when the many parties involved work together. When they do not collaborate, the numbers of parties involved, rather than being a source of strength are difficult to manage. The success of clusters is very often determined by the quality of collaboration amongst the many parties involved. These parties include many private sector participants, the state government, and Central Government agencies. Hence, skills to find solutions together and structures for collaborative management are keys for success.

5.14 In a learning session in the Planning Commission different ministries/departments and other agencies, including some of the Special Purpose Vehicles (SPVs) involved in implementing various cluster schemes shared their experiences and insights on how certain elements could be better designed or implemented and mistakes avoided for achieving better outcomes. What resulted was a diagnosis of factors for the success of interventions by the ministries and departments/SPVs for clustering (see Box 5.2 for the lessons that emerged).

5.15 Industrial enterprises that combine many smaller, independently-owned businesses into a larger productive enterprise can enable more people to own their businesses. In such 'industries of the people' entrepreneurs are financial stakeholders in their enterprises and not merely employees. Such enterprises can take many forms—as supply chains to a large company, or conglomerations of small enterprises into production clusters, or cooperatives, or producer companies. Innovation here is in the form of the enterprise that enables aggregation of many smaller independent units into a larger one. Such innovations have special value in India where, as mentioned earlier, many small enterprises are sprouting, whose competitiveness and sustainability can be improved through aggregation into larger enterprises whereby they can obtain benefits of scale too.

5.16 The government can make the formation of collaborative enterprises and clusters easier in two ways. First, it can develop appropriate legislative frameworks and remove disabilities in present laws and regulations.

Box 5.2
Learning Experiences for Achieving Better Outcomes of Cluster Schemes

	Learning	Action Step
1.	Combination of soft and hard interventions	• Study all schemes to see whether they have a clear and specific provision for soft interventions and make modifications to the scheme design to ensure that the soft components are comprehensively and adequately addressed as necessary for the situation • Ensure that the implementation plan proposed during the approval stage or subsequently has sufficient priority for soft interventions
2.	Flexibility in design and implementation of schemes	• Study all schemes to see whether they have clear and specific provisions for activity-wise financial limits and redesign them to consider embedding flexibility to reallocate budgets across activities within the total assistance based on local situation and demand • Rework implementation guidelines to allow inter-se reallocation of funds under different components during implementation subject to suitable justification
3.	Developing trust and cooperation among cluster participants	• Presence of a strong cluster development agency/partner should be reviewed at the time of approval of the project
4.	Targeting the entire value chain of the product	• While approving schemes in sectors/industries with strong backward and forward linkages, consideration should be given to how the project intervention will improve the value chain for the product
5.	Suitability of mode of implementation	• Study whether alternative modes of implementation through for profit, not-for-profit companies (Section 25), NGOs should be allowed in the same scheme • Lay down the roles and responsibilities of all the stakeholders clearly in the schemes • Consider flexibility in structure of SPV to allow a few majority stakeholders for driving the project. Incorporate safeguards for ensuring larger public benefit of the project
6.	Longer term engagement of a service provider	• Develop a suitable model for longer term engagement of a professional service provider who will be compensated on outcome-based parameters • Gather the knowledge of experience of similar arrangements with ongoing and past schemes • Higher allocation of funds for engaging such a service
7.	Maximizing asset usage during operation and maintenance	• Allow some provision for financial support for management of common facilities during the initial period of operation
8	Promoting inclusiveness in projects remains a challenge	• Develop clear metrics for defining and measuring inclusiveness in project • Work out an incentive framework for implementing agencies to address inclusiveness, including linking future disbursements to enhancing inclusiveness • Incorporate social impact assessment as part of monitoring and evaluation of projects in a manner that the inclusiveness dimension is clearly addressed

5.17 Second, the government and industry associations can catalyse programmes for improving techniques and skills for collaboration. 'Soft skills' are required for improving the performance of enterprises, just as they are for improving individual performance. The total quality movement that permeated large and small firms in almost all Japanese industries in the 1970s transformed their capabilities. Simple

techniques were learned by Japanese managers and workers to improve quality that they applied to their own work settings. They were disseminated by many institutions, government and private, and even through newspapers and the radio! Their adoption was promoted by competitions. Thus the nation adopted a new language and new ways for quality management. Later, companies in other nations adopted these same techniques to catch up with Japanese competitors who had surpassed them. Similarly, a campaign is required to improve soft skills for collaborative management, in clusters and otherwise, for Indian industry, especially small industry, to improve its competitiveness and growth. A strategy to build this infrastructure derived from success stories in India is described in Box 5.3.

Special Economic Zones

5.18 Special Economic Zones (SEZs) are a special form of industrial cluster in which the units within it, in addition to the benefits of a shared and better quality infrastructure, also get special tax benefits to offset high transaction costs in the domestic economy to enable them to improve their competitiveness with international competitors. A policy for SEZs was formulated in 2005 underpinned by the SEZ Act, 2005, and the SEZ Rules, 2006. The investment in setting up SEZs comes from the private sector and there is no commitment from the government in this regard. Out of the total investment of Rs 1,28,385 crore as on 31 December 2009 in these SEZs, the major chunk of investment of Rs 1,15,603 crore was made by SEZs notified under the SEZ Act, 2005, since the coming into force of the Act in February, 2006.

