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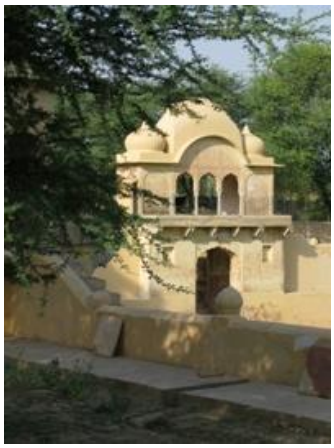
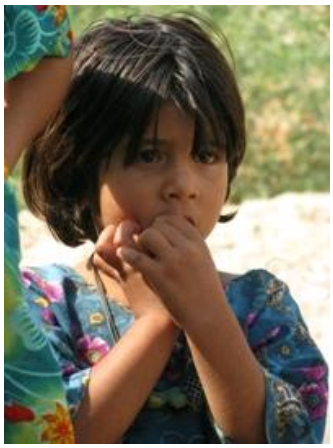


Punjab Industrial Review

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This study was undertaken in 2007/2008 at the request of the State Government of Punjab. The research team assembled by UNIDO for the assignment was led by Isher Ahluwalia and included Saumitra Chaudhuri and Samrat Sidhu. It benefited from research assistance by Anny Gupta and the secretarial support of Deepa Gopalan and Muralikrishna.
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CHAPTER 1

INTRODUCTION

The objective of this study is to prepare a medium-term strategy for the recovery and growth of the industrial sector in Punjab against the backdrop of resurgent growth in the Indian economy, the improved performance of the industrial sector generally across India, and the expanding opportunities offered by the greater integration of the Indian economy with the rest of the world. The terms of reference are appended at the end of this chapter in **Box 1.1**.

Punjab has been in the forefront of the Green Revolution in the late sixties and the seventies, with a rich agricultural base. This, together with good infrastructure, particularly a network of good roads and communications, as well as enterprising people, provides excellent pre-conditions for an industrial take-off. Yet, with industrial activity limited to a few industries like cotton textiles, food processing, dairy, light engineering, machine tools, hand tools, bicycles and bicycle components, automotive components, leather, and sports goods and hosiery, Punjab has not exploited its potential for industrialization and agricultural diversification.

Punjab's industrial performance up to the end of the 1980s was much better than that of the country as a whole. Ironically, Punjab's long-drawn slowdown in industrial growth began during the 1990s when the Government of India launched a process of wide ranging economic reforms opening the Indian economy to imports as well as domestic competition which provided larger scope to the private sector to generate growth in the economy. To some extent, the major deceleration in agricultural growth had a dampening effect on the industrial sector in Punjab in the 1990s. Also, even though militancy had subsided by the mid-1990s, the government was slow to come to terms with the emerging peace in the state and was not proactive in making the policy

regime investor-friendly. The deceleration in the growth of value added of agriculture as well as industry since 1991 has meant that Punjab is no longer the first but only the fourth in per capita income rank among the states of India.

A new industrial strategy is proposed in this report with full appreciation that sustainability of high agricultural growth in Punjab is seriously endangered, and any rejuvenation of agriculture itself is crucially dependent on an industrial strategy which builds synergies between the two sectors. The focus of the strategy is informed by an assessment of what is feasible and most suitable to the specific resource endowment and other attributes of the state. The strategy respects the limits imposed by the finances of the state government as discussed in Chapter 4 and takes these into account in tailoring the policy options for fuelling the process of industrialization.

It is important to clarify at the outset that this report does not provide a detailed roadmap for conceiving, prioritising and developing specific projects. However, it recognizes that full cost competitiveness must form the basis for all projects. Thus, all the cost including that of physical infrastructure reflecting the opportunity cost of alternative use of resources such as land must be explicitly incorporated in the project cost and should be fully funded. The report provides the framework within which industrial policy and institutional reform have to be formulated so as to realise the underlying industrial potential of the state in an increasingly competitive national and global scenario.

A major challenge in the development of industry in Punjab is the very high price of land, which is much more expensive than in other parts of the country, even after making allowance for the fact that land is much more fertile in Punjab. This makes industrial investment in Punjab relatively uncompetitive. The strategy proposed in this

report calls for a clear and transparent policy of making land available for industrialization. The government of Punjab will have to "find" its unused land and make it available for industrial use and facilitate the process of "acquiring" land by private developers.

The industrial strategy spelt out in this report highlights the importance of creating a highly favourable climate for large scale investments in food processing and textiles including cotton textiles in order to create multiplier effect on economic activity in the associated units in the small scale sector as well as the farm sector. To promote the synergy of industrial development with agricultural diversification, the strategy points to the urgency of amending the Agricultural Produce Marketing Committees (APMC) Act to allow private trade in agricultural produce in Punjab so that the economy of Punjab can exploit its potential for food processing. The amendment will also lead to the state being well positioned for private investments in logistics and cold chains as modern retail becomes a growing reality in India.

A number of existing industries in Punjab are dominated by the small scale sector. The industrial scenario in Punjab has suffered from the lack of modernization of the small scale units, which contribute about half of the total industrial production in the state. The proposed strategy would help rejuvenate these units. The strategy emphasizes the importance of a cluster approach within the framework of public private partnership to rejuvenate the existing small scale units in light engineering, leather, sports goods, etc. It recommends developing infrastructure, providing common facilities, promoting technology up-gradation, and building skills through properly conceiving and designing industrial clusters so as to help the small scale units in these industries to become globally competitive. For the small scale units in the auto-components sector, it recommends attracting at least one large automotive unit in

Punjab which can help the modernization of these units through ancillarization and vendor development.

The proposed industrial strategy also calls for creating conditions for growth in the technologically advanced sectors, e.g., IT and IT enabled services, biotechnology, pharmaceuticals and healthcare, which could become the new drivers of change on the industrial scene in Punjab.

The proposed strategy recommends five new engines of growth, i.e., (i) special focus on logistics, cold chains and supply and distribution chains to encourage high value added agriculture and food processing for urban centers, specially as the retail sector is being modernized, (ii) Special Economic Zones not only for IT, biotechnology, pharmaceuticals and textiles, but also for agro processing, (iii) a knowledge city in close proximity to Mohali, (iv) the promotion of a PCPIR in Bathinda, and (v) and an Industrial Zone along the dedicated rail freight corridor, ensuring that Punjab is linked to the corridor in the first phase of the extension of the Western corridor.

The strategy calls for a proactive approach on the part of the government of Punjab to build infrastructure of good quality as well as promote modern infrastructure through public-private partnership. The importance of making power available to industry at competitive prices emerges clearly if the industrial strategy is to lead to an industrial revival, and specific recommendations are made to reform policies in the power sector. The strategy also highlights the importance of building skills to match the demands that are likely to arise in the course of implementing the strategy.

Chapter 2 presents the proposed industrial strategy for Punjab, followed by SWOT analysis in Chapter 3. Chapter 4 presents an overview of industrial development

and economic growth in Punjab, while Chapter 5 presents the challenges of infrastructure and skill development. The recommendations are presented in Chapter 6. We believe that if these recommendations are implemented, Punjab will realize its economic potential and find its rightful place at the high table among the states of India.

BOX 1.1

TERMS OF REFERENCE

The terms of reference of the study include *inter alia*

i. An assessment of the current performance and the potential for industrialization in Punjab given the emerging scenario at the national and global levels.

ii. A review of recent policy measures that have been taken, including the Industrial Policy of 2003, Central Electricity Reform Act (2003) and the Information Technology (IT) Policy (2001).

iii. A dialogue with government officials, representatives of private business, local experts and other stakeholders

iv. An assessment of the perceived key challenges to investment and growth, in conjunction with the consultation process discussed above.

CHAPTER 2
AN INDUSTRIAL STRATEGY FOR PUNJAB

The proposed industrial strategy for Punjab addresses the multiple challenges of industrial development in the context of the overall economic development in the state. It is important to recognize that for a variety of reasons, Punjab has not paid adequate attention to the development of modern industry, and a radical change in the mindset of the government officials and the political leaders of Punjab is needed to bring about a much needed and much delayed transformation in the economy of Punjab.

An industrial strategy for Punjab must obviously include significant initiatives for agro-processing and value addition for agriculture, given the rich agricultural base of the state. These initiatives including the encouragement of private investment in logistics and cold chains are equally important and necessary for turning around the stagnation in the agricultural sector and enabling this sector to reach its full potential. In this sense, industrial strategy is needed as much for the revival of agriculture as of industry.

In building infrastructure of high quality for an industrial take-off, the public sector and the private sector have to come together in partnership within a transparent and competitive framework of operations. There is need for a radical transformation in the business environment in the state by making the industrial policy regime and the government administrative regime more investor-friendly, more prompt and more transparent.

The new industrial strategy must also be mindful of the need to create high quality jobs, given the larger and more educated young population in Punjab than in

India as a whole. Sectors such as IT, IT-enabled services, Biotechnology (BT) and healthcare are the natural new thrust areas. This requires a concerted effort at improving the quality of education, creating a functional system for skill development, and expanding the base for higher education.

In all the initiatives recommended in the proposed strategy, the government of Punjab has a lead role to play in creating an investment climate which is entrepreneur-friendly. If the administrative machinery of the state government can be geared up to implement the proposed strategy, and accountability for improving the business environment is properly established, Punjab can regain its earlier position as the state with the highest per capita income in the country.

2.1 Initial Conditions

The proposed strategy takes as its point of departure the natural resource endowment, the challenge of the state's location, the human resource base, and the business environment in the state.

2.1.1 Natural Resource Endowment

Punjab has been in the forefront of the Green Revolution that helped liberate the nation from the perpetual threat of hunger and famine. The extensively developed farm sector provides a wealth of opportunity for industries that use agricultural produce. There are problems relating to the over-exploitation of the land and water resources which need to be addressed and these issues are discussed in **Annexure B**. Broadly, there is need to harness science and technology, and design policy to conserve both water and land and improve on their productive potential for agriculture as well as

industry. Conserving water is one of the most fundamental challenges facing the economy of Punjab. The answer lies not only in science and technology but also in the industrial strategy adopted by the state. To build successful agricultural diversification, it is necessary to define an industrial strategy which can exploit agricultural linkages and also encourage the process of agricultural diversification.

There is also an urgent need to build human resources through expanding the base of education, particularly higher education, and improving the quality of education at the school level where an extensive infrastructure is already in place. This must be supplemented with a skill development initiative within the framework of Public Private Partnership along the lines of the National Skills Development Initiative of the Government of India which has also offered financial assistance for this purpose.

2.1.2 Location – The Challenge and The Response

There is a general perception that Punjab is disadvantageously placed for industrial growth because of its location. Mineral resources as well as markets within India are at a considerable distance from the state. Being landlocked, the state is also at a disadvantage relative to coastal and peninsular states when it comes to imports and exports. An effective response to this challenge is the development of high quality infrastructure. A further challenge for Punjab is that of being located at the Western border of India with Pakistan. It has suffered from military conflicts between the two countries as well as cross-border terrorism. Even though these problems are much less today as India and Pakistan are engaged in a peace-making dialogue, it is important to make a special effort at industrialising and modernising the border area districts of Punjab.

The dedicated rail freight traffic corridor proposes to link Punjab through Ludhiana with the major metropolitan cities of India. On present plans, the Eastern corridor is to begin from Ludhiana and terminate at Sonnagar via Ambala, Saharanpur, Khurja and Allahabad. A primary feeder route will link Ludhiana to the Western Corridor via Rewari and Hissar. While, this will make a huge difference to the connectivity of Punjab, the government of Punjab must give the highest priority to pushing the Railways for building the Delhi-Ludhiana link in the first phase of implementation, i.e., with the Western Express corridor for which planning is at an advanced stage.

Punjab has very good internal road-connectivity compared to other states of India, and more work is going on. The Ambala-Jalandhar and the Ludhiana-Chandigarh roads are being six-laned. The National Highway Authority of India has also taken up the Amritsar-Jalandhar, the Kiratpur-Chandigarh and the Ambala-Chandigarh highway projects. But progress is slow. The road infrastructure is certainly not good enough for an industrial take off. Strengthening, widening and extending the road network will help complement the construction of the dedicated freight corridor by the railways and the inter-state network of the national highways. A general improvement in the state highways and road linkages will also change the medium term scenario for industry in Punjab.

Besides the international airport at Mohali, Punjab should plan for a regional airport near Ludhiana and at least 6 small daylight-take-off airports in selected districts which could transform the development scenario in the state. The new airport policy allows the development of greenfield airports through private investment, and this should be exploited.

High quality telecommunication network is another major means by which the locational "disadvantage" of Punjab can be overcome, since telecommunication is not deterred by borders. The proposed strategy places a great deal of importance on high end infrastructure.

Much of the urban and industrial activity in Punjab has for historical reasons been concentrated in the central part of the state which has led to both urban congestion and higher land prices. The proposed strategy calls for industrial dispersal away from the central belt and slowly, in course of time, moving towards the southern part of the state where land prices are comparatively lower. For example, the HPCL-Mittal Petroleum refinery is located in Bathinda in the southern part of Punjab. The state government should take advantage of the refinery to promote a petro-chemicals and petroleum investment region (PCPIR) with downstream industries, under the new policy initiatives of the Government of India

Looking further ahead, it is reasonable to envisage an opening of the Punjab border with Pakistan linked to an improvement in India's bilateral relations with Pakistan. This would provide tremendous opportunity of greater cross-border trade with Pakistan, and more importantly with Central Asia, transiting through Pakistan. Development of a six-lane toll-based motorway could make a huge difference in this respect. Pakistan has built such a motorway from Lahore to Peshawar. Punjab could then become the land gateway for India to Central Asia. Although this remains in the future, Punjab's overall economic strategy should be mindful of the scope for benefiting from these developments in the medium to long run. In the short run, some effort must be directed at promoting industrialisation in the border districts by putting better infrastructure in place in these districts and attracting private investments.

2.1.3 Human Resource Development

Punjab has invested in a relatively good infrastructure for education and health. There is considerable effective demand for good quality education and health, given the relatively high income levels in the state. However, in educational attainments and skill development, and to a lesser extent in health outcomes, the performance of Punjab does not compare well with the other major states. There is need to launch major initiatives to reform the system of delivering education and health. In particular, the proposed industrial strategy calls for a major and determined initiative in skill development and improving the quality of vocational education as well as higher education.

2.1.4 Business Environment

As the dialogue with the stakeholders **(Annexure A)** suggests, Punjab fares very poorly in business environment. Administrative delays, apathetic approach of the government officials and blatant corruption emerge as important messages from the dialogue. The single window clearance system for multiple approvals from the state government has not worked. The Udyog Sahayak is the 17th stop on the train of government approvals rather than the one and only one as it is supposed to be. Our understanding is that the rules under the Industrial Facilitation Act of 2005 have been notified but the question is whether these are being enforced. Officers causing delays beyond specified time frames for approvals should be penalised. What is needed is a system of deemed approvals after a certain specified lapse of time. As regards clearances for pollution control and environment protection from the Government of India, again, an agreement should be sought for proceeding with deemed approval if the parameters are clearly in line with the responsibility and a certain amount of time has elapsed.

Businesses throughout the world prefer a friendly investment climate, transparent and quick decision-making, and low transactions costs. In order to attract more investment and create successful businesses in the state, the proposed industrial strategy highlights the importance of business-friendly policy environment, quick and transparent decision-making within the government, and low transactions costs and control of widespread corruption.

2.2 The Proposed Industrial Strategy

The industrial strategy proposed in this report attempts to promote synergy between agriculture and industry as well as between the large and the small scale industrial sub-sectors. It combines the rejuvenation of traditional industries such as cotton textiles (including hosiery and knitwear), food processing, dairy, leather, hand tools, etc., with the promotion of non-traditional industries, e.g., Bio-technology, IT and IT-related industries, logistics and cold chains, and healthcare. A promising area for Punjab is the tertiary healthcare industry which can be linked with spiritual tourism in and around Amritsar. This can be built on the strength of the pharmaceutical industry in the state and the good health infrastructure that has been developed over the years.

The strategy recommends five new engines of growth, i.e., (i) special focus on logistics, cold chains and supply and distribution chains to encourage high value added agriculture and food processing for urban centers, specially as the retail sector is being modernized, (ii) Special Economic Zones for IT, biotechnology, pharmaceuticals, textiles, and agro-processing, (iii) a knowledge city in close proximity to Mohali, (iv) the promotion of a PCPIR in Bathinda , and (v) and an Industrial Zone along the

dedicated rail freight corridor and also ensuring that Punjab is linked to the corridor in the first phase of the extension of the Western corridor.

Good infrastructure, peaceful industrial relations, flexible labor market conditions and an efficient administrative machinery can be used to attract large investments in a competitive environment vis-à-vis other states. The World Bank's earlier assessment of 2003 was confirmed by the industry representatives, i.e., that the investment climate in Punjab clearly lags behind other states. It is necessary that the industries which are already in Punjab must "feel good" about the business environment in the state. Only then can the efforts on the part of the government to attract new investments would look credible.

To address the enormous challenges of modernising the small scale units in a number of industries in Punjab, the strategy strongly endorses using a cluster approach with public-private partnership (PPP), which is being used effectively and successfully in many states with active support from the Government of India.

Because of the Golden Temple and a number of other historical Gurudwaras of the Sikhs and the famous Durga temple of the Hindus in and around Amritsar, a large number of tourists including the non-resident Indians (NRIs) visit the area. Many who visit are older people. Healthcare industry can be encouraged so as to provide a double attraction to the tourists for visiting Amritsar – improving physical and mental health.

The principal elements of the strategy are listed below:

2.2.1 Making Land Available for Industrial Development

Punjab needs **a clear and transparent policy of facilitating land acquisition for industrial development.** In the absence of such a policy, Punjab will miss out on the opportunities which are being exploited by many states in providing a major push to their industrial drive.

Punjab is a state of fertile land. There is apparently a lot of demand for land for urban usage – housing, commercial and supporting infrastructure – where the ability to pay is often in excess of what would be viable for industrial use. This is particularly true along the industrial belt, i.e., the rapidly urbanising axis running from Chandigarh through Ludhiana to Jalandhar and Amritsar. Land prices have shot up so much as to seriously dent the prospective competitiveness of any industrial project in Punjab. There are always options of investing in other states where land prices are much lower. It is obviously not possible to provide land to industry at a cost that is lower than the price at which the farmer is willing to sell. However, in levying additional development and other charges, care should be taken that the cost does not become so high that the viability of the industry is compromised.

From the previous land allotments, a large number of plots have not been developed into industrial units, and the reason may well lie in the fact that the original applicant was interested only in the speculative gain that could be made due to the increase in land prices. **The government of Punjab must examine the legal feasibility of resuming land which has been previously allotted but not utilised to build a**

functioning industrial unit. The government must also consider allocating some common land (shamlat) available with the Panchayats for the purpose of industrial development. To the extent that the plots are in the more expensive northern regions and can be aggregated to larger single sites, they should preferentially be converted to clusters/parks for textiles, hand tools, leather products or light engineering, involving common infrastructural facilities built in public private partnership. If they cannot be aggregated, they should be preferentially re-allotted to agencies supporting industry such as industrial testing laboratories or technical training institutions.

The proposed strategy recommends that the government of Punjab **develop a comprehensive policy of u*tilization and development of land***, clearly ear-marking parcels for urban expansion, infrastructure (roads, canals, tanks, railways etc.) and for industrial use. The betterment cess or development charges, land prices and the modality of bringing such lands from agricultural and other uses into the land bank of the state government should be clearly worked out and communicated in a transparent manner.

2.2.2 Utilising the rich agricultural base

The locally available agricultural raw materials, e.g., cotton, paddy for high value basmati rice, milk, fruits and vegetables and poultry provide a rich input base for industries such as cotton textiles, food processing including modern rice mills, and dairy industry, which are the major agro-based industries in Punjab. Besides enhancing the income opportunities of the farm sector, these linkages encourage agricultural diversification and lead to a more balanced use of land and water resources. Since the Government of India has recognized the potential of food processing both for the growing levels of urbanization and for export and as the playing field is being made

more level by lowering custom duties on consumer goods, Punjab can come into its own. **Sec. 2.2.9 below proposes a few options on Special Economic Zones focused on agri-exports and/or agri-processing.** Of course, the varieties of the fruits and vegetables that can be used for processing need to be promoted.

Modernization of retail services and a growing expression of interest by private parties such as Reliance, Bharti, ITC, etc., in marketing, logistics and retail, offers further opportunities for agro-based development in the industrial sector. Investment in logistics, modern warehouses, and cold chains will help strengthen the synergies between the rich agricultural base and the industrial sector. As the corporates develop a hub and spokes system of acquiring and marketing quality products, the system will guide the producers, especially small farmers towards the crops which are in demand. These synergies should result in facilitating the adoption of improved seeds, water conserving irrigation techniques, soil testing and conservation, and other modern agricultural practices. However, avenues for effective marketing of crops are crucial if these synergies are to be exploited.

The most important immediate bottleneck in all this is the *Agricultural Produce Marketing Committees (APMC) Act* which limits the ability of the private sector to buy and sell agricultural crops directly from farmers or to set up new markets. A number of other states have already amended this Act, in line with the “model" Act suggested by the Government of India. **It is recommended that the government of Punjab speedily amend the APMC Act and do so in a manner consistent with best practices in other states.** This will enable market forces to generate economic activity and employment at a rapid pace, thus ensuring that economic prosperity is shared between the rural and the urban areas of Punjab.

An important area in which Punjab has demonstrated tremendous success is dairy farming. As the expansion of Nestlé in the Moga district has shown, dairy industry has tremendous prospect if enduring networks are successfully established with farmers. There are also other examples of dairy development such as Milkfed in the public sector and Milktime and Milkfood in the private sector. Bee-keeping and producing honey is another industry which can use the tremendous agricultural potential of Punjab.

2.2.3 Using catalytic agents for industrial development

The policy makers must pick a few catalytic agents which have the ability to bring about a major transformation in the economy. The new Mittal-HPCL petroleum refinery in Bathinda and the possibility of a large petrochemical hub around it is an example. In order to translate this possibility into a reality in the specific instance, aggressive supportive and planning actions will have to be taken by the state government. Otherwise the downstream industry will certainly come up, but elsewhere. **The government of Punjab must find an anchor investor for downstream industries and put forth a proposal to set up a Petrochemical Industrial Complex as PCPIR in Bathinda.**

Similarly, Special Economic Zones (SEZ) including those for agri-processing and Industrial Parks for IT, BT, and/or textiles are effective instruments for catalytic change (Sec 2.2.8 and 2.2.9 below). **The government of Punjab should set up a High-Powered Group under the chairmanship of Chief Secretary to promote and facilitate the development of SEZs, learning from the successes and mistakes in other states and creating a model for facilitating land acquisition, which is transparent and workable.**

The **development of an Industrial Zone** along the dedicated freight corridor with assistance from the Government of India is another catalytic agent for rapid transformation of the economy. The government of Punjab must push hard to get the Delhi-Ludhiana link as part of the Western Express corridor on which work has already begun and not wait for it to be included in the Eastern Express corridor which will come in the second phase.

The natural synergies of some of the new thrust areas in the proposed industrial strategy, i.e., IT, IT-enabled services, BT and healthcare should be exploited to **build a knowledge city** with public-private partnership (PPP). This would call for ambitious planning and meticulous execution of a new urban complex near Mohali. The developers for the project should be selected, based on competitive bidding and global tenders. More generally, responding to a growing demand for urban infrastructure, Punjab should learn from the experience of Haryana in planning and executing urban development, e.g., Manesar.

2.2.4 Attracting lead units for vendor development

A large plant for automotive manufacture or for the production of large-scale sub-assemblies could have a transformative effect on the small scale units in the auto-component industry. For example, the Punjab Tractors and its Swaraj group promoted higher-technology ancillaries, and some of these, i.e., Sutlej, JC Coach, GNA and Tech-tools grew to national stature. But even though Punjab was traditionally a leader in the manufacturing of auto-components, the state has not shared in the dynamism of this industry in the post-1991 economic environment, mainly because it was unable to attract major investments in the automotive sector. The purchase of Punjab Tractors by Mahindras may bring some positive effect downstream, and help change the auto

components industry in Punjab which is largely catering to replacement parts rather than the original equipment market.

2.2.5 Industrialising Border Area Districts

The Border Area Districts of Punjab have suffered from the political and military tension between India and Pakistan for several decades. While the dialogue for peace in recent years gives cause for hope and opportunity, there is need to make a special effort at developing these districts through industrialisation and modernisation. The government of Punjab should consider providing capital subsidy for infrastructure development as well as for expansion and setting up of new units in these districts.

The policy of the Government of India to give exemption from excise duty and income tax on earnings to industries in Himachal Pradesh, and Jammu and Kashmir - the neighboring states of Punjab, has taken its toll on industrial development in Punjab. The least that the Government of India can do, if these exemptions are not withdrawn, is to extend similar concessions to the Border Area Districts of Punjab. Even if these exemptions are removed from the neighboring states of Punjab, and we recommend such removal, there is an independent case for providing such concessions to the Border Area Districts of Punjab.

2.2.6 Developing Industrial Clusters under Public Private Partnership

Besides agro-based industries such as food products (including rice mills) and cotton textiles (including hosiery, knitwear and shawls), which have a substantial presence of small scale units, metal products, hand tools, light engineering (including automotive components), bicycles and bicycle components, leather, and sports goods

are some of the other major industries present in the state with numerous small scale units. The policy of freight pool equalization (no longer in operation), the policy of reservation for small scale units (launched in 1969 and now slowly being phased out), and heavy protection from imports (now rapidly declining), had all helped protect the small scale units in many of these industries from competition from large scale units. Mandi Gobindgarh developed as a steel-town on the strength of these policies. But the economic environment post-1991 calls for a radical change in the industrial strategy of Punjab. In a world of increasing global and domestic competition, it is extremely important for the small scale companies of Punjab to become globally competitive.

The proposed strategy calls for **the development and strengthening of industrial clusters within a framework of Public Private Partnership (PPP)** with a view to inducing collective efficiencies for improved competitiveness of the small scale units. In Punjab, clusters have evolved more by default than by design as discussed in Sec. 5.1.3, Chapter 5. By contrast, the state of Tamil Nadu has attempted PPP models in providing infrastructure, common facilities, and skills through industrial clusters and helped the process of modernisation of its small scale units. The government of Punjab must find a professional institutional mechanism to manage cluster development under a PPP regime.

The Planning Commission has offered technical assistance to determine the cluster needs for individual states. The UNIDO has a long-standing expertise in this area. More recently, the Department of Micro, Small and Medium Enterprises (MSME), Government of India has launched a cluster development programme for small scale units. The government of Punjab must **set up some industry-specific Task Forces** in collaboration with industry associations such as PHDCC, CII and FICCI to study the best practices by other states of India or other countries, and **come up with concrete**

proposals on cluster development without losing much time. The example of developing modern industrial estates within the framework of urban planning on the lines of the IMT, Manesar (Haryana) in partnership with private investors, should be seriously explored for Punjab.

2.2.7 *Building Strategic Networks for light engineering, hand tools, etc.*

In the process of modernising the small scale units in industries such as hand tools, machine tools, bicycle components, and other light engineering, the government of Punjab should be proactive in attracting investments from East Asia, particularly Taiwan. Given the strength of the Taiwanese companies in technology, designs, and markets in these industries, such alliances can help transform the SSIs of Punjab into substantive exporters.

The bicycle industry in Punjab has suffered from a slowdown in demand arising from customer preference in favour of motor-cycles and scooters as incomes have risen and from competition from cheap imports from China. There is a tremendous opportunity for moving up the value chain and attracting investments in high-end bicycle manufacture to reap downstream benefits for the bicycle component manufacturers of Punjab. **The possibilities of collaboration between Indian bicycle manufacturers and companies from Taiwan should be encouraged, since Taiwan is the second largest exporter of bicycles after China.**

2.2.8 Using Central Schemes for Industrial Infrastructure Development

The Government of India has a number of Industrial Area Development Schemes and a number of industry-specific schemes which provide infrastructure

support for industrial development. But Punjab has by and large not availed of the opportunities offered by these schemes to upgrade its infrastructure, e.g., for modernizing its textiles industry or promoting food processing industry. Thus, Punjab has taken little advantage of the Scheme for Integrated Textiles Parks (SITP) so far. The Textile Park at Tirupur, Tamil Nadu under SITP shows the possibilities of what can be achieved by utilising these schemes[1]. The Punjab Apparel Park under the Apparel Park for Exports Scheme (APES) also had to seek extension for completion beyond March 2007, and is still waiting to be finished. The Food Park at Sirhind in Fatehgarh Sahib district was set up under the Food Parks Schemes to generate economic activity and employment in a rural area. But according to the monitoring report of the Food Processing Ministry, Punjab Agro-Industries Corporation has not allotted the industrial plots in the park so far, and has also not submitted the utilisation certificate for the central grant. If the Mega Food Park planned for Punjab in the 11th Five Year Plan is to be made operational[2], the government of Punjab will have to change its ways and **speed up implementation**. Also, the setting up of "collection centres" for sourcing raw materials for the Mega Food Parks **will require the amendment of the APMC Act**. This is a crucial hurdle which must be removed.

The government of Punjab must set up a High-Powered Administrative Review Committee under the Chairmanship of Chief Secretary, with principal Secretaries of the major economic departments as members, **to review why the state has failed to benefit from the Central Schemes**. A senior officer at the Principal Secretary level should be made responsible for utilizing the benefits of the Central Schemes. He/she must be accountable for ensuring that the pre-conditions for these schemes are met and the funds which are received are disbursed effectively and in time to secure the improved infrastructure offered by the Government of India.

[1] For details, see sec 5.1.3, Ch 5.
[2] Of the 30 parks planned in the 11th Plan, 5 are to be built in the first phase, of which one will be in Punjab.

2.2.9 Building Special Economic Zones

Under the Special Economic Zones Act of 2005, the Government of India has provided a new avenue to the state governments through the Special Economic Zones (SEZs) to promote industrialisation in a globally competitive environment. By partnering with private sector developers, the state governments can provide world class infrastructure and world class business environment in the SEZs for private industry to gain global competitiveness for exports. Punjab has lagged behind other states to kick start industrial development through this route. Of the 207 SEZs, that have been notified in the different states of India as of March 27, 2008, Punjab has only 2, i.e., Quarkcity for IT and Ranbaxy for pharmaceuticals – both in Mohali, adjacent to Chandigarh. The proposed SEZ at Amritsar by DLF has not taken off because of the inability of the private company to buy land.

A Special Economic Zone for agri-exports should be considered in places like Govindwal, near Beas in the Amritsar district or Malerkotla. The SEZ could focus on high value organic agri produce grown under controlled climate conditions. The scientific agricultural production would be capital-intensive with an investment of Rs. 5-10 lakhs per acre, and could be supported by facilities such as tissue culture labs, packaging houses, cold stores and a cold chain to the Amritsar international airport. Land available with Punjab Agro-Industries Corporation could be leased to private parties to develop the SEZ. **An agro-processing SEZ should also be considered in the Channo/Bhavanigarh area of Sangrur district.** Frito-Lays/Pepsi already have a major plant in this area which they are rapidly expanding. They are also encouraging outsourcing of key components of their value chain through ancillary unit development. Other prospective locations should also be considered seriously.

2.2.10 Assuring Power Availability at Competitive Prices

The problems of the power sector need urgent attention if the industrial sector is to be revived. The objective must be to provide industry with an assured supply of power at a reasonable competitive rate without resorting to power cuts and other interruptions. This calls for **major restructuring of the power sector**, which will help improve its financial position and revival of its capacity to invest. In addition, the government must **ensure a regime of open access for electricity** that will enable high tension (industrial) consumers to purchase electricity directly from private generating companies subject to paying a reasonable wheeling charge for the use of the distribution network. A few specific steps are recommended below as part of the major effort needed to make electricity of good quality available to the industry of Punjab at competitive prices:

(i) **The PSEB should be unbundled into separate generation, transmission and distribution corporations** as has been done in other states. Separating distribution as a distinct company will not only check the theft of power but more generally encourage focussed attention on reducing transmission and distribution losses as well as commercial losses (unrealized billed demands) and investment in improving distribution.

(ii) The present policy of **free power for farmers** is not in line with good economics and **must be withdrawn**. It is not only absorbing resources which could be used for investment in expanding power generation and distribution but it is also leading to excessive use of ground water.

(iii) **Open access must be introduced with appropriate regulation of open access charges** that would encourage industries to obtain power directly from the generating companies.

In the medium to long run, Punjab must develop non-conventional sources of energy, e.g., solar energy and wind energy. **The state must work with the Government of India in exploring the desirability and feasibility of locating a nuclear power plant in Punjab in the years to come.**

2.2.11 Building Skills

The importance of a skilled labor force in an environment of vibrant industrial growth, continuing technological innovation and competitive pressures of globalization cannot be emphasized enough. India's transition to a higher growth rate of 7 ½ - 8 ½ per cent per annum and the increasing pace of globalization has highlighted the dimensions of the skill deficit in the country[3]. Punjab must seriously begin the task of building skills to match the demands that arise in the course of implementing the proposed industrial strategy in this report.

The strategy emphasizes the urgency of skill development by involving the private sector in the upgradation of the existing vast but defunct infrastructure of government institutions, e.g., the ITIs for training and vocational education. Following the National Skills Initiative of the Planning Commission, the private sector has come forth in Punjab as well as many other states within a PPP framework to make the training and skill development more relevant for the demands that emerge from the process of industrial growth. The Government of India has promised an interest-free

[3] Chapter 5.

loan of Rs. 2.5 crore per ITI for the upgradation of infrastructure if a proposal is put forth within a PPP framework. But the progress in Punjab is very slow. The government of Punjab has selected 20 ITIs for upgradation under the PPP program. While private parties have been identified for some of them, and MoUs have been signed to bring about the upgradation, the challenge lies in effectively empowering the private partner to revamp the institute and offer new courses. The resistance on the part of the politicians to let go of the control that they have on the running of the institutes through their power on appointments and transfers and the resistance of the faculty for change may limit the genuine autonomy needed to bring about the required change. States such as Maharashtra and Haryana have moved much faster under this Scheme.

The government of Punjab must set up a High Powered Review Committee under the Chief Secretary with Principal Secretary, Industries and Principal Secretary, Human Resource Department of the government of Punjab, and some industrialists (from Punjab and from other states where the PPP initiative to upgrade the ITIs is working relatively better) as members to propose the steps needed to make upgradation of the ITIs work in Punjab.

The strategy also calls for an expansion in the institutions of higher education, particularly an IIT, at least one world-class central university, an IIM, a law school, engineering colleges, and also reforms of the existing institutions of higher learning including the agricultural universities. The Government of India has already announced its decision to set up a central university and an IIT in Punjab. **The government of Punjab must quickly identify the land for the two central proposals and move matters forward for implementation. The government must also explore the options for setting up an IIM and a law school, and strengthen and expand the**

number of engineering colleges which are at present 49. It is important to make the course curricula more flexible and wider to respond to the emerging demands.

2.2.12 Promoting New Thrust Areas

There are a number of new thrust areas which are recommended in the proposed strategy. First, there is the area of logistics and cold chains which will help build linkages with the agricultural sector and also help modernize food processing. Then, there are industries where locational disadvantage can be overcome by infrastructure development, e.g., Information Technology (IT) and IT-enabled services industries. These industries must be promoted by ensuring good telecommunication infrastructure not only in and around Chandigarh and Mohali but promoting new hubs, e.g., in Ludhiana. The skill base for these industries would require greater focus on higher education and computer skills. A significant new thrust area stemming from the scientific orientation of the agricultural sector in Punjab is that of Bio-Technology. A knowledge city close to Mohali could provide a major thrust to industrial development in the state. Special Economic Zones with world class infrastructure under public-private partnership should also be used as effective instruments for promoting IT, BT, textiles, agro-processing, and food processing. Promotion of a PCPIR in Bathinda and developing an industrial zone along the dedicated rail freight corridor are other major thrust areas proposed in the new industrial strategy. Finally, religious and spiritual tourism in the Amritsar area can be combined with the promotion of tertiary healthcare for tourism.

(i) Logistics, Cold Chains and Food Processing

Growing urbanization and modernization of retail in the Indian economy are creating new opportunities for modern food processing like never before. This opens up investment opportunities in logistics and cold chains in Punjab which has a rich agricultural base.

In order to promote this sector as a thrust area of development, the government of Punjab must amend the APMC Act to allow private trade in agricultural produce. This kind of industrial development opens up new opportunities for raising incomes of small farmers through contract farming on other institutional arrangements.

(ii) IT and IT-enabled services

Punjab government has identified IT and ITES industry as an important thrust area in its Industrial Policy of 2003. Considering that Punjab has a reasonably good talent pool and a strong potential for further expansion of the pool, and also considering that the usual argument of locational disadvantage of Punjab does not apply to this sector, **the choice of IT as a thrust area for the industrial strategy of Punjab is to be highly commended.**

The major challenges for the IT, IT-enabled services and the BPO industry in Punjab relate to the availability of good quality infrastructure, skilled manpower, and ease of doing business with the departments of the state government.

Mohali is emerging as the hub of the IT and ITES industry in Punjab, but already there are constraints of space. The existing infrastructure (Phase VIII and Phase VIII B in Mohali) would need to be significantly augmented and more hubs created. New development plans should be drawn in consultation with the industry to create a world class infrastructure to house a modern IT industry in Mohali. **The government of Punjab should promote a second IT Park in and around Mohali with the help of world class developers and make a strong pitch for global players to come and set up shop in the Park. In the medium term, Ludhiana should seriously be promoted as a second hub for IT in Punjab**. In a recent study by A T Kearney on the global and national IT-BPO scenario, Ludhiana is assessed as a potential IT-BPO destination provided there is requisite support and focus by the state government on infrastructure and skill development. Planning and work on other prospective hubs, e.g., Ludhiana must begin now.

As regards the need for space by the SMEs, the Government of Punjab should consider using one of its agencies through a public private partnership model to develop fully built and serviced facilities which can be given on lease basis to software entrepreneurs in the state. In the short run, options like increasing the floor area ratio (FAR) and permitting leasing of space may unlock the unutilized space within the existing industrial area of Mohali.

Abundant supply of well-trained manpower is a crucial requirement in the development of the IT-BPO sector given the high attrition rates in the sector. Despite the mushrooming of a large number of IT and ITES training institutes, Punjab lags in both the quantity and the quality of skills required to sustain a large IT industry. The industry perception is that only a fraction of the graduates emerging from these institutes are employable.

The government of **Punjab should enter into an arrangement of PPP to rejuvenate the engineering institutes and other training institutions for software engineering in the state.** NASSCOM's National Assessment of Competence (NAC) initiative is aimed at creating a robust and continuous pipeline of talent by continuously assessing candidates on the key skills through a national standard assessment, thus making it easier for firms to screen candidates and also provide training need analysis to candidates. **The government of Punjab must tap into the NAC program to facilitate the matching of supplies with the growing demand for skilled manpower for the IT-BPO sector.** The government should also provide incentives through grants to institutes of training which produce better results in the national performance tests.

As for regular and good quality supply of electricity, another significant input into the IT sector, the industrial policy of Punjab provides for electricity supply to the IT industry on a priority basis and also stipulates that electricity connections would be issued to IT units within 10 days of applications made. However, there are long delays in obtaining new electricity connections or getting load increased. **The PSEB will have to be radically restructured for better results if the IT-BPO sector is to be promoted as a thrust area in the industrial strategy of Punjab.**

Besides good infrastructure and abundant skilled manpower, **ease of doing business determines the competitive advantage of the state.** In Punjab, industry often has to experience significant delays in liaising with various government departments for securing approvals. For example, layouts and building plans have to be approved sequentially by the Greater Mohali Area Development Authority (GMADA), the Department of Industries, and the Chief Town Planner, and the process of approval often takes several months. **S**ome well-known large firms have been waiting to start operations in Mohali for a long time, but have not been allotted land.

Not only are the obstructive ways of the government to be corrected but a positive attitude of business facilitation has to be inculcated among the government officials if Punjab has to compete with the dynamic states like Karnataka, Andhra Pradesh and Haryana for IT investment. **The administrative machinery of the government is urgently in need of an overhaul. Government officials should be proactive in attracting large investments from large IT firms, because the competition from other states is tough, and time is money, particularly in the IT-BPO sector.**

(iii) Biotechnology including Pharmaceuticals

Biotechnology is widely regarded as one of the most important growth and knowledge drivers of the future. The existing and new drugs can be manufactured more easily and cheaply using modern biotechnology tools. The biotech industry in India has been growing rapidly at a rate of 35 per cent per annum in recent years. Its turnover has crossed the $ 2 billion mark in 2006-07, and is projected to cross $ 5 billion by 2010. The potential of biotechnology can be exploited to change the Indian food and agriculture scenario as well as the pharmaceutical scenario. By using biotechnological innovations, need based crops can be designed and cultivated for processing into products with applications for food, pharmaceuticals, cosmetics and neutraceuticals.

Punjab is well placed to promote biotechnology as a major driver for change in its industrial strategy. The state has a long and established history of agricultural research and development. One of the country's leading pharmaceutical companies is based in Punjab, and there are a number of other medium and small-scale companies operating in Punjab in the pharmaceutical sector. With its progressive farmers, technically skilled personnel, and an established research base in both agricultural

technology and pharmaceuticals, Punjab can leverage the growth potential of the biotechnology industry to advance both the process of industrialization in the state and the interests of the farming sector.

The BT innovations will also help address the major environmental challenges in the state. For example, biotechnology-based processes are being developed for cleaning waste water, industrial effluents and solid waster, using micro-organisms. Micro-algae (in particular blue-green algae or cyano-bacteria) can be used in ponds to eliminate nitrogen and phosphorus through degradation of organic matter by the bacteria. This results in water that can be recycled for irrigating non-food crops (e.g. cotton) or for industrial purposes. The micro-algal biomass can also be used as feed.

The government of Punjab has set up a biotechnology cell within the Punjab State Council of Science and Technology. This cell, in association with the Government of India, is attempting to bring the key stakeholders, i.e., academia, research institutes, farmers and industry, together in promoting practical applications of biotechnology in agriculture and food processing. The National Institute for Pharmaceutical Education and Research (NIPER) and the Institute for Microbial Technology (IMTECH), both located in Mohali are at the forefront of discovery, and PGI, Chandigarh, another international clinical research institute, is located next door. **The government of Punjab should set up a "knowledge city" in the vicinity of Mohali, which should have an institute of excellence in agro/food biotechnology with support from the Government of India.**

The Government of India is committed to **setting up a state of the art National Integrated Food Biotechnology Park in Punjab**, which should be located in the Knowledge City, which would have representations from science, biotechnology,

nanotechnology and an Agri-Food cluster. The major biotechnology firms can be attracted to set up units, within a PPP framework, in the Biotechnology Park. Moreover, the recent initiative of the Department of Biotechnology, Government of India, **encouraging public-private partnerships in the area of biopharmaceuticals** will go a long way in making inroads into the very complex pathway of discovering and developing new medicines for the Indian masses. **Biotechnology parks and incubators need to be created throughout Punjab** and "key specialty" will emerge depending upon the industry and academic strength of the region.