5.19 By January 2010, 571 SEZs had been accorded formal approval out of which 346 have been notified, and 105 are actually operational. Many more are expected to become operational in 2011. There are 2,761 units in these 105 SEZs. Of the 105 operational SEZs, 15 are multi-product SEZs while the remaining are in IT/ITES, engineering, electronic hardware, textiles, biotechnology, and gems and jewellery.

Box 5.3
Soft Infrastructure: Counsellors and Industry Associations

The achievements of the Indian auto component industry in the last 15 years are noteworthy. According to traditional wisdom, scale is necessary to succeed in the auto industry. The domestic automobile market was small until recently. Nevertheless, several Indian auto component manufacturers started competing for business internationally. What made them attractive were not only their low costs as compared with Western suppliers but also their quality and engineering capabilities. The industry made a concerted effort to build the capability of its members in quality and productivity and engineering, including the small ones of whom there are many in the industry, and the fruits of that effort were the commercial successes of its members in exports and within the country too against foreign producers.

The industry-wide focus on systematic development of capabilities of its members took root with the formation of two clusters in 1998 under the guidance of Professor Tsuda, a quality expert from Japan, working with ACMA and CII. It led to 11 of the companies winning international recognition by getting the Deming Prize for quality, the highest international recognition for quality. This was the highest number of Deming Prizes won by any country after Japan.

The cluster-based capability building programme has now been running for over ten years. Companies who participate in this programme—many of which are small, with turnovers of less than Rs 10 crore per annum—value the services they get. They pay for the services with hardly any complaints. Clusters include companies that are business competitors who have established boundaries of what they will share and what they may not. Thus they have created a 'commons' from which they all gain if they use it well.

Two lessons can be gleaned from this experience. The first is the critical role of trained counsellors. The biggest bottleneck in ramping up this initiative is the shortage of good, motivated, and capable experts for helping the companies. However, the programme has developed a profile and a curriculum for training good counsellors. With this, the number can now be multiplied, and with a larger number the benefits of this successful cluster-based approach can be expanded.

The second lesson is in the role of industry associations. One of the difficulties in getting clusters to form and then perform, is the difficulty of getting the beneficiaries to cooperate with each other. They do not have the 'soft infrastructure' of trust and systems, which must be built for them to cooperate. Industry associations provide infrastructure for engendering cooperation amongst companies. They are also good conduits of assistance to the clusters.

5.20 These SEZs have provided direct employment to 4.9 lakh persons of which 3.6 lakh is incremental employment after the enactment of the law. Exports from these SEZs in 2009–10 (till December 2009) were Rs 151,000 crore: 66 per cent of these were manufactured goods, 21 per cent IT/ITEs, and 13 per cent trading. Thus, SEZs have contributed significantly to growth of manufacturing, employment, and exports. Whereas the SEZs have proved their value as a concept, a major problem with the expansion of this idea is acquisition of land, particularly agricultural land.

Balancing Scale and Depth across Industries

5.21 For any manufacturing economy, building 'deep' manufacturing capabilities in specific industries is an important aspect of sustainable growth. 'Depth' is defined as capability and expertise in all aspects of a product value chain—from R&D and product design, to manufacture of components and final products, and further to installation and service, where appropriate. Depth is important for multiple reasons.

5.22 In certain industries such as defence and telecommunications, national security requires that the value chain be indigenous. Controlling the upstream value chain in some industries is critical for safeguarding growth in the downstream segments. Depth allows for the capture of greater value along the chain. Greater depth makes the industry's position more stable and less exposed to shifting global demand–supply situations and increasing volatility. This has consequence for key parameters like GDP growth and employment generation.

5.23 However, it is also important to note that the right balance of scale and depth is required across industries. Over the last two decades, Rapidly Developing Economies (RDEs) including India have grown their share of global trade through greater off-shoring to RDEs by companies in developed markets, of lower value mass production or assembly, driven primarily by the labour cost advantage of RDEs. The high-value parts of the chain, for example, R&D and design and production of core components, were often not outsourced as these companies were keen to retain their technology and value creation in their home countries, and also because these parts of the chain were more competitive in the developed markets. Very often investments are driven only in a specific part of the value chain due to higher competitiveness of RDEs in that part of the chain. It is important that these investments are not discouraged in the policy framework to promote depth.

5.24 India's challenge is to do both—continue to capture a large share of the off-shoring space by building scale in assembly and production of some basic parts in relevant industries; and at the same time, building deeper manufacturing capabilities which allow a greater share of the total value chain.