(iv) Healthcare

There are tremendous synergies between the development of Biotechnology and healthcare industry. While Punjab's health status is generally better than the national average[4], it is not commensurate with the high per capita income and a good health infrastructure in the state. If the latter is leveraged properly, not only can healthcare be improved for the residents of Punjab but a **tertiary healthcare sector can be developed to service the growing demand for healthcare** in the world. **Private investment will have to play a major role** in realising the potential for healthcare services export from Punjab. However, the government of Punjab has to play a major supportive role.

(v) Tourism

The tourism industry is growing rapidly in India and Punjab has great potential being a state with a rich religious and historical tradition and also a large NRI

[4] On the positive side Birth rate of 17.8 compared with 23.5 in India, Death rate of 6.8 compared with 7.5 in India, total fertility rate of 2.2 compared with 2.9 in India, Infant Mortality Rate of 44 with 57 in India, MMR of 178 with 301 in India. On the negative side, Sex Ratio of 876 is lower than 933 of India & child sex ratio at 798 is even more lower than 927 in India.

population which visit frequently. **Integrated development of tourism (including medical tourism) has great potential**, especially since in the years to come, the visiting NRIs are more likely to stay in commercial establishments rather than with relatives. The state government has entered into an agreement with the United Nations World Tourism Organization for preparing a Tourism Master plan for the state. This needs to be expedited. The promotion of healthcare industry in and around Amritsar will help in attracting older NRI tourists and others who will come for relaxation and healthcare- both physical and spiritual.

CHAPTER 3

SWOT ANALYSIS

3.1 STRENGTHS

The strengths of Punjab are grouped into the following four categories.

3.1.1 Geography and Societal Parameters

- Relatively flat alluvial land, almost all of which is easily amenable to economic utilisation.
- Administratively compact.
- Access to waters from the extensive river system and aquifers originating in the Himalayan foothills although diversion of dam water outside the Punjab river basin and over-exploitation of water in agriculture has lowered the water table of groundwater at a rapid pace such that over 85 per cent of the agricultural blocks in the state are “over-exploited” or “dark”.
- Despite some in-migration of farm and factory labor, the problem of slums in urban areas is relatively contained.
- Located on the potentially active trade route to Pakistan and Central Asia, when reactivated.

3.1.2 Economic and Infrastructure Strengths

- Among the highest per capita income states in India.
- Led the country in the *Green Revolution* and in the adoption of improved agricultural practices.
- Extensive development of agricultural markets and networks and some success in new kinds of contract farming.
- With its extensive road network, Punjab has the highest road density (105 km of surfaced roads per 100 square km. of geographical area as on 2002) amongst

major states. This is much higher than the national average (43) and also higher than the other economic frontline states, such as Tamil Nadu (97), Maharashtra (68), Gujarat (63), Haryana (60) and Karnataka (54).

- Has the highest railway networks for the geographic area.
- Consumption of electric power in Punjab is the highest amongst the major states of India. In 2005/06, per capita power consumption (utilities and non-utilities) in Punjab was 1437 units compared with the national average of 631 units. In comparable economic frontline states, the level of consumption was lower – Gujarat (1284), Haryana (1090), Tamil Nadu (977), Maharashtra (934) and Karnataka (720).

3.1.3 Social Infrastructure Strengths

- Low poverty & relatively superior nutritional and health indicators in comparison to other parts of the country.
- Educational infrastructure which is among the best of Indian states. By 2001, 96 per cent of the habitations were covered by primary schools within a distance of 1 km.
- Female literacy rate at 63 per cent in 2001 was superior to the national average (54 per cent) as also that of most other economically frontline States – Karnataka (57 per cent), Haryana (56 per cent), Gujarat (58 per cent) – and comparable to Tamil Nadu (64 per cent) and a little behind that of Himachal (67 per cent) and Maharashtra (67 per cent).
- Ease of access to government health care facilities for rural areas in Punjab is the highest (62 per cent) among the major states. It is much lower (24 per cent) than the national average of 41 per cent for urban areas.

3.1.4 Tradition of trade, business and industry

- Cotton mills, grain processing, sugar manufacture and the processing of agricultural materials such as oilseeds, as also metal working and leather products, have had a long history in Punjab.
- Hard working and innovative workforce that has been able to build a positive reputation both within the country and in several parts of the world.
- There exists a large pool of potential entrepreneurial talent that can push the industrialisation of Punjab, provided the business atmosphere is perceived to be conducive.
- Strong potential for IT, Biotechnology and healthcare sectors.

3.2 WEAKNESSES

The weaknesses are grouped in to the following six categories:

3.2.1 Geography

- Landlocked and located in a corner of the country with associated disadvantage in terms of sources of raw material and markets (domestic and overseas), and border with Pakistan with a history of military conflicts. The dedicated rail freight corridor and the building of at least 2 international airports and a few small airports should help overcome this limitation, while peace with Pakistan in the medium run could turn the border area “handicap” into an opportunity.
- Agricultural advancement and the general prosperity has meant that land prices are higher than in other parts of the country, with adverse implications for the conversion of land to industrial use.
- Urban infrastructure is not commensurate with the relatively high levels of income in the state.

3.2.2 Social Indicators

- The quality of education remains a major problem. Despite having relatively higher average incomes and good quality infrastructure, the educational attainment of Punjab is only slightly above the national average. Recent nation wide surveys on learning achievements conducted by the NCERT show learning achievements at the school level in Punjab to be consistently below the national average.
- Weak and malfunctioning public system of delivery of education and health.
- The male literacy rate at 75 per cent in Punjab is the same as the national average, but lower than that in Maharashtra (86 per cent), Tamil Nadu (82 per cent), Gujarat (80 per cent) and Haryana (78 per cent). The female literacy rates are better than the national average and that of most other states.
- Punjab's sex ratio at 876/1000 after Haryana is the worst among all the states. It is not only much lower than the sex-ratio of 933/1000 for India as a whole but has also declined between 1991 and 2001. Even worse, Punjab has the lowest child sex ratio (798/1000) of all the states and this has also declined continuously since 1981. Out of the 10 districts with the lowest child sex ratio in India, 7 are from Punjab.
- A major problem of drug addiction among young male population in Punjab.

3.2.3 Administrative Apathy

- Perceived indifference amongst the different departments of the state government to the needs of business. This may be a legacy from the days when Punjab was rocked by terrorism and the civil service functions had less priority, leading to a "comfortable non-activist approach", which seems to have become somewhat institutionalised.

- Excessive requirement of time in following-up with public offices and the multiplicity of such offices and points of interaction. The Udyog Sahayak System of "Single Window" system has just not worked.
- "Inspector-raj" is still perceived to be deeply rooted.
- The strained condition of the state's finances is widely known, and continuation of populist policies further undermines any confidence that business may develop in the capacity of the state government to do anything about improving the prospects for business in Punjab.

3.2.4 Weak industrial policy regime

- Punjab has all along had an agrarian focus and the state is perceived not to have much interest in promoting industrial activities. This weakness has become more pronounced in the economic environment of the past 15 years or so when many state governments are proactively pursuing private investment in thrust areas where selected industries can be made globally competitive.
- Punjab has not amended its APMC Act, while several other states have been more pro-active in revamping their legislation. The Government of India has circulated model rules to be notified in this regard. Punjab must allow the private sector in trading in agricultural produce if agro-based industry is to be given a thrust, leading to greater income generation and prosperity of the state's farm sector and farmers.
- A large part of the small scale industry (SSI) in metal products which came up in Punjab during the seventies and the eighties was greatly dependent on the Freight Pool Equalisation Policy for iron & steel. With the termination of this policy, many of the SSI units saw their businesses turn uneconomic. To make matters worse for the industry of Punjab, the termination coincided with the period of terrorism and the period of the collapse of export markets in the former USSR, which affected the hosiery and woollen textiles industry in Punjab.

Industrial policy of the state government did not adequately focus on the need to facilitate a process of modernisation so that the SSIs could refocus their businesses.

- Earlier octroi, and now entry tax, are levied by the government of Punjab which discourages industrial activity in the state which relies for its industrial raw materials and markets outside of the borders of Punjab[5]. Having an entry tax on industrial raw materials entering the state means that the cost of production of all units located in the state goes up and their competitiveness is further eroded. Since most other states do not have these levies, this is a wound inflicted on the competitiveness of industry by the government of Punjab.
- The fiscal concessions granted by the Government of India to the neighbouring hill states have led to a movement of industrial activity away from Punjab to these states, e.g., Himachal Pradesh and Jammu.
- Loss of credibility because of repeatedly announcing industrial subsidies of different kinds and failing to disburse because of resource constraints; the fine print in the Industrial Policy of 2003 that subsidies will be paid only if funds are available has also undermined the creditability of the government.

3.2.5 Infrastructure Deficit[6]

- **T**he indices of infrastructure facilities for Punjab "look" better than those for other states, but this comparison is deceptive. Punjab's dependence on air transport, railways and road network is much greater than many other states, given its landlocked nature.
- Although the power deficit – both energy and peak demand – for Punjab is around the median of all the states, this is because industrial growth (and hence

[5] The Southern states never had octroi and their municipalities draw their revenues from property taxes and water charges. Gujarat and Maharashtra were the only states to continue to levy octroi. Gujarat has totally done away with this impost in 2007. Maharashtra has abolished it in most cities, except Mumbai, Pune and a few others. Some cities that have abolished octroi have replaced this tax with a cess on goods sold within the municipal limits.
[6] For a detailed discussion, see Chapter 5.

demand for power by industries) has been much slower in Punjab, than in other comparator states.

- Punjab has not been active in promoting Public Private Partnership (PPP) models for the development of infrastructure projects. This is an area where the state can clearly do more and thereby broaden the pool of capital and expertise in improving the state's infrastructure.
- Dominance of small scale industrial units in the landscape of the state creates demand for industrial infrastructure. The strained condition of the state's finances serves to undermine confidence in the state's ability to provide industrial infrastructure for small scale units.
- Unsatisfactory performance in infrastructure creation with assistance under the Schemes available from the Government of India.
- Little state institutional support for industry. Quality Marking Centers and Industrial Development Centres are facing closure. PSIDC and PFC have lost their relevance.

3.2.6 The Challenge of upgrading skills

- Punjab has been slow to take advantage of the National Level Skills Mission to upgrade the infrastructure of its ITIs to address the manpower needs of industrial sector of Punjab.
- There is also an urgent need for other institutional mechanisms for providing vocational education to endow the youth with skills that are in demand in the market.
- If Punjab is to make knowledge-based industries as a thrust area for development, then there is need to expand and significantly improve the base for higher education.

3.3 OPPORTUNITIES

The opportunities include:

3.3.1 Agro-based Industry

- Any strategy to advance industrialisation must exploit the clear advantage that Punjab has in the farm sector. It produces wheat, paddy, other grains, oilseeds, cotton, sugarcane, fruit, vegetables, milk, honey and other animal husbandry products. This provides a strong base of supply of myriad inputs for food processing, dairy and other agro-based industries.
- The nexus between industry and agriculture can help disseminate best technology and best practices to farmers and thus symbiotically help both the farm sector and the industrial sector.
- The development of agro-based industries and longer-term contractual arrangements for purchase of produce (as well as the marketing of best quality seed etc.) has the potential of greatly reducing economic uncertainty for both the farmer and the industrial user.
- The entry of large business houses into the retail and distribution chain for farm products, opens up the opportunity of using these large professionally run companies as instruments for bringing the best technology and practices to the farm sector of Punjab. A highway for moving not just technology in the form of better quality seeds, but also practices that raise the efficiency of water and fertiliser use, check soil quality and offer remedial measures and other technical support programmes for farmers, will greatly complement and enhance the efforts of existing government agencies.
- As modern retail leads to investment in logistics, cold chains and warehousing facilities, this will encourage agricultural diversification away from foodgrain into high value vegetables and fruits, which will also help in the conservation of

water resources as area under paddy is reduced and will help improve soil quality through crop rotation.

- For cotton textiles, see below.

3.3.2 Cotton and Other Textiles

- Punjab is a major grower of cotton and has a long established industry of cotton spinning and weaving.
- The cotton-to-finished-product chain needs to be advanced through greater efforts at improving the cotton economy and facilitating the expansion of all downstream activities, particularly the manufacture of made-ups (that include home furnishings) and apparel. There is a rapidly growing domestic as well as overseas market for these products.
- The textiles industry of Punjab already has wool and acrylic fibre base. To sustain the thrust on textiles, some balance with manmade and blended fibre products will have to be maintained to cater to an expanding market for manmade and blended textiles.
- The facilitation and assistance to the multiplication of Textile Parks is vital to consolidate and expand the textiles base in the state.

3.3.3 New Petroleum Refinery and a Petro-chemical Complex

- The commitment to establish of the new (9 million tonnes per annum) high complexity petroleum refinery in Bathinda opens up an array of opportunities for the economy of Punjab.
- The availability of key petrochemical feedstock from the refinery – polypropylene, naphtha and Liquefied Petroleum Gas (LPG) – can enable the establishment of important products that can then be shaped into automobile

components and furniture (moulded products), packing material from crates to film, and items too numerous to list.

- The new industrial complex needs to be provided with common infrastructural facilities, e.g., power, effluent treatment, quality testing, outbound transportation, etc. – and the state government should play a leading role in promoting a highly efficient and self-contained complex around the location of the refinery.
- The complex must draw upon the amenities extended by the PCPIR programme of the Government of India and involve to the greatest possible extent, private sector investment – from both within the state and outside of the state as well as of the country.

3.3.4 Automotive Components

- The auto-components industry of India is likely to grow rapidly, given its global competitiveness, and this has strong implications for employment and income generation in Punjab.
- Punjab has an automotive component industry which caters largely to the lower value replacement market. This is partly the result of no significant automotive producer having set up manufacturing base in the state since the economic reforms were launched in India in 1991.
- The state government must adopt an imaginative plan to attract modern automotive components manufacturers to set up capacity in the state, while at the same time seeking large scale investments in the automotive sector.

3.3.5 Bicycles and Components

- Punjab is a major centre for the manufacture of bicycles, around which there is a large community of component manufacturers. The state accounts for over three quarters of the bicycle component manufacture in the country. Between 1994 and

2000, the output of bicycles in India stagnated at around 11 million units and has since risen only marginally to over 12 million units, while China's output rose from 40 million to over 50 million units, and has further increased to 87 million units by 2007. The growth of bicycles in China is driven primarily by the demand expansion in export markets.

- There is a tremendous opportunity in the markets of the industrial countries for high-end bicycles for health-conscious buyers, since the domestic production of bicycles in these countries has declined and they are importing mainly from China.
- Punjab is well placed to rejuvenate the bicycle industry, geared both to the domestic market (which will also gravitate towards the higher end) and to the export market. Collaboration with companies from East Asia, e.g., Taiwan, the second largest exporter, should be used in accessing technological know-how, designs, and market information.

3.3.6 Light Engineering, Machine Tools and Hand Tools

- Punjab has a history of light engineering, machine tool construction and metal fabrication. Most of these units are in the SSI sector and have been rendered uncompetitive by the radical change in the economic environment in the country and the world.
- The hand tools industry in India is mainly export oriented and is concentrated largely in the small scale sector at Jalandhar and Ludhiana in Punjab and at Nagaur in Rajasthan. Unlike Nagaur, Jalandhar and Ludhiana export 80 to 90 per cent of their production, specializing in spanners, hammers, vices, etc. The hand tools manufactured at Nagaur are mostly sold to dealers/merchants or manufacturers/exporters in Punjab for finishing.

- Industry clusters/technology parks by providing common facilities and both upstream and downstream sourcing as well as modern technical testing equipment can greatly improve their product quality and competitiveness.
- Facilitation of technological and commercial linkages with companies in East Asia especially Taiwan, in similar activities will help provide the local units with improved technology, new products and wider markets.

3.3.7 Leather, Sports Goods and other manufacturing Activities

- The leather industry in Punjab is mainly clustered in Jalandhar and specializes in the processing of buffalo hides into finished leather, which is mostly exported. There are about 50 tanneries, and about 20-25 units are ancillaries and manufacturers of leather products like footwear, garments and goods.
- Compared to other leather clusters like Kanpur and Chennai, the Jalandhar firms have not gone for forward integration into the manufacturing of products like footwear, goods and accessories, thus missing out on value added exports.
- Clusters and technology park instruments can be used effectively to build on the pre-existing local business in leather products, sports goods and other manufacturing.
- The Ludhiana knitwear cluster is an unorganized cluster of over 12,000 units in the value chain with around 10,000 knitting units, 500 processing units, 100 machinery manufacturers and 200 spinners, operating mostly in congested residential areas. The cluster employs around 400,000 people and produces an entire range of winter and summer wear including pullovers, T-shirts, sweat shirts, jackets, caps, track suits, gloves, socks, knitted furnishings, shawls and blankets for the domestic as well as international markets.
- The total turnover of the cluster is estimated at Rs.5000 crores, of which exports account for around Rs.1000 crores. Ludhiana has 90 per cent share of the

domestic woollen market and is a significant player in the cotton segment. Ludhiana is also a large manufacturer and primary supplier of cotton knit fabric to units based in Tirupur, Tamil Nadu.

- The small scale units in these industries need to be helped in modernization so that they can increase the scale, quality and design (attractiveness) of their operations and finished products.

3.3.8 Pharmaceuticals

- Punjab has one of the largest Indian pharmaceutical companies domiciled in the state and has several other companies engaged in the business.
- There are several colleges for training skilled manpower required for the pharmaceutical industry.
- The state government must focus on enlarging the pharmaceutical and personal hygiene industrial product space in Punjab.

3.3.9 Information Technology and Bio-technology

- Attracting large and high visibility investments is crucial to the development of IT within the state.
- IT provides opportunities for the state to embark on a path that maximises employment opportunities for its educated youth.
- IT is less intensive in the use of land and other natural resources.
- Many of the IT entrepreneurs in Punjab are relatively small and there is need to create facilitation methods by way of which these units can come up in areas where infrastructure is built and maintained by some form of public private partnership.
- The technological orientation of the Punjabi farmer and the presence of pharmaceutical industry in the state provides a natural base for the development of Biotech (BT) industries in Punjab.

3.3.10 Networking and Gaining from Central Financing Initiatives

- Punjab has been slow to make use of the Development Schemes of the Government of India to foster the advancement of specific sectors in the state, e.g., Textile Technology Parks, Food Parks, SEZs, Cluster development Schemes, Technology Upgradation Schemes, etc.
- A more pro-active approach is needed to exploit the opportunities and utilize the funding provided by the Government of India under these schemes.

3.4 THREATS

Stem (i) from geopolitics, (ii) the inertia which typically comes from economic comfort, and (iii) environmental sustainability of growth.

3.4.1 Geo-political

- Being a border State, Punjab has had a long history of suffering from the hostilities that have often come from our western neighbour. However, this has not been a major factor in recent years.
- Although bilateral relations with Pakistan have considerably improved, the continuing difficult conditions in Pakistan and also Afghanistan continue to hold concern for Punjab.

3.4.2 Comfort and Self-Satisfaction

- Punjab is a relatively rich state with one of the highest per capita incomes among the states of India. This comes in part from the relatively advanced farm sector and a small business and trading community, as also the larger number of prosperous Punjabis who are resident in other parts of the country and also overseas. This has resulted in an excessive focus on real estate opportunities which appear to be enormous. The expectations of the nature of the job

opportunities are also higher than they might be in other states. In consequence, greater emphasis needs to be placed on the quality of life parameters when seeking to create employment opportunities, especially for rural youth.

- The buying power of the Punjabis has boosted real estate development, both housing and commercial. The increase in the price of both urban and rural land has put a lot of disposable income in the hands of many.
- This has created a false perception that the economy will continue to grow with no evidence of great distress in most sections – even if the industrial sector does not take off.
- There is also widespread scepticism about the possibility of the materialisation of any significant improvement in the outlook for industry based on expectation of little change in official policy and bureaucratic attitude.
- There is a simultaneous sense of complacency and cynicism.
- If business continues as usual, Punjab would continue to fall relatively behind the Western and Southern states which are moving ahead at an ever faster pace, and are rapidly closing on whatever distance exists between them and Punjab in terms of income.
- It is extremely important for Punjab to get moving, not to address acute poverty or backwardness (which might be the imperative in some other states), but to be able to seize on the full gamut of opportunities that the rapidly growing Indian economy is placing on offer – for those who are willing to take the trouble of exploiting them. Only then can Punjab ensure the leadership role that it has had in economic development and broad-based prosperity within India.

3.4.3 Pressure on Natural Resources – especially soil and water

- The manner in which the wheat-paddy cycle has been taken forward and the associated excessive exploitation of groundwater has placed the bounty of naturally fertile land and water abundance in Punjab in jeopardy.
- This trend has to be reversed so that the natural vitality of the farmland of Punjab is restored.
- Recharging of water resources is perhaps the single most important challenge facing the economy of Punjab. A suitable industrial strategy can help fashion a response to this challenge which will enhance both the short-term and the longer-term productivity of farming activities in the state.