5.25 There are several sectors where India is building to global scale, but with not enough presence across each stage of the value chain. These include mobile phones, telecom equipment, consumer electronics, and even passenger cars. For example, in telecom equipment while a large proportion of wireless devices and software content are now produced in India, design, components, and telecom infrastructure continue to be imported from other markets and no single Indian player has been able to build capabilities to have a major play in the domestic market, leave alone the global market. (Indeed, India has to import such equipment from China, where such capabilities have been built whereas they have not been built in India even though telecom markets in both countries are large enough to provide manufacturing scale.) On the other hand, in passenger cars, several Indian players have made a strong beginning and are building capabilities to design and manufacture cars from scratch and now have an opportunity to scale up these capabilities to global levels.

5.26 Finally, India currently lags behind the curve on R&D. R&D spending is only 0.8 per cent of GDP which is much lower than developed country or even other rapidly developing economy benchmarks (Table 5.1). Given that technology and R&D are critical drivers of depth in any industry, this is a matter for concern. Two issues to consider here are: the quantum of R&D spent and the effectiveness of spending. More spending need not translate into more results. Therefore, merely calling for an increase in the spending to catch up with

the levels of other countries is not a smart strategy. The productivity of R&D and the effectiveness of the spending are more important and must be the focus of policymakers as well as R&D organizations. Issues related to R&D are addressed in the Chapters on Science and Technology (Chapter 19), as well as Innovation (Chapter 20).

TABLE 5.1
R&D Expenditure as Percentage of GDP in 2007

Brazil	1.02 (2006)
China	1.5
Pakistan	0.7
India	0.8
Mexico	0.5
Russia	1.1
South Korea	3.5
Malaysia	0.6
Thailand	0.2

Source: OECD and UNESCO Data Centre.

Policy Levers to Drive Depth

5.27 India has progressively liberalized its industrial policy to attract investments. This has paid off in many ways. The key question now is: given the current position of the Indian industry and the global trends in off-shoring, should India refine its policy stance and framework to give greater focus to building depth in target sectors?

5.28 Indian manufacturing will require a concerted policy agenda that should vary based on the type of industry. As a starting point, four main segments that require focus are:

- The nation's 'building blocks'— infrastructure, capital goods, and machine tools, etc.—require focused efforts and large investments to build technical expertise and manufacturing capabilities.
- In consumer-led businesses, which are driven by scale and where India has already started building to scale, the focus will be to continue to rapidly build to scale to drive down costs, and at the same time, proactively 'learn' and transfer knowledge from more developed markets.
- New/emerging technologies where India could position itself as an early mover and possibly global leader require careful assessment to identify the right emerging technologies where India can display advantage. These technologies will require support through earmarked 'innovation' funds, open experimentation, and active teaming and investment in research institutes to gain early mover advantage.
- In defence, India will need focused investment to build capabilities in manufacturing defence equipment.

5.29 There is a range of actions that the governments can take to facilitate the growth of specific manufacturing industries in a competitive manner. The objectives of these could be to promote employment generating industries in which the country has some resource advantages (such as large labour pools, raw materials, and traditional skills), and/or to create depth in some industries for strategic reasons as mentioned earlier. These actions could be in the following areas:

i. The government's own purchases, where these are large, could be used as a lever to encourage domestic manufacture and transfer of technology as a condition. The intention should not be to simply prefer domestic manufacture irrespective of cost or technology but to use leverage to create a modern and competitive industry.
ii. Standards of products and services that may be sold in the country could be specified in a manner that would encourage domestic production building to scale within these standards.
iii. Wherever the government subsidizes the purchase and use of new technology (for example, for the promotion of environment friendly products) it specifies standards or technologies as well as domestic production requirements.
iv. Tax benefits (and/or) interest subventions for selected industries along with conditions for local content (with no discrimination between domestic and foreign companies).
v. Subsidies for local manufacture, or local R&D, in selected industries (with no discrimination between domestic and foreign companies).
vi. Provision of special infrastructure, for example, privileged and well equipped areas, R&D funds, and marketing funds the users of which are required to meet specified conditions.

This is an illustrative list. The specific actions that would be appropriate must be determined through a process of consultation between the producers and policymakers.

5.30 Asian countries, especially Japan, Korea, and China, which accelerated their industrial growth in the last few decades, targeted their policies very effectively to produce results. A lesson from the successes of the large industrial Asian giants is the close cooperation between the policy and productive sectors in the shaping of policies. The productive sector, as it seeks to expand and compete, feels the 'pinch in the shoe', which must be eased by policy change. These policies must be WTO compatible. This requires much better collaboration between industry and policymakers to focus policy actions. Therefore, the quality of the process of collaborative learning and policymaking will be a key to the growth of industry. While industry and the government in India are meeting in various forums, there is scope to sharpen insights for strategic actions that can have the most impact at the least political cost.

Skill Development

5.31 Skill development for inclusive industrial growth must address the vast numbers in the unorganized sector to improve their productivity. This will have to be a continuous process, leading to upgradation of skills over a period of time. It would require revamping technical and vocational training with the help of industry associations. Public-private partnership will be necessary in running and managing training institutions to meet the gap in skills.

5.32 The Prime Minister's National Council on Skill Development has set a target of reaching out to 500 million persons by 2020. Out of 500 million, 45 million are expected in the manufacturing sector. The ministry/ department-wise targets are: textiles—10 million, heavy industry—10 million, food processing industries—5 million, micro, small, and Medium enterprises—15 million, and chemicals and fertilizers—5 million. The ambitious nature of these targets may be seen by comparing them with the training capacity of institutes directly under the five ministries/ departments at the beginning of the Eleventh Plan which was only 3,36,000 per annum.

5.33 The two main approaches to addressing skill development targets are coordinating private sector initiatives in the skill development sector through the National Skill Development Corporation (NSDC) and secondly augmenting existing schemes as well as new programmes within the overall strategy outlined by the National Skill Development Coordination Board (NSDCB) that has been set up to implement the decisions of the Prime Minister's National Council on Skill Development.

Labour Policy Reforms

5.34 Economic liberalization and deregulation have brought closer integration of domestic and international markets, and have increased competitive pressures on industry. A supportive policy environment can reduce such pressures considerably. It has generally been perceived that rigidity in the labour policies of the country codified in two principal legislations—the Industrial Dispute Act (IDA), 1947, and the Contract Labour (Regulation and Abolition) Act, 1970, have adversely affected employability and employment generation in organized manufacturing. Regular employment is giving way to increase in casual and contractual employment. The shrinking of the regular workforce is a matter of concern and belies the fact that benefits of growth have been inclusive.

5.35 Inclusive growth requires that more and more citizens are directly included in the growth story, with more people obtaining better employment opportunities. In the past it was generally perceived that labour legislation was a stumbling block when it came to rationalization of costs (through downsizing) and that there were inherit inflexibilities in the IDA Act that constrained employers from achieving optimum levels of employment and production. However, evidence suggests that downsizing has taken place in response to market requirements irrespective of IDA. This is in evidence particularly in the textile sector, which took the major hit

during the recession when lakhs of workers were laid off.

5.36 The other legislation in question, the Contract Labour Act, prohibits contract labour in an industry where labour is seen as essential to the main activity. However, contract labour, when employed, helps to reduce costs and affords employment to those who would otherwise not have got any regular employment. Employers are therefore generally of the view that the Contract Labour Act should be amended to distinguish between 'core' and 'peripheral' work (the latter being permitted to be contracted out). Greater flexibility to employ contract labour should be supplemented with better conditions of work, such as a certain minimum level of pay and duration of work.

5.37 Creation of not only more employment opportunities but also qualitatively better employment needs to be a priority. The unorganized sector is completely outside the purview of most labour laws and the system of social security. Inclusive industrialization will have to create more employment opportunities than hitherto and enable a large portion of the Indian workforce to move out of the vast unorganized sector to an expanding organized one (to which social security is applicable to a large extent). At the same time, social security will have to be ensured to the workers in the unorganized sector. Recently, on the recommendation of the NCEUS, the Ministry of Labour notified the Unorganized Workers Social Security Act, 2008. Measures such as Rashtriya Swasthya Bima Yojana and Aam Aadmi Bima Yojana, and the Old Age Pension Scheme have also been introduced.

5.38 Under the Constitution, labour is a subject in the concurrent list where both central and state governments are competent to enact legislation. Consequently, there are labour laws enacted by the Central Government where the Centre is solely responsible for their enforcement. Then there are laws that are enacted by the Central Government and enforced by both the central and the state governments. Yet another set of laws are enacted by the Central Government but enforced by the state governments, and finally there are laws that are enacted and enforced by the state governments. In addition, both the Central Government and state governments have formulated rules to facilitate the implementation of these laws.

5.39 The states would remain empowered to enact rules to implement the laws and indeed play a more significant role in harmonizing and streamlining procedures that would make compliance transparent and less arbitrary and stressful. In this context, the recommendations of the Anwarul Hoda Committee (2005) to shift towards self-certification and third party inspections, joint inspections, and a joint annual calendar of inspections need to be implemented. The Committee had also supported proposed amendments in Labour Laws (Exemption from Furnishing Returns and Maintaining Registers by Certain Establishments) Act, 1988, which aim to reduce the number of inspections and maintenance of registers as currently required under various labour laws. The amendments should be enacted expeditiously.

Land for Industry and Mining

5.40 Land for industry and mining is becoming more difficult to obtain and more costly, year after year. Major industrial projects have been started, while some abandoned in several states, because they could not get possession of the land intended for them. Small and micro enterprises have more difficulties than large enterprises in obtaining land at economical rates in suitable locations for industry. Clusters are a solution for providing land and infrastructure for small enterprises but obtaining land for clusters is also becoming difficult and costly.

5.41 Land acquisition and use have become highly contested and politicized. Land stock is fixed, and with the growth in population as well growth of the economy, need for land is increasing. The issues raised are central to the concepts of inclusive growth. Who should be compensated for the land acquired—only the owners on record or also those who depend on the land for livelihoods even though they are not the owners? In what form should they be compensated? Outright grants, or stakes in future appreciation of the value obtained from the alternative use of the land?