CHAPTER 4
AN OVERVIEW OF ECONOMIC GROWTH AND INDUSTRIALIZATION

The economic environment in India has undergone a major transformation since 1990-91 when a balance of payments crisis was used by the Government of India as an opportunity to launch wide ranging economic reforms in the industrial and trade policy regime. Indian industry has been increasingly subjected to competition from imports as well as domestic deregulation, and the private sector has been given larger scope for contributing to the growth process.

4.1 Role of the State Government

The state governments have acquired a very important role in the new environment in attracting private investment through creating competitive conditions for investment in their states. This includes facilitating infrastructure development and skill development as well as enhancing the case of doing business by ensuring good governance, administrative efficiency and maintaining law and order. In particular, since the state governments have the primary responsibility for education and health, and these services are at the base of human resource development, the state governments can attract private investment by being proactive in developing skills and creating the knowledge base which can sustain high economic growth and generate productive employment for skilled labor.

Punjab has not done well in the new economic environment. This report makes recommendations for an industrial strategy for Punjab which enables the state to make up for lost time and realise its economic potential.

4.2 The state of finances

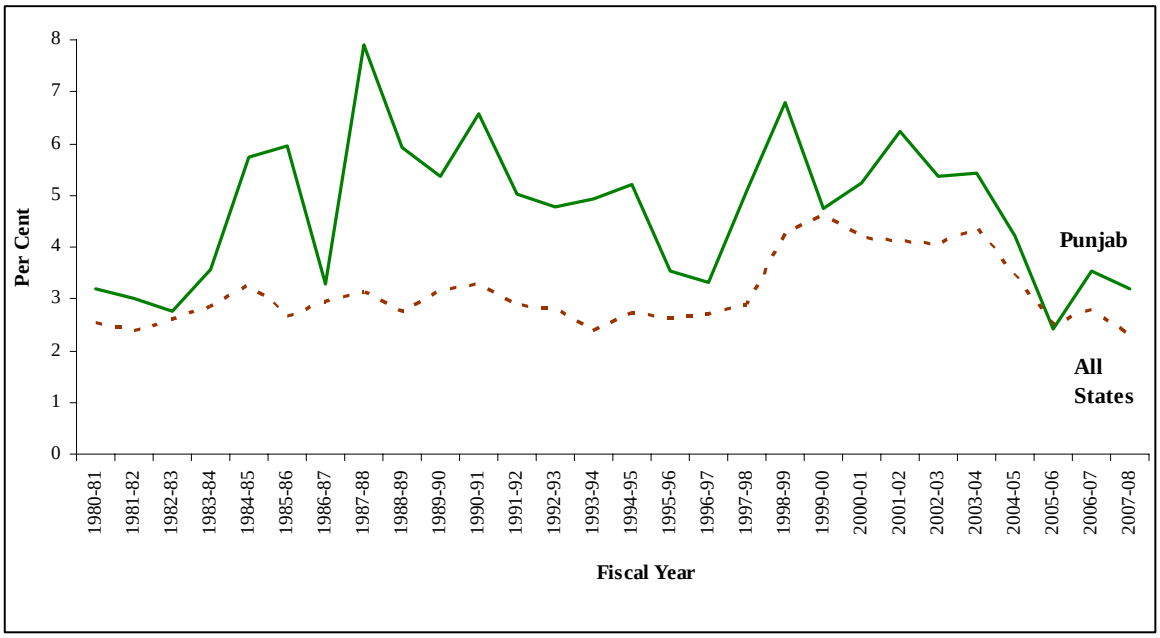
Before presenting an overview of economic growth in Punjab, this section presents an overview of the state of government finances. Punjab has had large and persistent fiscal deficits and revenue deficits right from the early 1980s. In fact, Punjab's fiscal and revenue deficits have been consistently much higher than the average of all states **(Chart 4.1).** Even during the recent period between 2001-02 and 2005-06 when there has been some improvement, the deficits remained high and were consistently above the average for all states.

There was a major deterioration in the fiscal balance of Punjab in 2006-07 when fiscal deficit reached 3.6 per cent of GSDP and the revenue deficit 1.4 per cent. The revised estimates for 2007-08 show some improvement. However, with revenue deficit at 0.9 per cent of GSDP and fiscal deficit at 3.2 per cent of GSDP in 2007-08, and projected at 0.7 per cent and 2.9 per cent, respectively in 2008-09, Punjab will still not meet the targets of the Fiscal Responsibility and Budget Management Act which stipulates that by 2008-09, each state should phase out the revenue deficit and compress its fiscal deficit to 3 per cent of GSDP.

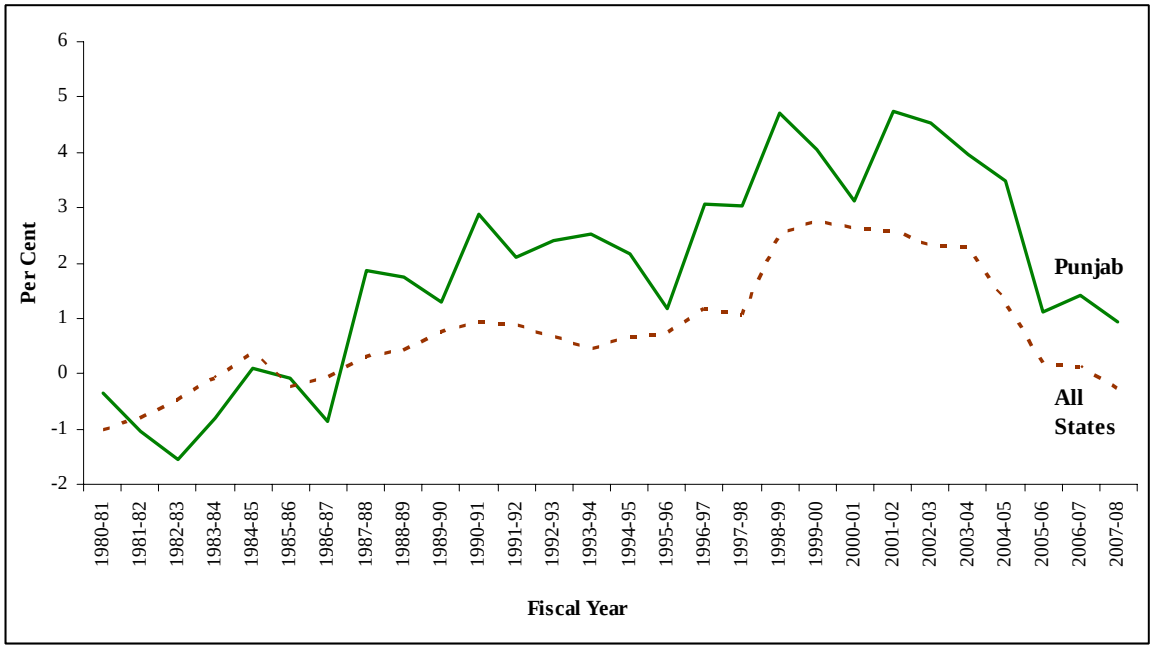
Punjab's own effort at tax mobilisation has been among the weakest of the major states. In 1994, Punjab's own tax revenue to GSDP ratio was 7.6 per cent, while that of Haryana was 7.2 per cent. In 2006-07, Haryana reached 9 per cent, while Punjab was still at 7.6 per cent. There have been some regressive decisions in Punjab in recent years, e.g., substantial lowering / removal of property taxes. Punjab was also one of the last states to remove Octroi, although octroi is still levied on electricity. Since Octroi was replaced by LADT (Local Area Development Tax), the information centres at the boarder continue to act as "extortion points", significantly impending the movement of goods. The recent introduction of

Chart 4.1
Fiscal Deficit & Revenue Deficit: Punjab & All States
(1980-81 to 2007-08)

Fiscal Deficit



Revenue Deficit



Source: Finance Department, Punjab & RBI.

Note: For Punjab 2006-07 Figures are actuals & 2007-08 Figures are Revised Estimates. For all states 2006-07 Figures are (RE) & 2007-08 Figures are (BE).

"entry tax" further adds fuel to the fire in this respect. It is better to monitor the movement of goods through close-circuit TVs or entrust the collection of information to a professional firm.

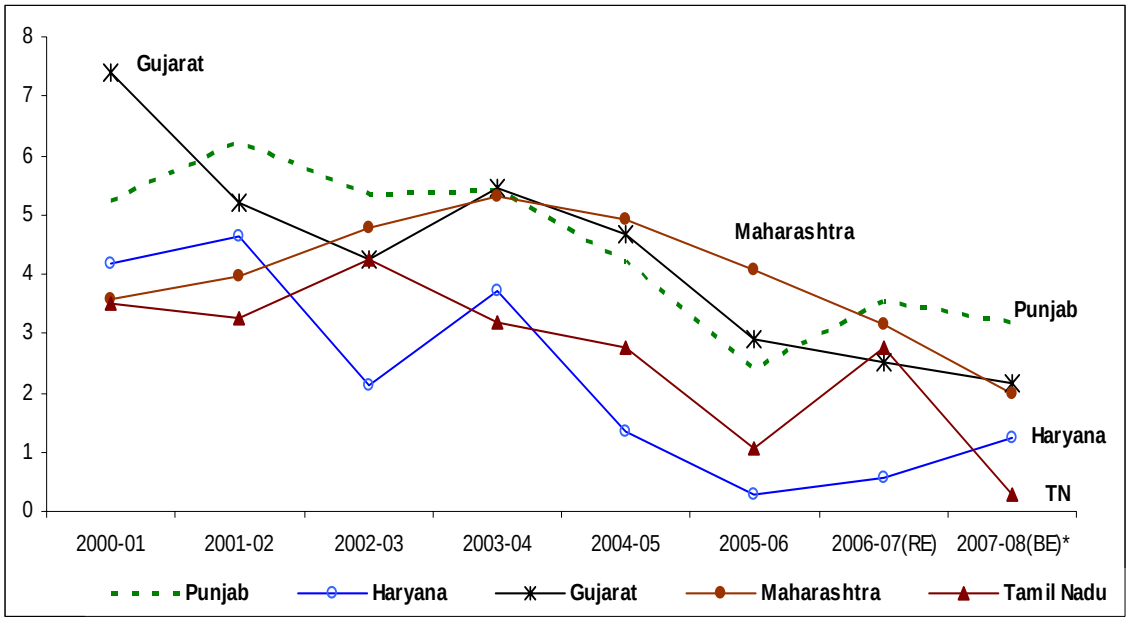
The introduction of VAT in 2005-06 brought about an increase in the own tax to GSDP ratio of Punjab from 7.1 per cent in 2004-05 to 8.2 per cent in 2005-06, but the ratio declined again to 7.6 per cent in 2006-07 and the estimate for 2007-08 shows no improvement. By contrast, Tamil Nadu was among the highest own tax effort states with its ratio at 11.6 per cent. Of the comparator states shown in **Chart 4.2**, only Gujarat's performance is as poor as Punjab's in this respect.

The introduction of VAT is supposed to help the manufacturing sector by providing input tax credit, thus minimising / eliminating the cascading of commodity taxes. World over, the practice is that all input and output taxes are refunded when a commodity is exported. This is called zero-rating of exports. There are two specific problems with regard to zero-rating in Punjab. First, input tax credit is not given to exporters. Since much of the production of Punjab is exported out of Punjab, this implies that cost competitiveness of such products is eroded. It is extremely important in a VAT regime to refund the input taxes to exporters. **The refunds should be made in a presumptive manner**. **An on-line system of payment of VAT and refunds directly into the relevant bank account with intimation to the tax-payer would be the most transparent and efficient way of solving this problem.**

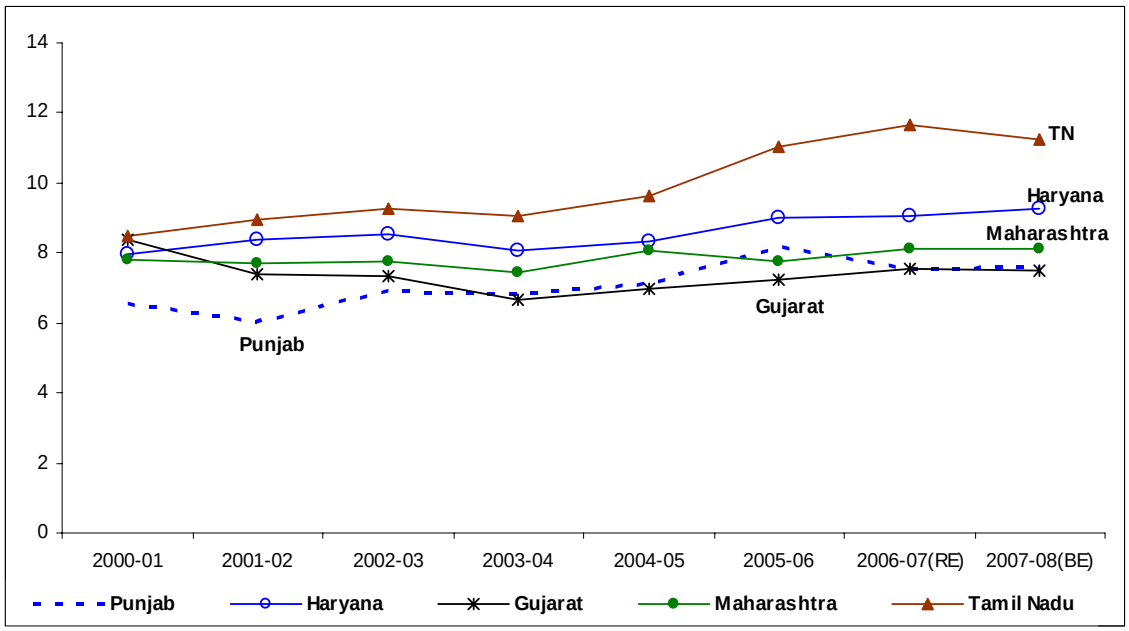
An additional problem arises from the fact that as in the case of yarn, the neighbouring Chandigarh and Haryana have much lower tax rates (central sales tax of 1 per cent), while local VAT on the same in Punjab is 4 per cent. If yarn is exported to other states from Punjab, the central sales tax is 2 per cent. All this hurts local textile industry which is exempt from VAT and gets no credit for input taxes.

Chart 4.2
Fiscal Deficit and Own Tax Effort: Selected States
(2000-01 to 2007-08)

Fiscal Deficit



Own Tax to GSDP Ratio



Source: Finance Department, Punjab, for other states Planning Commission

Note: For Punjab, 2006-07 figures are actuals & 2007-08 figures are revised estimates.

The second problem with VAT in Punjab is that of the administrative hassles and delays in VAT refunds. It appears from the representations made by manufacturers in Punjab that there are long delays (running into 6 to 9 months) in getting VAT refunds from the state government. It is extremely important to streamline the administration to provide timely refunds as the delays effectively amount to eating into the working capital of these manufacturers. **As mentioned above, an IT-enabled solution has to be found to this problem. If the refunds are not given within a month, the department should pay interest at a penal rate to the manufacturer and / or the exporter.**

Other taxes which adversely affect the prospects of manufacturing in Punjab are the state government levies such as purchase tax and mandi fees. Since there is no purchase tax or mandi fees in the neighbouring states of Jammu and Kashmir and Himachal Pradesh, the farmers of Punjab sell their wheat in these states to get better price. Manufacturing activity in these states adds value to the wheat by producing wheat flour, confectionary, etc., and Punjab is deprived the benefit of such economic activity and employment. **Finally, there is an urgent need to do away with the recently imposed entry tax.** A state which is highly dependent on procuring industrial raw materials from out of its borders is penalising its industry and eroding their competitiveness further by imposing an "entry tax" on materials coming into Punjab. The tax also provides an opportunity for corruption in a state where governance standards are generally considered to be low.

The non-tax revenue of Punjab has also been virtually stagnant and is estimated at just about 1 per cent of GSDP in 2008-09. An overwhelming proportion of this revenue is the net earnings from lotteries. The receipts from cost recovery from irrigation are negligible. The Punjab Roadways makes huge losses year after year and there are significant losses from the PEPSU Road Transport Corporation and the Punjab

State Electricity Board. These are not immediately reflected in the budgetary figures but almost always lead to subsidies on the expenditure side over time.

Augmenting public investment in physical infrastructure can play an important role in creating an enabling environment for the development of the industrial sector in Punjab. However, the state government's inability to raise revenues from tax and non-tax sources, on the one hand, and compress wages and salaries, subsidies, and transfers including interest payments, on the other, has constrained the state from making adequate budgetary allocations for capital expenditure. Moreover, the attempt to adhere to the Fiscal Responsibility Act, though not very successful, has further constrained the resources available for capital expenditures. Although capital outlay by the state government increased from 0.7 per cent of GSDP in 2003-04 to 1.3 per cent in 2005-06 and 2.1 per cent in 2006-07, it still remains lower than the all state average of over 3 per cent of GDP. It would appear that capital outlay which is government expenditure incurred on items such as physical infrastructure is taken as a residual and allocation is made only after meeting expenditures on wages and salaries, interest payments and subsidies. Similarly, budgetary allocation for maintenance expenditures on physical infrastructure is very small, as the revenue expenditure on economic services was less than 0.5 per cent of GSDP in most of the years.

The overall scenario with regard to macro finances in Punjab therefore is weak and vulnerable. In presenting an industrial strategy for Punjab, we have taken cognizance of this very important fact, and have not recommended tax concessions and / or subsidies to lure private investment in industry.

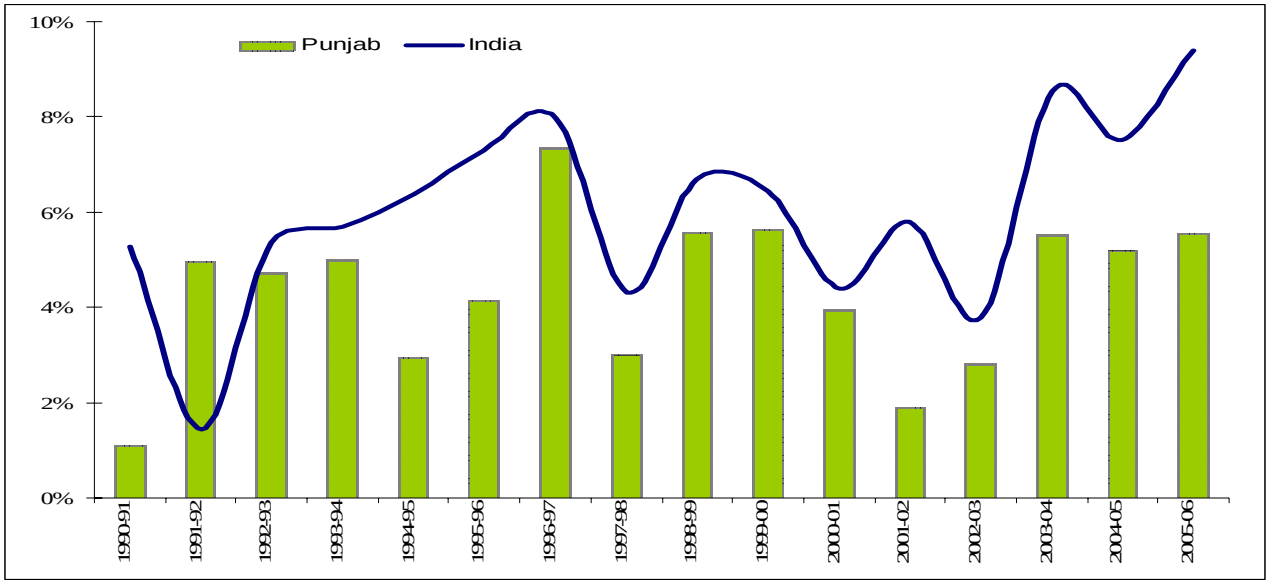
The government of Punjab in the past 10 years or so has been announcing subsidies and then not disbursing the same. In more recent years, the accumulated

arrears are being paid gradually. It is extremely important for the credibility of the government that it pays the subsidies it promises. At this point in time, given the daunting challenge of infrastructure, skill development, and delivering better health and education, there is need to leverage the limited funds of the state government for infrastructure development, particularly in the border districts, and there is little room for subsidy for industrial development.

4.3 Industrial Deficit in Punjab

Beginning with the 1990s, economic growth in Punjab has fallen short of the growth rate of the Indian economy, and the divergence has widened with time (**Chart 4.3)**. In the *Tenth Five Year Plan (2002-2007)* period, Punjab's economic growth at 5.1 per cent per annum was significantly below the growth rate of 7.8 per cent achieved in the country as a whole. Even in the *Eleventh Five Year Plan (2007-12)*, the target for Punjab at 5.9 per cent is far below the national target of 9.0 per cent, and is the lowest target of all the major states.