In what manner should rehabilitation be provided so that there is reasonable continuity of incomes for those displaced? Many land acquisition problems are occurring in the context of PPPs where land is sought to be acquired for projects—for infrastructure, industry, urban renewal, or SEZs—in which the private sector is involved along with the government. The people affected would seem to be the missing 'partners' in the arrangements so far. Therefore, the issue of land acquisition and its use require that the concept of PPP be expanded to include another 'P' in the partnership—the people affected. Principles have to be distilled and agreed to for public–people–private partnerships and solutions have to be found quickly and justly.

5.42 Land acquisition processes that worked earlier do not work now because not only is the pressure on the land more, but people's awareness about their rights, and their expectations too have changed as the country has developed. The role of the state has also become complicated. Laws that appeared fair when the land was acquired for public utilities or public sector enterprises, in which the gains were retained in the public sphere, do not appear just when the gains go towards the enhancement of the private wealth of investors. It is worth noting that while there are many much-publicized cases of projects being stalled by problems of land acquisition, there are also cases, often in the same states, of land being obtained by industrialists who have negotiated issues of compensation and rehabilitation directly with the people affected.

5.43 The National Rehabilitation and Resettlement Policy (NRRP), 2007, aims at striking a balance between the need for land for development activities and protecting the interests of landowners, tenants, and the landless. The Rehabilitation and Resettlement Bill, 2007, to give a statutory basis to the policy, and the Land Acquisition (Amendment) Bill, 2007, were introduced and passed by the Lok Sabha and referred to the Rajya Sabha for consideration. However, due to the dissolution of the fourteenth Lok Sabha, the bills have lapsed. Early reintroduction of these legislations is essential to set up an appropriate statutory framework to address the important areas of land acquisition and rehabilitation and resettlement. It must be kept in mind that in the absence of new legislation we have to per force continue with the existing laws which are manifestly inadequate.

MINERALS SECTOR

Eleventh Five Year Plan Objectives

5.44 The Eleventh Five Year Plan aimed at the intensification of exploration activities for low volume-high-value minerals, such as gold, diamonds, base metals, and the platinum group of minerals, and efforts towards augmentation of resources of ferrous, non-ferrous, and industrial minerals. These objectives were to be achieved by encouraging private sector investment in exploration. The other objectives of the Plan included restructuring and modernization of the Geological Survey of India (GSI) in the areas of instrumentation for both ground and airborne surveys, and acquisition of state-of-the-art laboratory facilities with high-precision capabilities, and the creation of a comprehensive portal giving meta-data of the regional exploration work done by GSI and the scope for investment based on such work. Other thrusts were the modernization of the Indian Bureau of Mines (IBM) and state directorates for establishing of a national registry and a mineral atlas; adoption of the United Nations Framework Classification (UNFC) system of classification of mineral resources so as to present reserves/resources of minerals on an internationally uniform system to attract more private investment into the sector; development of minerals in the North-Eastern region; and strengthening R&D activities in all aspects of mining.

Policy Initiatives and Strategies

5.45 The National Mineral Policy, 2008 was approved by the government and has been tabled in Parliament. Some of the important features of this policy are given in Box 5.4. The government has initiated a proposal for amendments/revision of the Mines and Minerals (Development and Regulation) Act based on the National Mineral Policy, 2008, and the recommendations made by the High Level Committee (HLC) on National Mineral Policy (Hoda Committee). A bill has to be introduced in Parliament and this should be expedited.

Box 5.4
Some Important Features of the National Mineral Policy, 2008

- Seamless and transparent grant of mineral concessions and security of tenure to a holder of a concessionaire.
- Arm's length distances between state agencies that mine and those that regulate.
- Preference to value addition industry in grant of mineral concession.
- Development of a proper inventory of resources and reserves—priority to a mining tenement registry and a mineral atlas.
- Strengthening of the Geological Survey of India, the Indian Bureau of Mines, and the State Directorates of Mining and Geology, with manpower, equipment, and skill sets upgraded to state-of-the-art.
- Developing a framework of sustainable development to take care of biodiversity issues.
- Special care to protect the interest of host and indigenous (tribal) populations through developing models of stakeholder interest based on international best practice.
- Assistance to state governments to overcome the problem of illegal mining through operational and financial linkages with the Indian Bureau of Mines.
- Developing a comprehensive institutional framework for R&D and training.
- Developing of capital market structures to attract risk investment into survey and prospecting.

5.46 A high powered committee on GSI set up in January 2008, submitted its report titled 'Report on the functioning of the Geological Survey of India' to the government on 31 March 2009. The committee visualized making GSI a world class geo-scientific institution and made 74 main recommendations, which are beginning to be implemented.

5.47 In order to augment the revenue of mineral producing states, the Hoda Committee had recommended that the method of fixing of royalty should move decisively to *ad valorem* rates. Internationally, the *ad valorem* royalty system is more commonly used as it has the basic advantage of providing buoyancy to revenues in line with increases in the price of minerals. Based on the recommendations of the study group set up by the Ministry of Mines to consider the revision of rates of royalty and dead rent of major minerals (excluding coal, lignite, and sand for stowing), the government approved the royalty rates and dead rent and the same were notified by the Ministry of Mines in August 2009. These changes have resulted in substantial increases in royalties to the states, doubling and tripling them for several, and even more than that for Goa.