Chart 4.3
Annual Growth of GDP: Punjab and India

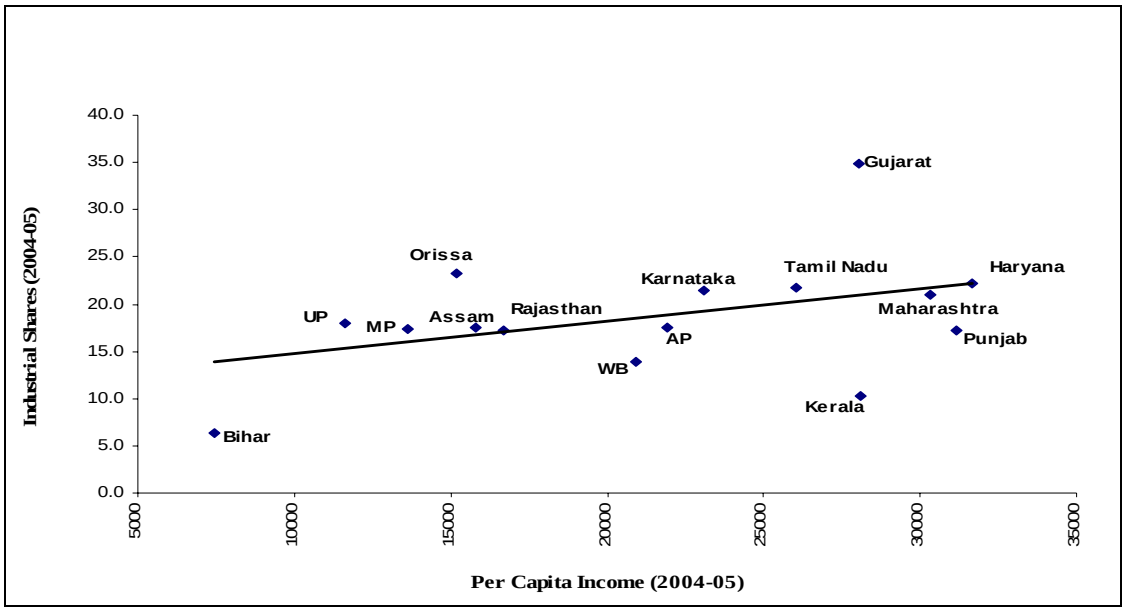


Source: National Accounts Statistics, CSO

The industrial deficit in Punjab can be seen clearly in **Chart 4.4** which plots the scatter of industrial shares of GSDP for the major states of India against their per capita income as of 2004-05, and fits a regression line to these points. Given its high per capita income, Punjab's share of industry in GSDP is much below the level indicated by the fitted line. The shares of agriculture, industry, construction and services in the GDP of Punjab and India are presented in **Chart 4.5** for a comparative perspective.

Chart 4.4

Share of Industry in GSDP: Major States of India



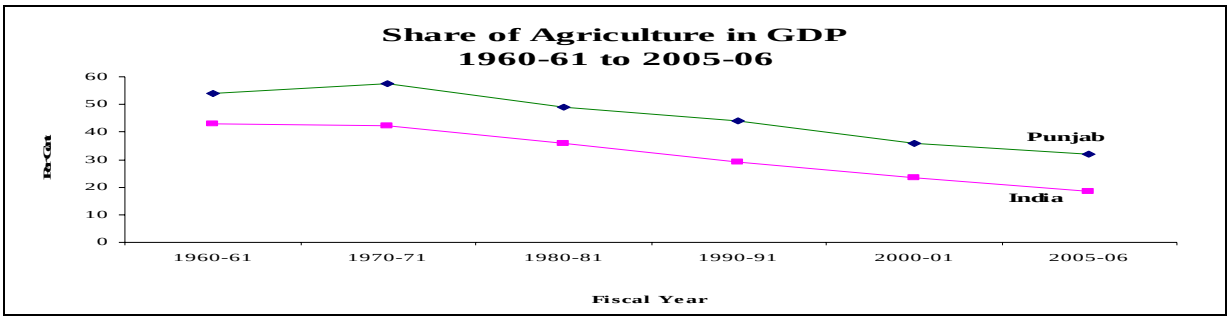
Source: National Accounts Statistics, CSO

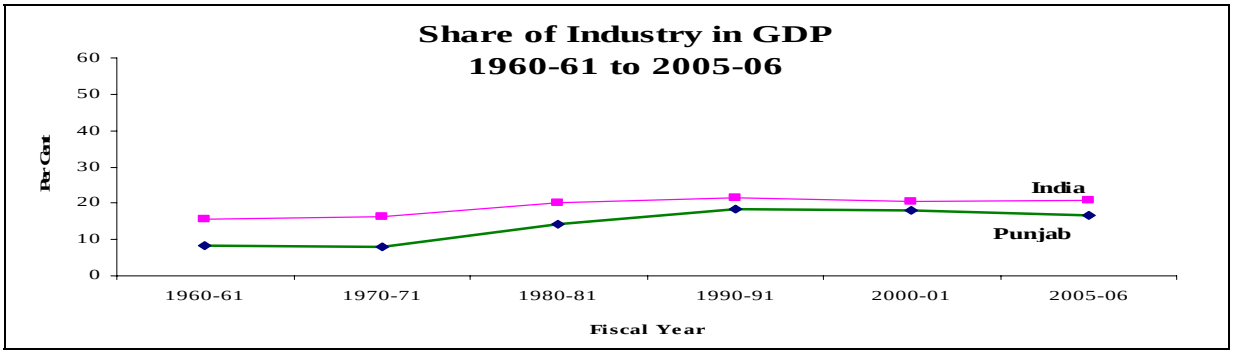
4.4 Growth of Agriculture, Industry and Services

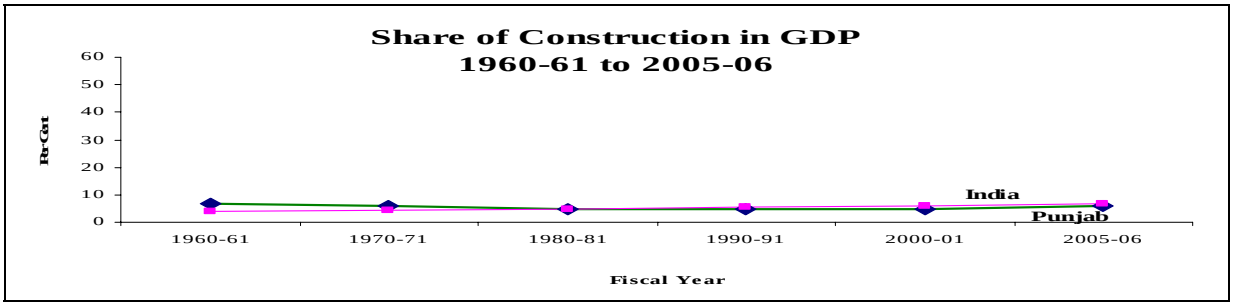
Agriculture was the driving force of growth in Punjab and there has been loss of momentum of agricultural growth in the past one and a half decades with an excessive focus on the cultivation of wheat and paddy, without sustained efforts to improve resource (land, water and fertiliser input) efficiency and inadequate diversification

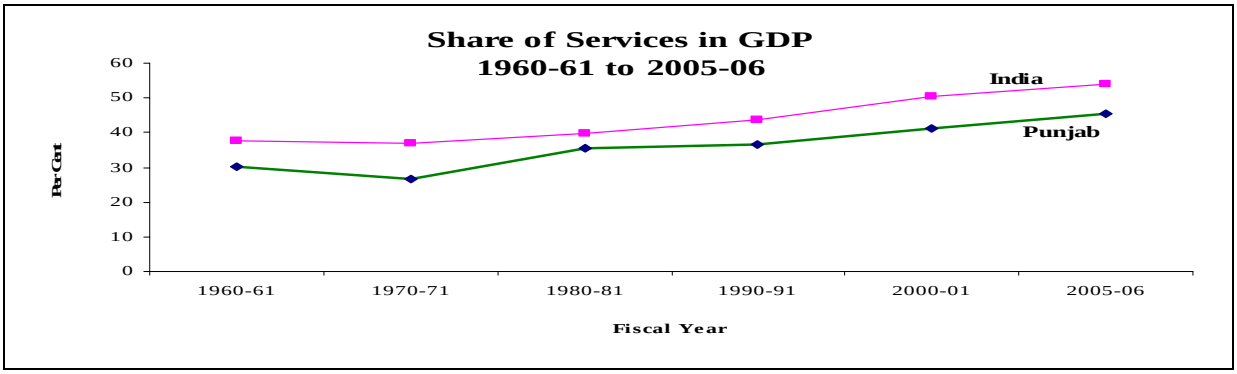
Chart 4.5

Sectoral Shares in GDP: Punjab and India









Source: National Accounts Statistics, CSO

towards higher value crops. Not only has there been stagnation in the yields of wheat and rice but Punjab has been experiencing a growing environmental deficit on account of the fast declining water table and rapid depletion in soil nutrients and in the general quality of soil.

Industrial growth in Punjab up to the end of the 1980s was principally driven by the stimulus provided by agriculture **(Table 4.1)**. While industrial prospects of the state are challenged by its landlocked location and by the absence of any significant mineral resources in the state, the private sector in Punjab was able to capitalize on the rich agricultural base, good connectivity through a well-developed road network, the legendary entrepreneurial spirit as well as the spending propensity of the Punjabis[7], to deliver relatively faster growth of industry, compared with the slow and stagnant industrial growth in the rest of the country within the framework of a protectionist model of industrial development for the Indian economy.

Industrial value added in Punjab grew at twice the rate of the Indian economy during the 1970s (**Table 4.1)**. Besides the manufacturing units in food products, e.g., grain mills, rice shellers, etc., small scale units in the private sector grew in metal-based light engineering, knitwear and hosiery, leather and leather products, and sports goods industries. In the case of leather products and sports goods, industrial development was helped by infrastructure provided in industrial estates and clusters. Medium and large scale units were few and included Vardhman and Nahar in textiles, Punjab Tractors in automotives, Nestle in food products and dairy and Ranbaxy in pharmaceuticals.

[7] The Punjabi saying "khadda Peetta Lahe da, Rehnda, Ahmadshaheda" aptly summarises the Punjabi propensity to spend, because it means "whatever we eat and drink, i.e, spend profits us, and what we save is looted by Ahmadshah Abdali who repeatedly plundered Punjab en route to the rest of India." .So, why save?

Table 4.1

Growth of GDP by Sector: 1970-71 to 2006-07

PUNJAB

	Agriculture	Industry	Construction	Services	GSDP
1970-71 to 1980-81	3.2	8.5	0.9	7.1	4.7
1980-81 to 1990-91	4.9	9.1	1.0	4.5	5.3
1990-91 to 2000-01	3.1	6.2	7.9	5.7	4.7
2001-02 to 2006-07	2.2	4.2	14.5	5.3	4.6
Year-on-year rate of change					
2001-02	0.8	-4.2	6.0	5.2	1.9
2002-03	-1.2	6.0	-6.3	6.1	2.8
2003-04	5.8	4.3	16.6	4.6	5.5
2004-05	2.2	5.5	23.7	5.3	5.2
2005-06	1.7	7.7	25.0	5.0	5.5
2006-07 (QE)	4.1	5.7	21.8	5.7	6.3

INDIA

	Agriculture	Industry	Construction	Services	GDP
1970-71 to 1980-81	1.8	4.4	3.3	4.4	3.2
1980-81 to 1990-91	3.5	6.7	4.7	6.6	5.4
1990-91 to 2000-01	2.8	5.7	5.1	7.3	5.6
2001-02 to 2006-07	3.2	7.0	11.4	8.9	7.4
Year-on-year changes					
2001-02	6.3	2.4	4.0	7.2	5.8
2002-03	–7.2	6.8	7.9	7.4	3.8
2003-04	10.0	6.0	12.0	8.5	8.5
2004-05	0.0	8.4	16.1	9.1	7.5
2005-06	6.0	8.0	16.5	10.3	9.4
2006-07(RE)	3.8	10.6	12.0	11.1	9.6
2007-08 (AE)	2.6	8.6	9.6	10.7	8.7

Source: National Accounts Statistics, CSO

Even when industrial growth picked up in the 1980s for the Indian economy with the beginning of the emphasis on domestic deregulation and its impact on productivity improvement, industry in Punjab continued to record higher growth than that of the industrial sector for the Indian economy as a whole. This was in spite of the fact that the state was faced with many challenges including the rise of militancy and the associated political turmoil, and disruptions in the trading with the Soviet Union and the associated economic turmoil. Industrial growth at 9.0 per cent per annum in the 1980s in Punjab was much higher than the 6.7 per cent per annum recorded in the country as a whole.

Unlike many other state governments which caught on to the new orientation after 1991, and started gearing up their administrative machinery to attract private investment in industry, Punjab somehow failed to take advantage of the new industrial opportunities that were opening up. Punjab was unable to attract private investment, particularly in automotives and textiles (with a few exceptions, such as the Trident group) where it was relatively well positioned. It failed to provide incentives and infrastructure through institutional innovations such as modern clusters within the framework of public-private partnership to revitalize the existing small scale units in industries such as hosiery, sports goods, leather products, etc. The tremendous potential of the food processing industry was also left largely untapped.

The Government of India's decision in 2003 announcing a number of attractive fiscal concessions for the states of Himachal Pradesh, Uttaranchal and Jammu & Kashmir – all neighboring states of Punjab, further contributed to industrial stagnation in Punjab. This has not only had an adverse impact on new investment in Punjab but there has also been some investment flight, particularly in the footloose industries. The Government of Punjab will have to work with redoubled effort to offset this major handicap imposed by the policy of the central government.

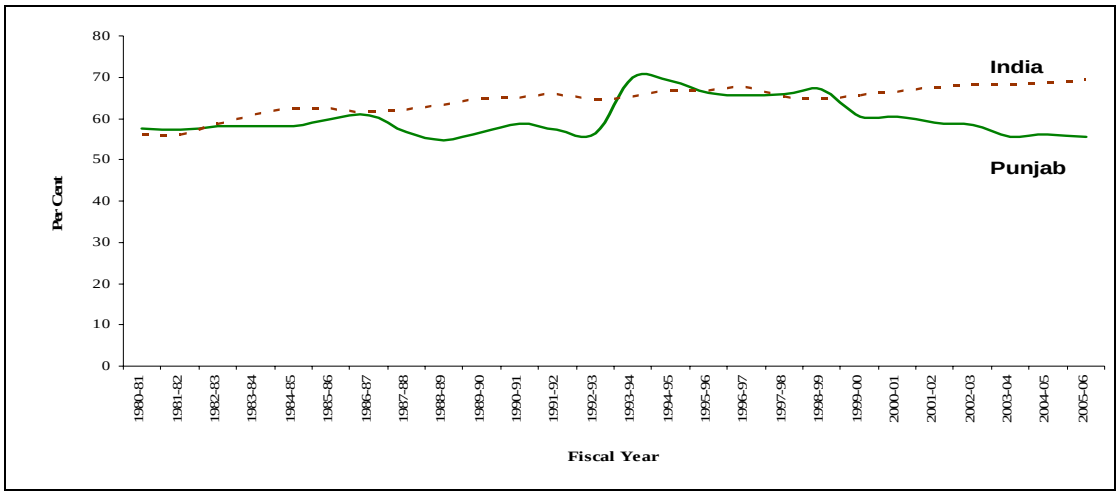
During the period of industrial stagnation in Punjab in the 1990s **(Chart 4.5)**, the services sector grew relatively faster at 5.7 per cent per annum, although it was still slower than the growth of services sector in India at 7.3 per cent per annum. More recently there has been a slowdown to 5.3 per cent per annum in the growth of value added of services in Punjab. This contrasts with the acceleration in the growth to 8.9 per cent per annum of services in the country as a whole **(Table 4.1)**.

4.5 Manufacturing: A Closer Look

A significant development within the manufacturing sector in Punjab has been the relative decline in the share of the registered sector after 1990-91, while the share of the registered sector in the value added of manufacturing in India has increased albeit mildly over the same period **(Chart 4.6)**.

Chart 4.6

Share of Registered Sector in Manufacturing: Punjab and All India



Source: National Accounts Statistics, CSO

The structure of the manufacturing sector in Punjab has not changed much over the course of the past 25 years. (**Table 4.2)**. Food products (including dairy products and grain mill products) and textiles continue to be the two most important industry

groups accounting for about a third of the total value added. When metal products, machinery and equipment, chemicals and chemical products and transport equipment are added, the five groups combined account for 70 per cent of the value added. Food products and textiles are also industries which contribute the most to employment in Punjab as can be seen in **Chart 4.7**. Light engineering industries such as metal products, machinery and equipment, transport equipment and parts are the next most important generators of employment. In 2004-05, food products created 90,000 jobs, a little less than in light engineering. Textiles created 47,200 jobs, while textile products, a growing sector, created another 33,100.

The textiles sector in Punjab by and large failed to modernize itself during the 1990s to exploit the opportunities offered by the end of the MFA regime. A significant development in the textiles sector in Punjab in the 1990s was the emergence of the Trident industrial group. Their entry into yarn business in 1990 and diversification into terry towels and yarn processing in 1998 has put Punjab on the map of global competitiveness. The unit located in Barnala is one of the largest terry towel manufacturers in the world and has the largest spinning capacities at a single location.

Manufacturing activity in Punjab has been dominated by the small scale sector. After a long spell of slow and steady decline in its relative share, the small scale sector has been increasing its share in the total industrial production, beginning with 1997-98. In 2006-07, the small scale sector accounted for almost half of the total industrial production **(first graph of Chart 4.8)**. The small scale sector has seen less fluctuations in its growth of production and employment than the large scale sector, and its growth rate has also been higher **(second graph of Chart 4.8).** Employment growth was relatively flat in the small scale sector and showed more fluctuations around a declining trend in the large and medium sector **(third graph of Chart 4.8).**

Table 4.2

Registered Manufacturing Sector: Punjab and India

(Share in Value added)

Industry Group	1980-81		2004-05	
	Punjab	**India**	**Punjab**	**India**
Food products	16.1	7.0	19.8	6.4
Textiles	16.6	18.5	14.5	5.2
Metal products, Machinery & Equipment (1)	16.5	18.8	13.9	12.4
Chemicals and Chemical Products	16.0	15.4	11.2	16.6
Transport Equipment	10.3	8.4	10.9	9.7
Basic Metals & Alloys	15.2	12.9	8.3	19
Textiles Products	3.0	1.1	6.8	3.0
Non-Metallic Minerals	0.2	3.9	4.7	5.0
Paper and Paper Products	0.5	4.3	3.6	2.6
Rubber, Plastic & Petro Products	1.7	5.2	2.2	14.4
Beverages and Tobacco Products	2.2	2.1	1.9	2.6
Leather and Leather Products	0.3	0.6	1.0	0.5
Other Manufacturing industries	1.1	1.2	0.8	2.1
Wood and Wood Products	0.2	0.6	0.3	0.4

Source: Annual Survey of Industries

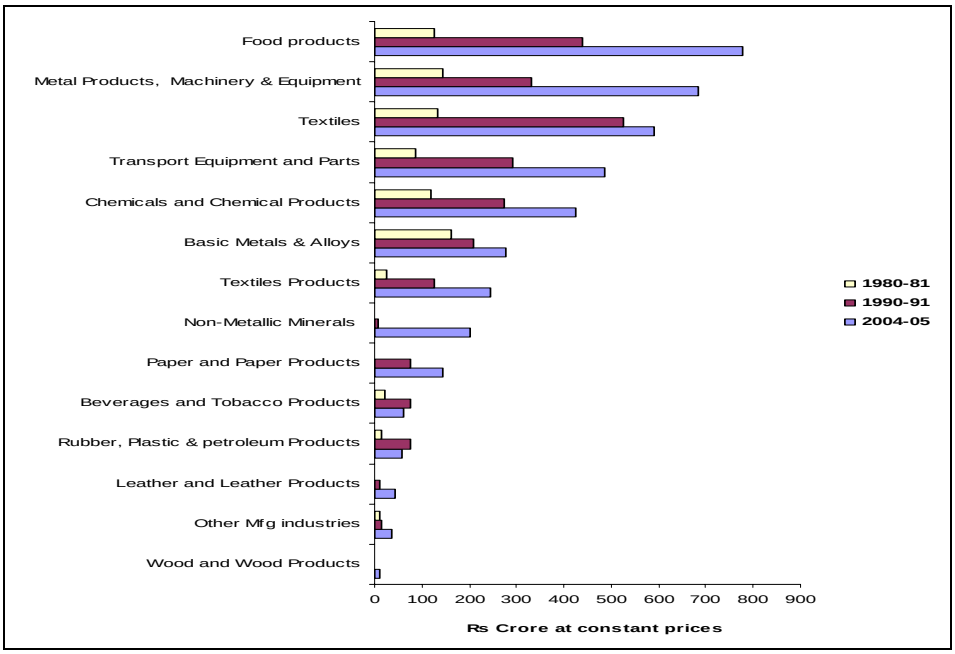
Note: Since data on metal products group and machinery and equipment are not available separately after 1998-99, these groups have been clubbed together.

The pharma industry amongst chemicals and chemical products has a significant presence in Punjab. There are 14 large/medium scale units in the pharma sector with an investment of Rs.1432 crores employing over 5500 persons and a large number of small scale companies with an investment of Rs.27.6 crores providing employment to about 2500 persons. However, the pharma industry in Punjab is facing tough competition from the neighbouring states which are exempt from excise duty. The reduction in the excise duty on medicines in the central budget for 2008-09 from 16 per cent to 8 per cent has improved the situation, but the distortion remains significant.