5.48 The FDI policies have been gradually liberalized in the last few years. With this, FDI in the mining sector for all non-atomic and non-fuel minerals, including diamond and precious stones, has now been fully opened up to 100 per cent through the automatic route.

Physical Performance

5.49 Specific production achievements of some important mineral-based industries are impressive as can be seen from Table 5.2.

5.50 Production of selected minerals is given in Table 5.3. This performance is mixed. Whereas production of iron ore and manganese has increased, production of other minerals has not. One reason may be, as in the case of chromites, that the imposition of export duty to discourage export of a scarce mineral to conserve it for value adding domestic use, can result in lower production of the raw ore. So long as the country's industry gains overall, this decline in one mineral or sector need not be of concern.

5.51 Crude steel production has been increasing and, with it, domestic production of iron ore. However, export realizations from iron ore exports have declined recently. The value of iron ore exports declined to US$ 4.8 billion in 2008–09 as compared to US$ 5.8 billion in 2007–08. In the first half of 2009–10, the value of exports of iron ore fell by a further 34 per cent.

5.52 Modernization and upgradation to provide state-of-the-art laboratory facilities with high-precision capabilities was initiated in GSI in the terminal year of

TABLE 5.2
Physical Performance of Some Important Mineral-Based Industries

S. No.	Item	Unit	2006–07	2007–08	2008–09	2009–10 Apr.–Dec.	2011–12 Projected
1	Crude Steel	Million tonne	50.82	53.86	58.44	52.20*	80.23
2	Aluminium	'000 tonne	1,152.53	1,236.70	1,348.70	1,115.08	1,250.00@
3	Copper cathode	'000 tonne	641.70	704.97	640.67	523.94	705.00 (E)
4	Zinc (Primary)	'000 tonne	380.94	458.23	562.20	455.84	638.00
5	Lead (Primary)	'000 tonne	44.55	58.25	60.32	45.97	95.00

Sources: Joint Plant Committee, *Annual Report Ministry of Steel* (2008–09), Ministry of Mines. Working Group Report on Mineral Exploration and Development (other than coal and lignite), Volume III, for the Eleventh Five Year Plan.
Note: E: Estimated.
@ Excluding additional capacity of 250 thousand tonnes from Vedanta Aluminum Limited (VAL) at Jharsuguda, which is under trial run.
* April 2009–January 2010.

TABLE 5.3
Production of Selected Minerals, 2006–07 to 2008–09

S. No.	Item	Unit	2006–07	2007–08	2008–09	2009–10 (Apr.–Dec.)
1	Iron Ore	Million tonne	187.70	206.45	222.54	156.00
2	Bauxite	'000 tonne	15,733	23,085	15,250	10,388
3	Chromite	'000 tonne	5,296	4,799	3,976	2,524
4	Manganese	'000 tonne	2,116	2,551	2,695	1,686
5	Copper Ore	'000 tonne	3,271	3,245	2,983	2,302

the Ninth Five Year Plan and continued through the Tenth Five Year Plan. However, progress has remained slow. Efforts must be made to complete the work in the Eleventh Plan. The project for establishing a portal for dissemination of geo-scientific information is in an advanced stage.

5.53 Several high-cost equipments are being acquired for enhancing the capabilities of GSI in the field of marine and airborne surveys. These include a Blue Water Research Vessel at an estimated cost of Rs 448 crore, a Geotechnical Research Vessel at an estimated cost of Rs 70.20 crore and a Heliborne Geophysical Survey System at cost of Rs 52 crore.

5.54 The IBM had taken up work in the Tenth Plan to present the national mineral inventory in line with the UNFC system to improve the quality of information for assessing the economic viability of deposits.

5.55 The IBM has taken up projects on the computerization of the online tenement registry system, which includes construction of cadastral and concession related data. A pilot project has already been initiated in the two states of Karnataka and Chhattisgarh. The work must be expedited to attract more investment in the sector.

5.56 IBM has completed the preparation of the overlays of mineral and forest maps on 1:50,000 scales, with respect to Chhattisgarh, Orissa, Jharkhand, and Andhra Pradesh and preparation of maps for Rajasthan has been taken up in the Annual Plan 2009–10. These maps are critical to facilitate clearance of proposals from the forest angle, which is a contentious issue.

5.57 In 2007–08, 56 reconnaissance permits covering an area of 76,482 sq. km were granted, which indicates an encouraging response to the policy measures in the sector. The total number of reconnaissance permits granted by state governments as on 31 March 2009 was 258 out of which 22 were completed.

5.58 Since the liberalization of the FDI policy, FDI in the mining sector has been increasing. From a total

of US$ 6.6 million in 2006–07, it had increased to US$ 34.2 million by 2008–09 and was as much as US$ 86.6 million in the first six months of 2009–10. In fact, the total FDI was US$ 444.3 million in 2007–08—most of that accounted for by investments by the Vedanta/Sterlite Group.