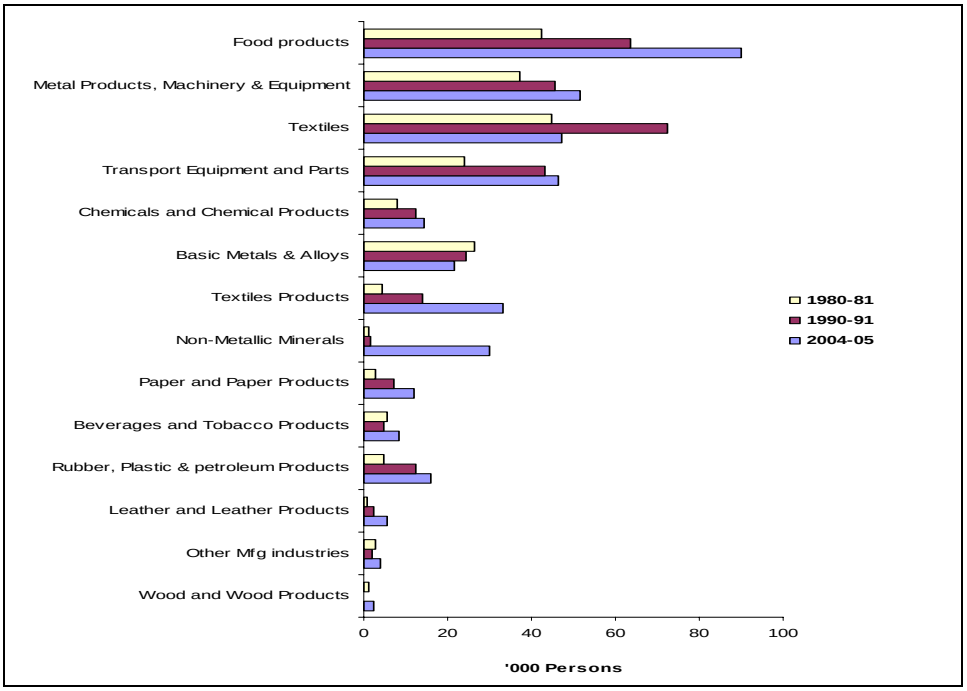
Chart 4.7

GVA and Employment by Two Digit Industry Groups (Registered Manufacturing): Punjab

GVA



Employment

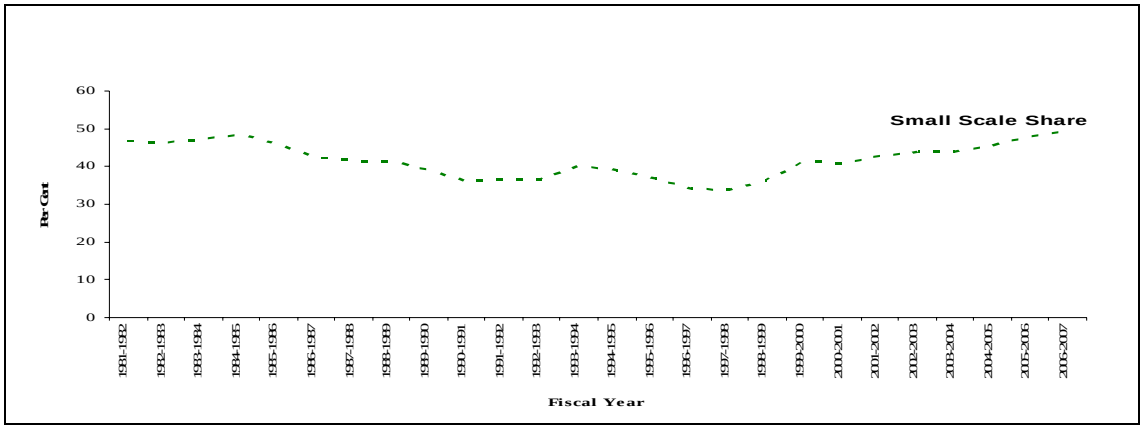


Source: Annual Survey of Industries

Chart 4.8

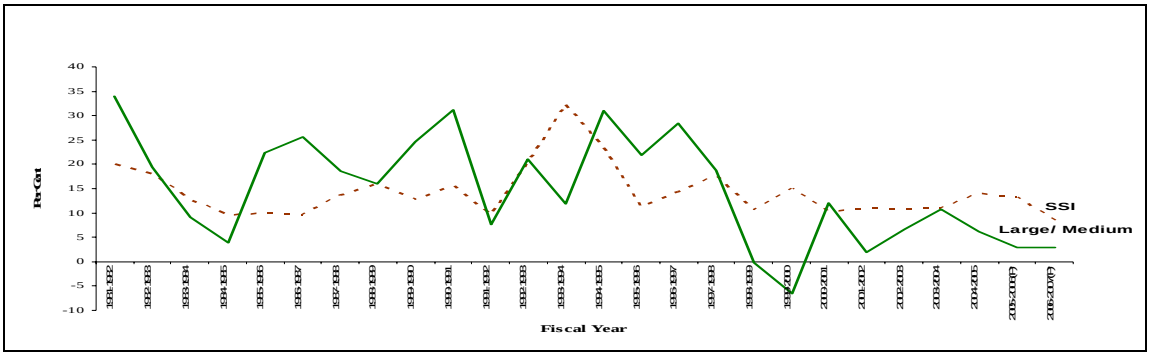
Trends in Industrial Production: Small and Large/Medium Sector

Share of Small Scale Sector in Industrial Production



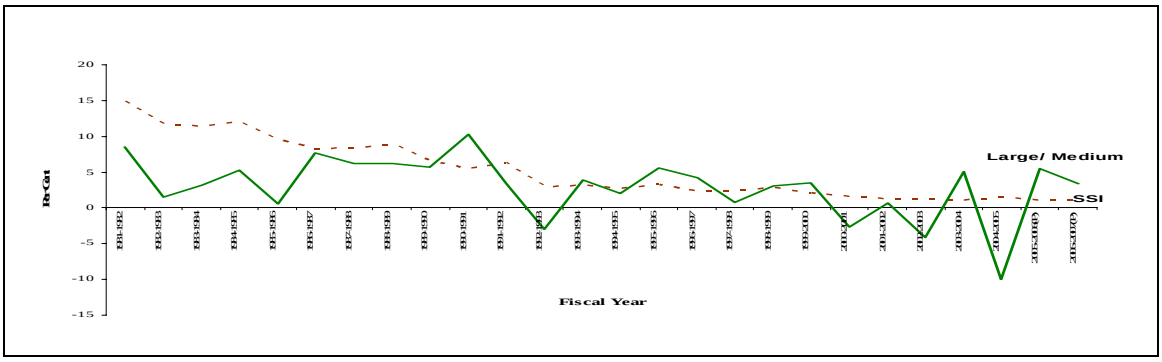
Growth of Production

Small and Large/Medium Sector



Growth of Employment

Small and Large/Medium Sector



Source: Department of Industries, Punjab

4.6 Towards a Strategy

The economy of Punjab at the present juncture is at an important crossroads with an urgent need for an industrial strategy which should:

- Harness its underlying strengths in industries such as cotton textiles, food processing, agro-processing, dairy, logistics and cold chains and modern light engineering.
- Realise the potential in IT, bio-technology, pharmaceuticals, healthcare and tourism.

The strategy can be designed so as to become an important part of the solution in reviving and diversifying agricultural growth in the state by building explicit synergies between industry and agriculture. The modernization of retail service networks offers an important new opportunity for investment in logistics and cold chains which should help transform the rural and urban economic scenario.

The industrial strategy must be directed at facilitating the transition to global competitiveness of the small scale units in industries such as leather, sports goods, auto components, hand-tools and light engineering industries where considerable investments have been made by the private sector over the years but the units are desperately in need of technological up-gradation. A cluster-oriented approach with significant involvement of the government and the private sector will be needed in rejuvenating the small scale units in these industries. A number of Central Schemes are available for improving the competitiveness of specific industries, e.g., leather, hand tools, textiles, food processing, by providing high quality infrastructure, means for technological up-gradation, and skill development. **The state government should play**

a pro-active role in bringing the small scale units in these industries together to help them to seek benefit from these schemes and facilitate their interaction with the Government of India. Setting up state government schemes in line with the central schemes provides greater motivation to exploit the benefits offered by the central schemes.

The strategy must include a proactive element to attract a few large scale investments which can not only generate economic activity and employment but also act as catalyst for overall development. Thus, industries such as auto-components can benefit immensely from the presence of one or more large scale automotive units in the state. More broadly, a petrochemical complex at Bathinda is a prime candidate for promoting catalytic development. The scope for creating a new industrial/ urban complex outside the present industrialised areas needs to be explored seriously**.** The government of Punjab should explore areas where land is relatively less expensive, and where good infrastructure, peaceful industrial relations, flexible labor laws, and better business environment can be provided so as to attract large scale investments in a competitive environment vis-a-vis other states. Planning for an industrial/urban complex with private developers can be used either through the SEZ scheme or some alternative route.

Considering that Punjab's locational handicap is much less relevant for the Information Technology (IT) sector and that good quality telecommunication infrastructure and high quality education are the two basic requirements, the state is gearing up in recent years to exploit these opportunities in Mohali near Chandigarh, but again, much more focused effort is needed both in attracting such investment and preparing the good quality infrastructure and expanding the skill base of high quality through training and education not only in Mohali but also in Ludhiana and other prospective hubs.

Along with IT and IT- enabled services, the proposed strategy also spells out the importance of biotechnology, pharmaceuticals, healthcare and tourism in the industrial map of Punjab.

CHAPTER 5

CHALLENGES OF INFRASTRUCTURE AND SKILL DEVELOPMENT

As Punjab embarks on a new industrial strategy to put the economy of the state back on a high growth trajectory with the associated revitalisation of the agricultural sector, the challenges of infrastructure and skill development will have to be confronted frontally.

5.1 Infrastructure

Punjab appears to score well on infrastructure when comparisons are made across the states of India using standard indicators of physical infrastructure. However, the comparisons are misleading for three reasons:

- Punjab's dependence on air transport, railways and road network is much greater than many other states, given the landlocked nature of the state. In other words, "good transport infrastructure" for other states is not "good enough" for Punjab given its locational challenge.

- The relative deficit with respect to electricity has been calculated under conditions of industrial stagnation in Punjab and does not convey the sense of the challenge if Punjab's industrial growth was more "normal".

- Considering that the economic scenario is dominated by the small and medium sector, it is extremely important to provide common industrial infrastructure facilities, e.g., common effluent treatment plants for leather tanneries or common processing and finishing facilities for textiles. By

developing and maintaining the industrial areas well through improved administrative efficiency, the small scale units can be provided with good road connectivity and other facilities like good power and water connections in concentrated locations.

Punjab has lagged behind other states in developing infrastructure facilities. The section below outline the nature of the infrastructure challenges.

5.1.1 Transport Infrastructure

(i) Roads

Historically Punjab has had a strong road network with a total of over 51,000 kilometres of State and National Highways because of good development efforts in previous decades. Further Punjab has been ahead of other states in its road network but now the others are catching up and the relative gap is narrowing. There is not only need to build further on the available strength but also to maintain the existing highways and also decongest the network in critical locations. In particular, there is an urgent need to facilitate the execution of the much needed road bridges in Sirhind, Khanna, and Mandi Gobindgarh, that would serve to de-bottleneck the Grand Trunk road.

The pursuit of better and smoother road connectivity should lead to exploring a model of public-private partnership (PPP). The Government of India is experimenting with a number of models of capital subsidy, e.g., the viability gap funding, which has created a national market for PPP projects. Punjab must endeavour to market its projects actively so that they are executed at the earliest.

(ii) Railways

Punjab has 3,726 kilometres of railway track connecting most parts of the state, of which, 93 per cent is broad gauge. There has been little extension of the track network in recent years. Thus, only 200 kilometres of broad gauge were added between 1980 and 1999.[8] A major positive development with respect to railway transport in Punjab has been the decision of the Government of India to extend the planned dedicated rail freight corridor from Delhi to Ludhiana. However, as of date, the Punjab–Delhi sector is being clubbed with the Eastern Express corridor which is still at a relatively early stage of planning. The effort should be made to have the Delhi–Ludhiana sector of the dedicated freight corridor executed simultaneously with the Western Express corridor.

(iii) Airports

Over the past several years, India has seen an explosive growth in air passenger traffic – both domestic and international. For many multi-location businesses, access to air connectivity has become crucial. Also, for freight requirements of high value products and perishables, air transport availability plays a very important role in determining competitiveness for a landlocked state such as Punjab. At present, Punjab has only one functional international airport at Amritsar and a domestic airport operating from Chandigarh.

There is a proposal for an international airport in Mohali/Chandigarh. The *Greater Mohali Area Development Authority* (GMADA) has been entrusted with the task of acquiring land for the airport which process is reportedly well on the way to

[8] Punjab Statistical Abstract 1999

completion. The Governments of Punjab, Haryana and the Airport Authority of India (AAI) will be partners in this new international airport. There is potential for more regional airports within India, and Punjab should use this opportunity to expand air connectivity to other parts of the state. Also, Punjab should lead the country in starting a number of small daylight landing/ take off airports in the state which will help carry people and products quickly.

5.1.2 Power

Punjab has the highest per capita consumption of electricity amongst the major states of India (1437 kwh per annum compared with the national average of 631 kwh), a reflection of the fact that rural household electrification in the state is virtually universal. But, Punjab's electricity situation has deteriorated rapidly in recent years with increasing shortages and unpredictable supplies.

Since the Punjab State Electricity Board is unable to undertake capacity expansion and the overall environment is not conducive to private investment in power in Punjab, the capacity situation has deteriorated with time. Installed capacity in power increased at 7.1 per cent per annum in the 1980s, 3.8 per cent per annum in the 1990s and a miniscule pace of 0.7 per cent per annum between 2001–02 and 2006–07. As of March 2007, the own generation capacity of the Punjab State Electricity Board (PSEB) accounted for only half of the total capacity, the Bhakra Hydro Electric station provided another 20 per cent, and the gap was covered from Punjab's share of the central sources.

Punjab's net power shortfall at 9.8 per cent was lower than many states in the neighbourhood in recent years **(Chart 5.1),** but this is not a source of comfort because of the much slower industrial growth in Punjab and the faster pace of growth of demand

in the Western and Southern states. Also, the power shortfall understates the case of shortage because it does not reflect the peak capacity shortfall and the consequential planned power withdrawal restrictions that are prevalent in most states – more in some than in others. Moreover, if industrial development in Punjab were to expand, the demand for grid power would rise significantly and such future demand expansion would place the state in a position that is inferior to what is suggested by the relative standing given in **Chart 5.1**.

Punjab suffers from a shortfall in capacity of 27 per cent of the peak load requirement. Rationing is the principal instrument used in Punjab for matching the market demand with the available supply of power. The peak load restrictions impose a daily cut of 3 hours during the peak consumption hours. Moreover, a one day a week cut is imposed on industry on a rotating basis during the paddy growing season which itself has become longer in recent years so as to stretch from June to September. In 2008, the severity of power shortage has led to the cuts being made much earlier, in February itself, and in a more stringent manner, i.e., for two days a week. What makes it worse is that the cuts are not announced in advance and tend to be erratic. In 2006–07, power cuts for industry amounted to 19.6 per cent of electricity sales to industry which was a marked deterioration from power cuts of 14 per cent in 2005–06.

The practice of "free–power" to agriculture has been extended in more recent years to domestic consumers of scheduled castes and those below the poverty line. This has been financed partly by high charges on industry and partly by the state government subsidy to the PSEB. Some burden of the cross–subsidies is therefore borne by the industrial sector in Punjab. But the average power tariff to industry in Punjab is lower than in Haryana, Gujarat, and Maharashtra (**Chart 5.2)**.

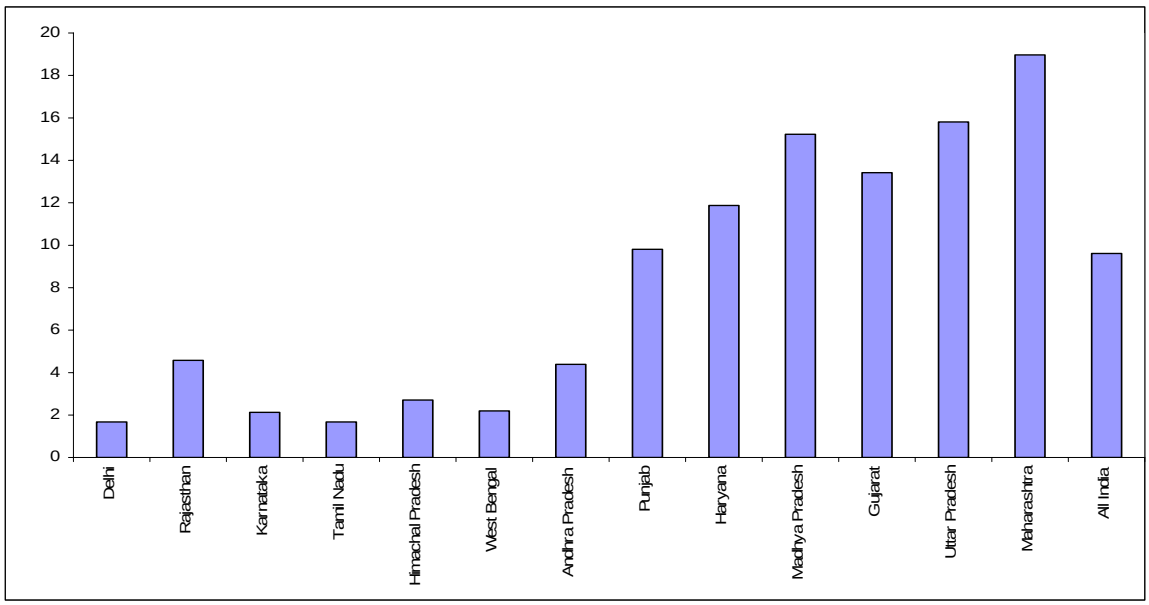
Chart 5.1

Power shortfall Across Major States

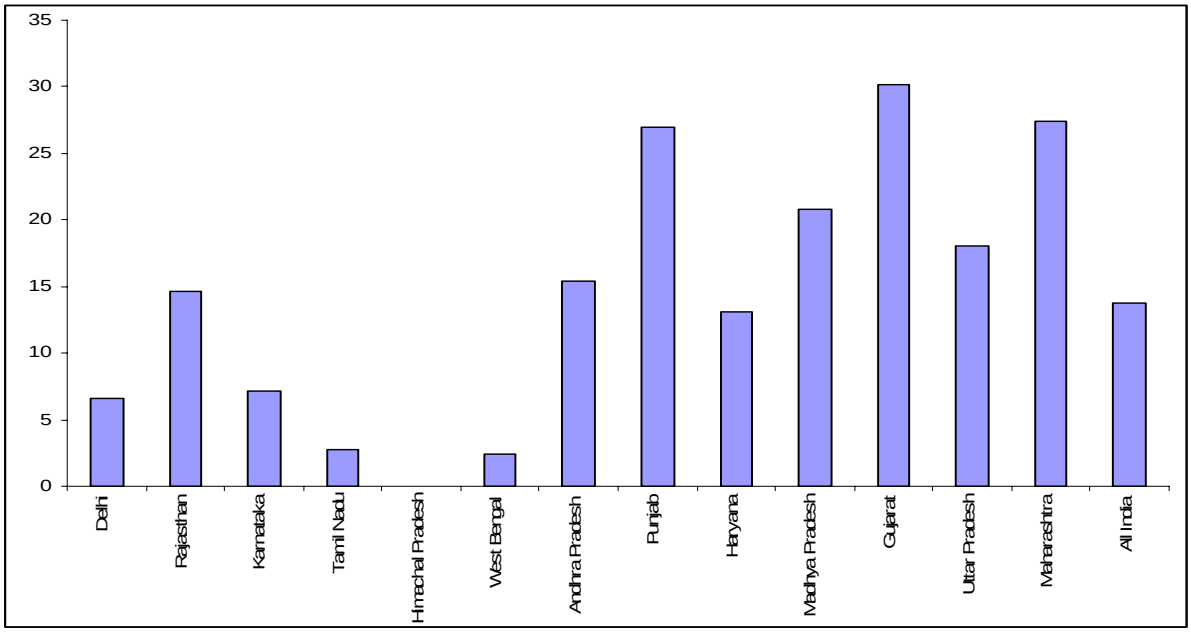
2006-07

(per cent)

A. Shortfall in Power Supplied: Major States



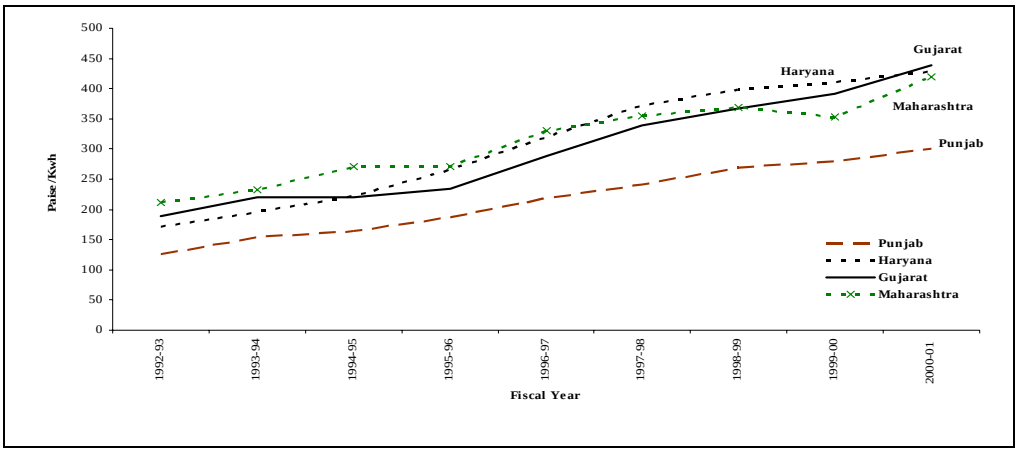
B. Shortfall at peak Demand: Major States



Source: Central Electricity Authority.

Chart 5.2

Average Power Tariff to Industry



Source : Annual Report on the working of State Electricity *Boards & Electricity Departments, 2001, Planning Commission.*

Since 2001, many states have hived off their distribution companies and a comparison of average power tariffs has become more difficult. For the period after 2001, a comparison for Punjab with other major Indian states is attempted in **Table 5.1,** and the latest comparative tariff position is provided in **Table 5.2**.

Table 5.1

Power Tariffs in Selected States

(Rs Per Unit)

		2005-06	2006-07	2007-08
Andhra	Domestic	2.64	2.64	2.59
APCDDCL	LT Industry	4.35	4.19	4.26
	HT Industry	3.94	3.46	3.63
Gujarat	Domestic		3.08	3.11
Dakshin (DGVCL)	LT Industry		3.98	4.19
	HT Industry		4.58	4.85
Maharashtra	Domestic	2.98*	3.14	3.4
Reliance Power	LT Industry		4.97	6.01
	HT Industry	3.97*	4.25	6.33
Karnataka	Domestic	3.33	3.37	3.37
Bescom	LT Industry	4.45	4.63	4.63
	HT Industry	4.39	4.72	4.72
Punjab	Domestic	2.96	2.96	3.74
PSEB	LT Industry	3.83	3.82	3.75
	HT Industry			4.13

Source: ICRA Limited
** Tata Power*

Table 5.2

Estimated Average Tariff Rates of Electricity

(As of March 1, 2008)

Rs per unit		Domestic		Commercial		Industrial			In force since
		Min	Max	Min	Max	Min	Max		
Andhra		2.39	4.92	6.00	6.30	3.80	4.19		1-Apr-07
Gujarat	U	3.48	5.27	5.65	5.90	4.68	5.35		1-Apr-07
	R	2.64	4.28	5.65	5.90	4.68	5.35		
Haryana		3.56	4.51	4.68	4.68	4.57	5.00		11-Nov-06
Himachal		2.16	2.83	4.37	4.51	3.86	5.00		1-Apr-07
Karnataka		2.61	4.82	6.12	6.54	3.95	5.21		1-Nov-06
Madhya Pradesh	U	3.47	4.63	6.16	6.18	3.86	5.40		16-Apr-07
	R	3.42	4.51			3.49	4.78		
Maharashtra		2.70	5.60	5.34	6.51	3.44	5.17		1-May-07
Punjab		2.47	4.09	4.69	4.69	3.75	4.64		1-Apr-06
Rajasthan	U	3.93	4.18	5.54	5.56	4.21	4.63		1-Jan-05
	R	3.58	3.90						
Tamil Nadu		1.20	2.70	6.02	6.09	4.59	4.63		1-Apr-07
West Bengal	U	2.48	5.29	4.43	6.08	3.80	4.71		1-Apr-07
	R	2.37	5.23	4.41	6.04	3.65	4.50		

Source: Central Electricity Authority

The operational and financial management of the PSEB has been a matter of growing concern. The utility has the dubious distinction of having the highest number (over 70,000) of employees and the highest ratio of employees to consumers, the latter being more than 40 per cent higher than that of Haryana which has the next highest ratio in the country and five times that of Karnataka **(Table 5.3).** What is more, despite a 15 per cent decline in the number of employees between 2000 and 2007, its total cost of employees increased at an average annual rate of 8.5 per cent.

The financial performance of the PSEB has deteriorated sharply in recent years. The cumulative financial loss which stood at Rs. 340 crores ending 1996–97, increased to Rs. 6000 crores ending 2006–07 despite regular fixation of tariff by the State Regulatory Commission from 2002–03 onwards.

Table 5.3

Employees per 1,000 consumers at PSEB : 2003

Punjab	**16.2**
Haryana	11.4
Madhya Pradesh	10.9
Maharashtra	8.6
Tamil Nadu	6.8
Gujarat	6.7
Andhra Pradesh	4.6
Karnataka	3.5

Source : World Bank (2004), Resuming Punjab's prosperity

The precarious financial position of the PSEB has meant that there has been very little investment in transmission and distribution systems. However, the Aggregate Transmission & Commercial (AT&C) losses[9] have been reduced to 25.2 per cent in 2006-07 and are projected to improve further in 2007-08. This compares favourably with most other states shown in **Table 5.4**; in many states the AT&C losses are available only for the distribution companies and hence have been shown as a range for the state. Since there is a small but non-zero tariff for agricultural supplies in most states but Punjab levies no charges at all for agriculture, this may be a factor in understating the AT&C loss in Punjab. However, in general, the PSEB has maintained a good collection record ranging between 96 and 98 per cent for metered electricity.

[9] Include transmission and distribution losses and losses due to non-realization of billed demand.

The large reductions in AT&C losses in states such as Andhra Pradesh and Himachal Pradesh, however, suggest that more is possible.

The Government of Punjab has not yet moved to unbundling generation, transmission, and distribution notwithstanding the stipulation in the Electricity Act of 2003 **(Annexure D)**. It has obtained repeated extensions of the deadlines from the Government of India. The unbundling will help focus managerial attention on issues facing distribution.

Table 5.4

Aggregate Technical and Commercial Losses of Power

(Per cent)

	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08
Punjab	**27.7**	**26.5**	**25.5**	**24.0**	**25.8**	**25.2**	**22.2^**
Delhi	60.1	51.8 – 62.5	45.7 – 55.5	35.9 – 51.7	33.8 – 43.9	23.8 – 43.3	21.7*
Haryana	40.7 – 45.9	41.4 – 42.5	40.0 – 40.5	43.4 – 44.0	40.8 – 41.9	29.0 – 34.5	
Himachal	28.3	29.5	9.3	21.7	15.2	13.2	
Rajasthan	49.0 – 59.3	40.0 – 42.0	41.7 – 46.2	43.2 – 49.8	42.3 – 47.5	37.2 – 42.6	
Andhra	14.5 – 28.9	17.6 – 30.2	9.8 – 19.0	14.3 – 24.0	12.7 – 19.2	12.5 – 26.6	
Gujarat	23.3	31.2	35.5	35.2	26.9	22.2	
Karnataka	40.5	35.7 – 47.7	25.8 – 43.9	21.5 – 37.1	15.3 – 36.0	15.0 – 27.1	
Madhya Pradesh	48.6	49.4	41.5	54.3	50.4	52.2 – 56.6	
Maharashtra	46.3	44.3	39.0	26.6	36.7	39.4	
Tamil Nadu	19.3	20.0	20.6	19.4	20.5	20.1	
West Bengal	35.3	26.6	32.9	23.9	26.6		

Source: ICRA Ltd.

Note: Includes T&D losses and losses due to non-realization of billed demand, ^ Estimates for 2007-08 are first 9 months of fiscal year, * Data for Delhi relate only to Northern Delhi Power based on estimates for the first 9 months of 2007-08

The unwillingness to recover costs in pricing as permitted by the power regulator has meant that the subsidy burden of the PSEB has been growing over time. **(Table 5.5**). The cost of power per unit as shown in **Table 5.5** reflects the effect of the increasing share of power being bought from traders at much higher prices than either from self generated electricity or from central NTPC units from 2006–07 onwards.

It is not surprising that Punjab has lagged far behind other states in the participation of the private sector. The low private sector participation of less than 1 per cent in power generation in Punjab compares poorly with 4 per cent in the Northern region, 7 per cent in the Eastern region, 17 per cent in the Southern region, and 23 per cent in the Western region of the country.

Table 5.5

Selected Data on Financial Position of PSEB

	Cost Per Unit (Rs.)	Revenue Per Unit (Rs.)	Financial Loss (Rs. Cr.)	Subsidy Burden (Rs. Cr.)
2002-03	3.18	2.97	-436	950
2003-04	3.00	3.06	175	857
2004-05	3.30	3.05	-591	903
2005-06	3.27	3.27	13	1436
2006-07	3.70	3.12	-1626	1497
2007-08 Est.	3.95	3.22	-800	2112

Source: PSEB

5.1.3 Industrial Infrastructure Development

State governments are typically involved in developing industrial areas and industrial estates within these areas to facilitate the establishment of industrial units,

particularly in the small and medium sector. The provision of concentrated infrastructure in selected locations and attracting private units to locate in these areas also serves as a very effective means of industrial dispersal. The state can also play an important role in developing industry specific areas attending to the specific infrastructure needs of specific industries, e.g., effluent treatment plants for leather tanneries and exhibition centres for textiles.

The Government of Punjab has not played an effective role in developing industrial areas. Prior to 1972, the Department of Industries or the Urban Estate Department of the Government of Punjab was entrusted with the responsibility of developing *Industrial Areas /Colonies/Estates*. For want of funds and policy focus these industrial areas are neither broadly dispersed nor well maintained.

The Punjab Small Industries & Export Corporation (PSIEC) was assigned the task of developing industrial areas in 1972. The PSIEC has developed 28 *Focal Points* for industrial development, of which five were developed with assistance from the Government of India under the Growth Centre Scheme of 1991. Over a third of the *Focal Points* have occupancy of 50 per cent or less, and another 15 per cent have no occupancy at all **(Table F.7, Annexure F)**.

The PSIEC includes the cost of the development of infrastructure facilities and their maintenance for a period of 5 years in the allotment price charged to the allottees. Thereafter, the *Focal Points* are supposed to be transferred to the respective municipal authorities for maintaining the infrastructure out of the tax revenue collected from the allottees. However, the transfers have not taken place and infrastructure in the Focal Points has been deteriorating to the point of roads with potholes and no street lights. There are other problems. For example, an 11 KVA electricity feeder was installed for providing uninterrupted supply of electricity to the *Focal Point at Taran Taran*. As the

Focal Point was slow to develop, electricity from the feeder was diverted to residential colonies. The PSEB is now demanding Rs.1.75 lakh for providing uninterrupted supply of power.

The Government of India has a number of Industrial Area Development Schemes **(Box 5.1)** for promoting the development of manufacturing industries in industrially backward areas. Punjab's record in utilizing these schemes is poor. An exception is the setting up of a Common Hazardous Waste Management Facility by the dyeing, processing and other polluting industries in Dera Bassi under the Industrial Infrastructure Upgradation Scheme (IIUS) Scheme in 2006.

Punjab must learn from examples such as the development of Manesar in Haryana. Building new townships with provision for industry, commerce, housing and public areas is important if the growing pace of urbanization is to be coordinated with the industrial take-off. Punjab has not so far taken advantage of the National Urban Renewal Mission. Reforms at the municipal level will have to be undertaken to avail of the benefit under this national mission.

The Government of India also has a number of industry–specific schemes for infrastructure promotion. Punjab has not made adequate use of these schemes as well.

(i) Schemes for Textiles

Two centrally sponsored schemes were introduced for textiles in 2001–02 and 2002–03 for the up-gradation of infrastructure, i.e., (i) the Apparel Parks for Exports Scheme (APES), and (ii) the Textile Centre Infrastructure Development Scheme (TCIDS). The Punjab Apparel Park was sanctioned under the APES in 2004 to be set up near Doraha, around 30 km from Ludhiana on NH-1 by a special purpose vehicle formed by the

Box 5.1

Industrial Area Development Schemes

General

- Growth Centre Scheme – 1991
- Industrial Park Scheme 1999–2000
- Industrial Infrastructure Upgradation Scheme (IIUS) 2003–04

Textiles

- Apparel Parks for Exports (APE) 2001–02
- Textile Centre Infrastructure Development Scheme (TCIDS) 2002–03
- Scheme for Integrated Textile Parks (SITP) 2005–06

Food Parks

- Food Parks – Scheme for Infrastructure Development 1996–97
- Mega Food Park Scheme 2008–09

Petroleum, etc.

- Petro, Chemicals and Petrochem Investment Regions (PCPIR) 2006–07

Rural Development

Provision of Urban amenities in Rural Areas (PURA) – 2004–05

Apparel Exporters Association of Ludhiana and the PSIEC. The objective is to develop an environmentally friendly and socially compliant exclusive apparel park in 85 acres with 102 units to attain global competitiveness. The project had to seek extension beyond March 2007, and is still waiting to be completed. A similar park approved for Tirupur in Tamil Nadu is already functioning and generating significant exports, driving home the slow pace of implementation in Punjab.

The two schemes for infrastructure upgradation of textiles were subsequently merged into the Scheme for Integrated Textile Parks (SITP), which was introduced in 2005. The SITP is not only expected to enhance the competitiveness of textile units but also help them in meeting the international environmental and social standards by putting in place world class infrastructure. While slow on the uptake, Punjab has started taking advantage of the Central Schemes for upgrading technology for textiles in recent years. Two Integrated Textile Parks i.e., the Ludhiana Integrated Textile Park (for knitting and garmenting) in Ludhiana, and Lotus Integrated Texpark, in Dhaula, District Barnala have been approved for Punjab under the SITP Scheme in 2007.

The first park envisages an investment of Rs.1500 crores with an employment potential of 85000 persons in an area of approximately 59 acres, and its projected date of commissioning is November 2009. The process of acquiring land is under way. The project has been given "in–principle approval" by the Government of India. This park has also been granted exemption from the basic stamp duty of 6 per cent on purchase of land. As of March–end, 2008, 53 acres of land has been purchased. The Lotus Integrated Texpark Ltd., Dhaula, District Barnala envisages an investment of Rs. 849 crore with an employment potential of 5,000 persons. The project is to come up on an area of approximately 100 acres. The projected date of commissioning is September, 2008, but there has been a distinct slowing down in progress owing to some land compensation issues.

(ii) Food Parks – Scheme for Infrastructure Development Food Processing – 1996–97

The *Food Parks Scheme* is part of the overall Scheme for Infrastructure Development for food processing, which was initiated in 1996–97 by the Ministry of Food Processing, Government of India. The Scheme aims to promote consolidation of

fresh produce and accelerate investment in the food processing sector with a view to generating employment and economic activity in small and medium enterprises in rural areas. Under this scheme, the government invests in common infrastructure such as storage facilities, processing facilities, testing laboratories, sorting and grading facilities, packaging centres, and integrated cold chain facilities, etc., and private investors are allotted plots within the park to set up their food processing units and avail of the benefits of the common infrastructure. In essence, a Food Park is a food processing cluster.

The *Food Park Scheme* stipulates that the minimum area of the park should be 30 acres and at least 20 units should be set up within the park. Units within the Park are allowed fiscal incentives such as 100 per cent deduction of profits for the first 5 years and 25 per cent deduction under the Income Tax Act for the subsequent 5 years, and exemption of excise duty to fruit and vegetable–based products. Of the 56 *Food Parks* sanctioned for the country as a whole, only one Food Park was sanctioned for Punjab at Sirhind in Fatehgarh district in 2000–01. Only 29 of the total of 56 Food Parks have become operational.

The implementation for the Sirhind Food Park began in 2003–04 and the Park started operations in 2005. The Punjab Agri–Export Corporation (PAEC) is the implementing agency for the Rs. 15 crore project which includes grant–in–aid of Rs.4 crore from the Ministry of Food Processing. Even while the Ministry has sanctioned a grant of Rs. 2 crore for the project, PAEC has not allotted the industrial plots in the Food Park so far. So far, only the Punjab Agri–Ventures Ltd has come up in the Park for the processing of fruits and vegetables over an area of 5 acres with an investment of Rs. 27 crore. A monitoring report of the Food Processing Ministry finds that PAEC has not yet submitted the utilization certificate for even 50 per cent of the bank loan.

(iii) Mega Food Park Scheme

The Mega Food Park Scheme is being devised under the 11th Five Year Plan on a much larger scale with a more pro–active role for the private sector in linking to market demand and keeping in mind the proximity to the source of raw material. The Mega Park Scheme is essentially private-led and public supported. A Special Purpose Vehicle (SPV) is to be set up for conceptualising, funding and implementing each Park. The Government of India will contribute Rs. 50 crores per Park and the remaining Rs. 300 crores would come from private participants. Of the 30 Mega Parks planned under the Scheme, 5 are planned in the first phase, and one of these is in Punjab. It would include setting up "collection centres" for sourcing raw materials and marketing and distribution linkages for ready take-off of the processed food. A pro-active role of the state government will be crucial in the success of the Mega Food Parks, and amendment of the APMC Act, again, is crucial and should not be delayed.

(iv) Industrial Clusters

Industrial clusters are aimed at inducing collective efficiencies leading to improved competitiveness while partnering with private sector associations of small scale units. The Government of Punjab with the help of SIDBI, NSIC, SBI, SIDO, Uptech, and UNIDO has over the years made some attempts at developing industrial clusters.

Industrial clusters have evolved in Punjab more by default than by design in leather, knitwear, hand-tools, machine tools, and other light engineering industries. But, the state interventions have generally been limited to softer areas such as bringing small scale units together for skill development, and have not addressed the critical problem

of providing infrastructure facilities. By contrast, the state of Tamil Nadu has attempted models of Public Private Partnership in providing infrastructure to small scale units. In Punjab, such initiatives have been few and far between, mainly because of the lack of a professional institutional mechanism to manage such efforts and also because the land is very expensive and private industry has not been successful in raising the necessary financial resources to partner with the government in infrastructure building. More recently, the Department of Micro, Small and Medium Enterprises (MSME), Government of India has launched a Cluster Development Programme for the small scale units. The clusters for Sewing Machine & parts in Ludhiana and the Agricultural implements cluster, Moga have been taken up for development under this programme, while diagnostic studies are being prepared for another six clusters.

The existing small knitwear companies in residential areas lack necessary physical and social infrastructure and constrain the ability of the industry to achieve cost competitiveness and meet the compliances for export and regulatory purposes. The provision of infrastructure facilities to the industry, at cluster level, assumes critical importance in this context. A few attempts at developing infrastructure through public private partnership model have not been successful because of the ineffectiveness of the PPP models, inability of the industry to raise finance, and issues relating to the procurement of land. For example, Ludhiana Dyers and Processors Pvt. Ltd., an SPV promoted by Shawl Club has been unable to achieve financial closure. Some of the important initiatives of infrastructure development in textiles are discussed above as Textile Schemes.

The tanning sector has a major opportunity to meet the growing demand for the raw material, but the present common effluent treatment plant in the cluster needs major expansion (the present capacity being 2 MLD while the requirement is about 7 MLD)

and technological upgradation. The leather products industry is skill-intensive and is in need of a major skill development initiative.

As for hand tools, the technology currently in use is hot forging, while high quality hand tools require special purpose machines using cold and warm forging techniques. Given the scarcity of power, the hand tools industry has not been able to upgrade from oil-fired furnaces to more efficient induction furnaces. Most of the smaller units are located in and around residential areas and lack specialised physical infrastructure, e.g. captive power plants, effluent treatment plants, and manpower training facilities.

(v) Information Technology Parks
Software Technology Parks of India Scheme

SAS Nagar Mohali in the vicinity of Chandigarh has emerged as an attractive destination for IT and IT-enabled industries. Punjab government has identified IT and ITES industry as an important thrust area in its Industrial Policy of 2003. Considering that Punjab has a reasonably good talent pool and a strong potential for further expansion of the pool, and also considering that the usual argument of locational disadvantage of Punjab does not apply to this sector, **the choice of IT as a thrust area for the industrial strategy of Punjab is to be highly commended.** Of the 108 IT units registered in Punjab, 63 (including Dell and Quark) are located in Mohali. The industry is dominated by a few large players. Thus, Dell International and Quark Media accounted for 85 per cent of the IT exports from Punjab in 2006-07.

Being a satellite town of Chandigarh, the city with the highest per capita income in the country, brings several advantages to Mohali. The “tri” cities of Mohali, Chandigarh, and Panchkula are home to some of the best schools, colleges, hospitals

and entertainment institutions in the country. The cities are well connected with roads and railway to Delhi and to many other important cities of the region. Chandigarh has an airport linking the area to Delhi and Mumbai through direct flights. The airport is expected to be upgraded to an international airport.

The STPI (Software Technology Parks of India) centre at Mohali is one of the 47 centres set up by the Government of India in different parts of the country for providing facilitation to software industry. It provides satellite connectivity and regulatory services for certification of export, and the units (numbering 284 as of 2007-08) registered with the STPI are exempt from income tax on their exports. The Punjab Information & Communication Technology Corporation (Punjab Infotech) is the nodal agency of the state government for creating infrastructure, expanding the technical skill base, and facilitating investment in IT and IT-enabled services as well as electronics.

The Electronics Township (ELTOP) spanning 365 acres in Mohali forms the hub of the IT industry in Punjab. An additional 500 acre area is available in the industrial estate for further development. Quark plans to invest Rs.1000 crore in Punjab in two phases and is developing an IT park in an area of 50 acres in the first phase. Quark City in Mohali has commenced work on Special Economic Zone, and space will begin to become available for the industry in 2008. Five more IT SEZs are planned for Mohali. IT parks are also planned for Patiala, Amritsar, Jalandhar and Ludhiana. Also, if IT industry is to be a thrust area of growth for Punjab, there is an urgent need for expanding the institutions of technical training further and improving the quality of the teaching.

The availability of manpower has been a very important factor in the coming up of Mohali as a hub for IT and IT enabled services. Punjab has 50 engineering institutes

from which about 16,000 students graduate every year. Of these, 9000 or so are in IT, computer science & engineering, and electronics. In addition, 51 polytechnics in the state produce 13,000 diploma holders, of whom about 6000 are in IT, computer science & engineering, and electronics. Punjab Infotech through its franchise centers adds another 1500 trained persons to the pool.

The availability and reliability of electricity supply at competitive prices and ease of doing business with the state government are other considerations that determine the ability of a state in attracting investment in IT. Punjab has a long way to go to improve in both these dimensions and some specific recommendations to this effect are made in Chapter 2.