Sustainable Development in Mining

5.59 Mining activities, including exploration, development, production, and disposal of minerals generally affect the environment and ecology of the mined areas. Therefore, environmental and social concerns must be addressed sensitively, for which effective governance systems are required to ensure mining in a sustainable manner. In view of this a Sustainable Development Framework (SDF) appropriate to Indian conditions should be developed as quickly as possible.

Outlays and Expenditure in the Eleventh Five Year Plan

5.60 An outlay of Rs 1,180 crore (GBS) was approved for the Eleventh Five Year Plan for the Ministry of Mines against which the likely expenditure in the first three years (2007–10) of the Plan would be Rs 491 crore. The main shortfall is with respect to GSI where the procurement process for high-cost equipments mentioned earlier is progressing slowly. GBS and the expenditure for the Ministry of Mines is given in Annexure 5.2.

Areas of Concern

5.61 Illegal mining is rampant in many states. This amounts to stealing of public property; it is also an environmental hazard. Strong action is required by the states to check such illegal activities.

5.62 The modernization programme of GSI is progressing at a very slow pace and needs to be accelerated.

5.63 There is shortage of geo-scientists in the mineral sector due to less intake in the past in GSI and IBM and poor career progression. Steps need to be taken for enhancing the capabilities to ensure faster growth in the sector.

5.64 In spite of step-up of investment in R&D since the Ninth Plan, no visible impact or outcome has been noticed in the sector so far. More attention is required to improve performance.

MINERALS SECTOR: THE PATH AHEAD

5.65 There is need to improve management capacity at the central and state government levels. Scientific and regulatory capabilities of the concerned organizations must be strengthened. A sustainable development framework must be formulated.

5.66 More emphasis must be given to scientific mining practices, adequate attention to host populations, including tribals and the poor affected by mining activities, prevention and detection of illegal mining, and enforcement of mine closure plans.

5.67 The value chain for mineral processing involves various steps, often with alternative uses possible at these steps. Thus there is a trade-off between sales/exports of the raw material or processing it further for value addition. Since there are different agencies responsible for regulations at each step, a comprehensive framework has to be formulated for the most sustainable use of the country's mineral resources for national development, taking due notice of the conflicts of interests of various agencies.

5.68 Investments in the mineral sector, as in an industry, are affected by the availability of land for projects and environmental concerns. Laws and policies and their administration, must be improved. Mineral sector enterprises must also overcome a large 'trust deficit' with the social sector. Therefore, they must voluntarily do much more to address social and environmental concerns.

SHAPING FUTURE GROWTH OF THE INDUSTRIAL AND MINERAL SECTOR

Business Accountability

5.69 Private business enterprises are the principal engines of industrialization in India: the government is no longer promoting public sector enterprises in industry. Its principal role in industry today is to enable

and regulate the activities of business enterprises in the private sector to ensure that they may profit and grow, and meet societal needs too. Therefore, the government must induce private enterprises to pay more attention to societal concerns of inclusion and environmental sustainability.

5.70 The government intends to continue the process of liberalizing the economy to give more freedom to entrepreneurial energy. The benefits of this approach are being realized in the faster growth of the economy at rates that are now amongst the highest in the world. Meanwhile societal concerns about the condition of the environment and climate change are increasing. The country wishes to continue on its path of industrial liberalization and progressive dismantling of government controls. However, regulation of business conduct in some form cannot be avoided. If voluntary regulation is not effective, governments are pressed to step in. The more effective the industry is at self-regulation, and the more credible its actions are, the less will be societal pressure on the government to control the industry.

5.71 A movement is growing around the world within businesses themselves, to develop frameworks of accountability that go beyond the responsibility of business towards investors and customers to responsibility towards citizens and society. In such 'triple bottom line' frameworks, business organizations are expected to report to public scrutiny the impact of their business activities on the environment and on communities. Leading Indian companies are part of this international movement.

5.72 This voluntary movement for accountability must be strengthened. It must spread beyond a few leading firms. Business organizations do not want more government 'control' of their activities. They resent government imposed reporting requirements, especially those that are tedious and costly to implement. However, reporting standards developed by business associations themselves, as the new frameworks are, should be acceptable. The government could work with industry associations and put pressure for the wider adoption of such standards. They should not be footnotes to financial accounts. They must be front and centre where they are noticed.

Shaping Industrial Policy

5.73 The task of shaping industrial policy is to elicit information on significant externalities and their remedies. As it advances and grows, the industrial sector bumps into constraints in the economy: it feels the stones underfoot, or the 'pinch in the shoe'. Some of the obstacles in the path of industry in India—poor infrastructure, inadequate power supply, and the plethora of inspectors and permissions required—have been mentioned earlier. The lesson from all Asian countries that have rapidly grown strong industries in the last century is that policymakers must work closely with industrial managers to solve problems in the production sphere. In Japan, Miti and Keinderan worked together; in Korea, the government and Chaebol; and in China, the party and state-controlled enterprises. In its own way, each produced an institutionalized process of collaboration that created policies resulting in competitive industries. Not only did these countries choose strategic sectors in which they believed they could build competitive advantage, the government worked with industry to make it happen. In a world in which not only companies but states and countries too are rated on their competitiveness by international agencies, and a world in which all must strive to climb that scale, the only sustainable source of competitive advantage can be a company's or a country's ability to learn, change, and improve faster than any potential competition. Therefore, a country's competitive ability lies in the capability of the collaborative process between the producers and policymakers to produce effective policies and not any particular policy.

5.74 India cannot return to 'protection' to nurture industry in India. Nor can India simply copy the collaborative process used by Japan, Korea, or more recently China. Its circumstances are different and times have changed. Nevertheless, Indian policymakers must find ways to improve competitiveness and growth of Indian industry. The processes that will enable policymakers to do so will include consultations not only with large domestic companies that has characterized the Asian giants so far. The consultations must involve those who represent labour rights,

landowners, and the concerns for the environment; small-scale industries that generate more employment and thus more 'inclusive' growth; and foreign companies whose investments and technologies can help India.

5.75 Industrial policy requires reconciliation of the interests of many interacting sectors within industry, between several ministries too, and also between states. The promotion of capital goods industries, so necessary for the long term, if done through a costly process of protection, can compromise the growth of domestic user industries in the short term and thus affect domestic employment and domestic consumers. On the other hand, 'inverted duty' structures in favour of downstream user industries can distort the industrial landscape, and crimp growth of upstream capital goods' producers. Therefore, while the tuning-up is being done through direct consultations between producers and ministries in their respective sectors, an overview is always necessary. The Planning Commission must continue to provide this perspective.

5.76 In conclusion, the key to accelerating broad and deep industrial growth in India within a competitive world, is to innovate and improve domestic processes for consultation and consensus-building. They must work well and work fast. Policymakers and stakeholders must apply themselves to the design and development of these processes to find policies that will propel inclusive and sustainable industrial growth in India. Should India succeed, as it must, the description of that process (which will be different from China's and the others) and the policies that it will produce (which cannot be known ex-ante) may be added by future economic historians to their list of successes in economic development. The Planning Commission will focus on the improvement of these processes in the remainder of the Eleventh Plan and into the Twelfth Plan.

ANNEXURE 5.1
Gross Budgetary Support and Expenditure during the Eleventh Plan (at current prices)

(Rs crore)

S. No.	Ministry/Department	Eleventh Plan Gross Budgetary Support (GBS)	Annual Plan 2007–08 (actual)	Annual Plan 2008–09 (actual)	Annual Plan 2009–10 (actual)	Annual Plan 2010–11 (BE)	GBS in First Four Years in Eleventh Plan
1	Department of Industrial Policy and Promotion	4,183.0	925.2	524.8	886.6	1,050.0	3,386.6
2	Ministry of Textiles	14,000.0	2,211.3	3,824.7	4,221.9	4,725.0	14,982.9
	(A) Village and Small Enterprise	3,000.0	588.4	697.7	771.0	1,356.0	3,413.1
	(B) Industry	11,000.0	1,622.8	3,127.0	3,450.9	3,369.0	11,569.7
3	Department of Heavy Industry	4,093.0	82.4	191.7	157.1	370.0	801.2
4	Department of Fertilizers	1,492.0	37.5	40.3	199.7	215.0	492.5
5	Ministry of Steel	217.0	70.0	0.0	7.1	36.0	113.1
6	Department of Public Enterprises	54.0	9.0	8.3	7.6	10.5	35.4
7	Ministry of Corporate Affairs	211.0	0.0	63.0	33.0	40.0	136
8	Department of Chemicals	563.8	90.1	139.8	402.9	400.0	1,032.8
9	Department of Pharmaceuticals	1,396.2	76.6	110.1	102.2	165.0	453.9
10	Department of Food Processing Industries	4,031.0	183.0	223.1	277.5	400.0	1,083.6
11	Ministry of MSME	11,500.0	1,101.4	1,659.6	1,376.6	2,400.0	6,537.6

ANNEXURE 5.2
Gross Budgetary Support and Expenditure during the Eleventh Plan, Ministry of Mines (at current prices)

(Rs crore)

S. No.	Organization/PSU	Eleventh Plan Gross Budgetary Support (GBS)	Annual Plan 2007–08	Annual Plan 2008–09	Annual Plan 2009–10 (RE)	Likely Expenditure in First 3 Years of the Eleventh Plan
1	Geological Survey of India (Including Construction)	1,020.00	119.94	133.80	143.00	396.74
2	Indian Bureau of Mines (Including Construction)	90.00	16.06	20.44	20.00	56.50
3	Mineral Exploration Corporation Limited (Promotional)	50.00	11.00	9.00	10.00	30.00
4	Science & Technology Programme	20.00	1.75	3.00	3.00	7.75
	Total	1,180.00	148.75	166.24	176.00	490.99

Source: Ministry of Mines.