Besides Mohali, Ludhiana should be developed as a prospective hub for IT in the years to come.

5.2 Special Economic Zones

The idea of Special Economic Zones is motivated by the desire to provide world class infrastructure and freedom from red tape for Indian industry to gain global competitiveness and help promote the export of goods and services. The policy of Special Economic Zones (SEZ) was announced in 2000 and the SEZ Act was passed in 2005. The status of SEZs at the all-India level and in Punjab is presented in **Box 5.2**. The Act uses market forces to attract investment by providing fiscal incentives for both the developers of the SEZs and the units located in the SEZ area. Initially it was envisaged that the labor laws within the SEZs would be made more flexible but this provision was dropped from the Bill before it was passed in the Lok Sabha. However, several state governments have subsequently committed to make employment

Box 5.2

Status of Special Economic Zones

India	
SEZs set up prior to SEZ 2005 Act	19
Proposals approved formally	453
Proposals approved in principle	136
Notified under the SEZ Act (as on March 27, 2008)	207
Punjab	
Proposals approved formally	7
Proposals approved in principle:	8
Recommended by Government of Punjab for Approval	3
Notified by the Government of India	2

generation as easy as possible by a suitable framing of rules and interpretation within the existing labor laws in a manner that is investor friendly. The development of infrastructure through the SEZs is expected to reduce the burden on the urban areas and the relatively flexible provisions on export commitments are expected to help in exploiting the opportunities offered by the growing domestic demand in the economy.

In the two years or so since the SEZ Act was notified, there have been many controversies surrounding the acquisition of land by the state governments for Special Economic Zones, the most notable being the violent agitation in Nandigram, West Bengal. The tensions stem partly from a widespread apprehension amongst the farming community that they would be unfairly deprived of their land in the process. There is also fear that the SEZ Act could become a handy instrument to use the special powers vested in the state to acquire land on a hitherto unprecedented scale. Both the

Government of India and the state governments have attempted to allay these fears. The Government of Punjab has clearly stated that it would prefer not to be involved in acquiring lands that were meant for private sector development. Partly as a result of this, and also because land is very expensive in Punjab, there has been relatively little progress in the development of Special Economic Zones in Punjab **(Box 5.3)**.

Box 5.3

SEZs Notified in Punjab

Name	Type	Area (In Hectares)	Investment (Rs. crores)	Employment
Quarickty India Pvt.Ltd., Mohali	IT	20	677	3000
Ranbaxy Laboratories Ltd., Mohali	Pharmaceuticals	32	0	3000

A Pharma specific SEZ in Punjab was notified in the name of Ranbaxy as the developer in April, 2007. An area of 32 hectares was acquired by Ranbaxy from the Punjab Small Industries and Export Corporation. Ranbaxy has already set up a medium size tablet manufacturing unit in the SEZ with a capacity of 300 million tablets per annum with an investment of Rs. 86 crores. There are plans to set up additional capacities catering to the generic pharmaceutical market primarily in the US, EU and other developed economies.

An IT-specific SEZ in Mohali was notified in the name of Quarkcity India Pvt Ltd as the developer in 2007. This SEZ covers an area of 20 hectares and is expected to attract investment of Rs. 677 crores and create direct employment for 3000 persons.

The SEZ which was to be developed in the Amritsar district by the DLF is unable to move forward because of the exorbitant price of land in the area and the unwillingness of the state government to help in making land available.

In exploring options for further development of the Special Economic Zones, the Punjab government should announce a transparent policy with respect to making land available. First of all, the government should prepare an inventory of government land with the government including the unallotted and/or unused plots in industrial areas and some defunct industrial areas. In purchasing land from farmers, a number of practices are being used in the different states including giving some equity stake to the farmers in the industrial ventures. These should be examined for their relevance and applicability in Punjab. **The land pool should be used to promote proactively the development of specialty SEZs, e.g., in IT, Pharma, and agro-based industries.**

5.3 Petroleum, Chemicals and Petrochemical Investment Regions (PCPIR)

In March 2007, the Government of India approved the PCPIR programme to encourage the construction of integrated petroleum refinery and chemicals complexes. The concept of the PCPIR is described below:

> "(The) Petroleum, Chemicals and Petrochemicals Investment Region (PCPIR) would be a specifically delineated investment region with an area of around 250 square kilometres planned for the establishment of manufacturing facilities for domestic and export led production in petroleum, chemicals & petrochemicals, along with the associated services and infrastructure. A PCPIR would be a combination of production units, public utilities, logistics, environmental protection mechanisms, residential areas and administrative services. It would have a processing area, where the manufacturing facilities, alongwith associated logistics and other services, and required infrastructure will be located, and a non- processing area, to include residential, commercial and other social and institutional infrastructure. The minimum processing area for the PCPIR will be about 40% of the total designated area, i.e., around 100 sq km. The processing area may or may not be contiguous. The PCPIR may include one or more Special Economic Zones, Industrial Parks, Free Trade & Warehousing Zones, Export Oriented Units, or Growth Centres, duly notified under the

relevant Central or state legislation or policy. All the benefits available under the relevant legislation or policy will continue to remain available to the said Zones or Parks, as the case may be, forming part of the PCPIR."[10]

It is expected that each PCPIR will get an investment of Rs 35,000 crore to Rs 40,000 crore and that the Government of India will ensure the availability of physical infrastructure including rail, national highways, ports, airports and telecommunication facilities in a time bound manner with an investment of around Rs 10,000 - Rs 15,000 crore for each PCPIR. The state governments would be responsible for providing infrastructure facilities like power, water, sewerage, health, safety and environmental standards. The Government of India has received applications for setting up the PCPIR from Andhra Pradesh, Gujarat, Karnataka, Orissa, Tamil Nadu and West Bengal.

The government of Punjab must draw full benefits from this programme of the Government of India in the development of the petroleum refinery at Bathinda by bringing the proposed petrochemical complex under the PCPIR scheme, and apply for setting up the PCPIR at Bathinda.

5.4 Skill development

Skills are emerging as a major challenge as the Indian economy has moved to a higher growth path of 7½ to 8½ per cent per annum. The same is true for the economy of Punjab, even though the GDP growth rate of Punjab is much lower than the national average, Whether it is traditional industries such as light engineering and textiles or new industries such as modern food processing and IT, there is need for creating an expanding pool of skilled labor to match the growing demand for employment. The skill deficit is bound to increase as Punjab embarks on a new industrial strategy for

[10] Government of India: *Policy Resolution for Promotion of Petroleum, Chemicals and Petrochemical Investment Regions,* 2007. para 3–6.

fuelling growth. The challenge of skill development to match the fast expanding demand for skilled labor therefore assumes greater urgency.

Creating high quality employment as part of industrial resurgence is fundamental to meeting the social challenges facing Punjab. The youth of Punjab, whose fathers had led the Green Revolution and reaped the dividends from the rural prosperity in the state are typically unwilling to be satisfied by manual unskilled work on the farm which is now carried out by migrant labor from UP and Bihar. They are looking for skilled jobs in industry and service sectors.

The challenge is made more acute by the fact that Punjab is specially favourably placed in the demographic situation within India. If India is going through a demographic transition with 50 per cent of its population being of working age, Punjab does better. In rural India, about 58 per cent of the population is in the age group 15–59 years, whereas in rural Punjab the ratio is 60 per cent. The comparable figure for urban areas are 65 per cent and 67 per cent, respectively**.** Punjab has a higher level of literacy than the national average, especially amongst rural women, even in comparison with the states that have significantly higher rural male literacy such as Tamil Nadu and Gujarat **(Table 5.6)**.

Punjab also has a larger proportion of the population that has completed education up to secondary school and higher. This is evident for both male and female segments in the urban and rural populations, but is particularly in evidence amongst the female population **(Table 5.7).** Given these advantages of youth and educational attainment, particularly amongst women, there is clear potential to build on this base through vocational education and technical training. A larger youthful population and a more educated population both call for strong efforts at creating high quality jobs.

Table 5.6

Literacy Rate

(7 years and above- 2005/06, Per cent)

	Rural			Urban		
	Male	**Female**	**Total**	**Male**	**Female**	**Total**
All India	74.2	52.1	63.5	89.4	76.5	83.2
Punjab	75.2	63.0	69.3	88.3	79.7	84.4
Haryana	77.9	55.8	67.4	87.9	74.1	81.4
Gujarat	80.6	52.1	66.7	91.0	78.7	85.2
Maharashtra	83.5	62.2	73.2	92.5	81.6	87.3
Karnataka	71.2	52.0	61.7	89.9	74.9	82.7
Tamil Nadu	78.3	59.0	68.4	93.1	82.4	87.7

Source: Employment and Unemployment situation in India 2005/06, 62nd round, NSS.

Table 5.7

Complete Education for 15 years and above

(Per cent of population)

	Upto Middle School	Secondary School	Above Secondary School	Upto Middle School	Secondary School	Above Secondary School
	Rural Male			**Rural Female**		
All India	47.9	11.1	10.7	32.9	5.9	4.4
Punjab	40.3	18.3	11.9	35.6	12.4	9.4
Maharashtra	51.9	14.7	13.3	40.7	8.9	5.3
Tamil Nadu	49.6	11.6	11.9	39.0	6.5	5.8
Gujarat	54.1	10.8	11.0	33.2	6.2	3.1
Haryana	40.3	19.4	13.3	34.1	6.0	6.8
	Urban Male			**Urban Female**		
All India	40.3	16.7	31.5	37.3	13.5	22.4
Punjab	32.8	23.9	29.7	28.3	19.0	29.2
Maharashtra	40.3	18.4	32.9	40.2	16.1	22.5
Tamil Nadu	44.6	19.8	27.3	45.0	14.0	20.7
Gujarat	48.9	16.9	24.2	43.6	12.8	19.3
Haryana	37.3	20.1	28.6	30.1	13.0	26.2

Source: Employment and Unemployment situation in India 2005/06, 62nd round, NSS.

The base for training labor for low-skilled jobs is also present in Punjab. Of the 460,000 unemployed people registered with the employment exchanges in 2005, a good 76 per cent are freshers with little training or experience. A breakdown of the educational background of this group is provided below:

Freshers for training	**Share** (per cent)
Matriculate	57
Undergraduate	28
Graduate	11
Post Graduate	3

There is a reasonably widespread infrastructure of more than 5000 Industrial Training Institutes (ITIs) in India which offer a range of training courses for workers. The Government of India formulates the overall policy with respect to vocational education but the operation of the schools as well as administration of the ITIs rests with the state governments. There are 49 ITIs in Punjab. As in the rest of the country, the quality of training in the ITIs as well as in the ITCs (private training institutions) in Punjab is very poor. There is an urgent need for expanding the number of skills covered by the ITIs as well as tailoring the course curricula to the requirements of the local industry. Mostly, the ITIs work on a two year diploma programme. There is need to devise shorter term courses in areas that are marketable especially in Punjab itself.

It is worth noting that between 1980 and 2005, the annual enrollment in the ITIs, Technical Industrial Art & Craft Schools, and other technical training institutions in Punjab actually declined from 35,000 to 23,000. In case of the ITIs, the decline is despite the increase in the number of ITIs from 37 in 1980 to 49 in 2005. In the same period, enrollment in diploma courses in the state increased nearly ninefold as more and more private engineering colleges and polytechnics opened in Punjab to bridge the skill

gap. The poor enrolment record is partly because of inadequate funding, leading to staff and equipment shortages (resulting in the closure of several courses over the years as in the case of the ITI in Patiala) and partly because of the inefficiencies and the poor governance or the perception that the training does not impart skills that are marketable.

For the small scale units, besides the 10 industrial centres and 13 quality marking centres, there are a number of industry specific institutes designed to provide technical support and training. However, their effectiveness has been constrained by lack of strategy and funds. Of course, there are exceptions. The Central Institute for Hand Tools, Jalandhar, run by the Government of India, is making a significant contribution to the development of hand tools industry of Jalandhar. Its services include job work, R&D and testing, introduction of latest technologies and training of work force. Similarly, the L M Thapar Center for Competitiveness which was set up in 2004 with a private grant, is working with the Hand Tools cluster in Jalandhar and the steel mills in Mandi Gobindgarh to facilitate the following of best practices by firms and help enhance their competitiveness. The Center has also provided training services to employees in certain private sector companies. The Northern Indian Institute of Fashion Technology has also been providing technical support to the garment industry. But, as mentioned above, the principal institutions entrusted with the task of technical training for the labor force, i.e, the state-owned ITIs, like their counterparts elsewhere in the country, have failed to measure up to the task.

The Government of India has recently announced a programme for upgrading the infrastructure of the ITIs based on PPP. An interest free loan of Rs.2.5 cr. each will be provided for upgradation of 1396 ITIs in the country, providing there is an agreed plan for upgradation within a PPP framework. Under the Scheme, the state government will have to constitute an Institute Management Committee (IMC) in the ITI which should

be chaired by the private partner and have 50 per cent representation of the private partner. As the owner of the ITI, the government continues to regulate admissions and fees and recruitment of regular staff. However, the IMC can introduce new courses especially short term demand responsive courses and hire teachers and trainers on contract. A percentage of admissions can also be decided by the IMC.

Box 5.4

The ITI in Patiala has established a Center of Excellence in Refrigeration and Air Conditioning with a grant of 40 lakhs from the Government of India. In addition, a grant of Rs. 1.17 crore was received from the state government under the Punjab Nirman scheme. The grant was utilized to add a new wing to the Center. The ITI has set up a well equipped conference room, a computer lab and broad band connectivity. An EDUSAT room is also being established for live education under the Government of India scheme. An advanced course in Refrigeration is being set up. Voltas has recruited from the Center for its requirements in the Middle East.

An innovative practice at the ITI, Patiala is the internal revenue generation scheme. Over Rs. 16 lakhs of revenue has been raised by either training industry staff or by partnering with private players to run profitable courses. Examples include, a 35:65 partnership with a private firm running mobile repair classes off the ITI premises. Another example is the training of the workforce of NHPC for a consideration of Rs. 5000 per month.

Despite earning the reputation of being one of the best run ITIs in Punjab, the institute has yet to re-orient its course materials. It offers several courses in trades like plumbing, welding, machining etc. The equipment in most of the departments is old and obsolete. The lab (and the course) has been closed for several years because of staff absence. Industry participation is lack luster. Placement services are also not well organized. No computerized data bases are maintained and no proactive effort is made to reach out to industry. Of the 743 seats, only 144 students were placed in on-campus placements in 2007, the first year when the institute started recording campus placements.

Punjab has identified 20 ITIs under this Scheme, but progress thus far seems inadequate. Other states are moving ahead in signing the MoUs with the private partners and some have even begun the revamp and are offering new courses. The success of these ventures depends not only in finding private sector partners, but in

conceding a substantial degree of autonomy in the decision making to the private sector parties. It is vital to address this issue if the scheme to succeed in Punjab. It should not come as a surprise that vested interests will resist genuine sharing of decision making but this resistance must be overcome. **The government of Punjab should in the first instance select three ITIs and work towards their upgradation based on best practices with a clear timeline for implementation. If a conscious attempt is made to replicate the degree of freedom given to PPP management in some of the states where this has worked well, it will serve as a benchmark for upgradation of other ITIs.**

Since knowledge-based industry such as IT, pharmaceuticals, biotechnology and healthcare are to be given a major thrust in the proposed industrial strategy, Punjab has to focus attention on expanding the infrastructure of higher education as well as improving its quality. The Government of India has announced the setting up of one new central university in Punjab and one new Indian Institute of Technology. **The government of Punjab must quickly identify suitable land for the university and the IIT so that the implementation can begin without any delay.**

CHAPTER 6
SUMMARY OF RECOMMENDATIONS

The analysis in this report has highlighted the industrial deficit in Punjab and the economic decline of the state against the backdrop of agricultural stagnation and increasing environmental stress. While the Indian economy appears to have made a successful transition to high growth in the past ten years, Punjab has fallen more and more behind, so much so that in the 11th Plan, the lowest growth target of all states (5.9 per cent per annum) is that of Punjab, while the Indian economy aspires to grow at an average rate of 9 per cent per annum. The old engines of growth like the Green Revolution have slowed down, while no new engines have been put in its place. Industry in particular has not stepped in to give the economy the impetus it needs.

In proposing an industrial strategy for Punjab, we have recognised the urgent need to revive the agricultural sector by building explicit linkages between industry and agriculture. Traditionally the agrarian focus in the development strategy of Punjab derives from the very strong political clout of the land-owning classes, but this does not mean that industrial dynamism should be neglected, and yet that is what has happened. To overcome this and to bring focussed attention on industry calls for radical change in the mindset on the part of the political leadership. In fact the solution to the challenges facing the agricultural sector in Punjab lies in an industrial strategy which is effectively anchored in the rich agricultural base of Punjab. Policy makers must build on this interdependence.

The strategy proposed in this report highlights the importance of building synergy between the agricultural and the industrial sectors, on the one hand, and the predominant small scale sector and the large scale sector in manufacturing, on the other.

The recommendations are not limited to changes in industrial policies alone but cover the entire spectrum of policies which have impact on industrial development and the associated agricultural rejuvenation. These include the amendment in the Agricultural Produce Marketing Committees (APMC) Act, the long overdue reforms in the power sector, a new paradigm of public private partnership (PPP) to build high quality physical infrastructure as well as a skilled labor force, and reform of the highly anti-industry tax regime in Punjab. The recommendations emerge from the industrial strategy proposed in this report and have been discussed earlier in the report in the course of presenting the analysis of the performance and the challenges facing the economy of Punjab. This chapter merely pulls together these recommendations.

6.1 Making Land Available

Punjab, like other states, has to make land available for industrialization. The challenge is greater because land is more fertile and much more expensive in Punjab. Hence

- First and foremost, in order to make land available to industry for purchase in a transparent manner, the government of Punjab must develop a comprehensive policy for long-term utilization and development of land, clearly earmarking parcels for urban expansion, infrastructure (roads, canals, tanks, railways etc.) and industrial use. A substantial volume of land which has been previously allotted has not been utilised to build functioning industrial units. The government should examine the legal feasibility of resuming such land so that it can be allotted to others with interest in industrial development.

6.2 Agro-based Industries

For the development of agro-based industries,

- The government of Punjab must speedily amend the Agricultural Produce Marketing Committees (APMC) Act and do so in a manner consistent with best practices in other states. Only then can Punjab hope to attract large scale investments in logistics, cold chains, and food processing with their multiplier effects on the rural economy and small farmers of Punjab.
- Dairy industry has done well in Punjab but can do much better with a growing demand with increasing urbanization in the country. A concerted effort must be made by the state government to attract more private investment in this sector.
- Special attention should be given to promoting SEZs for agro processing and food processing industries.
- In its 2006 Textile Policy the Government of Punjab outlined several measures necessary to rejuvenate the textile industry. These included, capitalizing on the centrally sponsored schemes such as TUFS, developing a textile cluster in Ludhiana for the benefit of small scale textile units, setting up three textile parks, and upgrading polytechnics and ITIs to address the human resource requirements of the industry. But there has been little by way of implementation, while other states have done much more.
- In order to address urgently the issue of the competitiveness of the large scale cotton textile industry including the tax regime facing the industry in Punjab, the government of Punjab must set up a High Powered Expert Group on Textiles which should include a few industrialists from Punjab. This Group must report to the government within one month on why large scale expansions in this sector are moving out of the state and what can be done to arrest this

trend. The government must also facilitate the development of Textile Technology Parks in Punjab which can synergise the growth of large scale sector with the modernisation of the small scale units in hosiery, garments and other textiles.

6.3 Small Scale Industry

To modernise and rejuvenate the small scale units in light engineering, leather, hand tools, sports goods, hosiery, etc., the strategy recommends the development of modern clusters and/or attracting a large scale plant in automotives which can facilitate the technological upgradation of the component suppliers through vendor development. The following recommendations address these challenges:

- To develop Industrial Clusters under Public Private Partnership (PPP), the government of Punjab must set up industry-specific Task Forces in collaboration with industry associations such as PHDCC, CII and FICCI to study the best practices by other states of India or other countries, and come up with concrete proposals on cluster development without losing much time.
- To review why Punjab has failed to benefit from Central Schemes such as Food Parks, Textile Technology Parks, Cluster Development, Special Economic Zones, etc., the government of Punjab must set up a High-Powered Administrative Review Committee with Chief Secretary as Chairman and principal Secretaries of the major economic departments as members. A Secretary level officer should be put in place in the Chief Minister's office to track the opportunities offered by these schemes and get the administrative machinery in the state to respond to exploit these opportunities.

- The government of Punjab should proactively attract a large plant for automotive manufacture because of its potential for positive downstream effects on the numerous small scale auto-component manufacturers.

6.4 Infrastructure Development

Besides industry-specific infrastructure discussed above, the strategy calls for a concerted effort to build high quality physical infrastructure which can support the rapid industrial growth which will be generated by the new strategy. The following recommendations are made for this purpose:

- The government of Punjab must unbundle generation, transmission, and distribution as stipulated in the Electricity Act of 2003. This has been done in almost all states of India.
- Privatization of distribution is a good place to begin reform of the power sector.
- The pricing of power must cover costs, and the policy of free power to farmers, and domestic consumers of scheduled castes must make way for a more rational policy of pricing power so that power is conserved. Otherwise, pump sets fuelled by free power are drawing ground water to feed paddy, and the water table in the state is declining at an alarming rate, on the one hand, and the industrial sector is made to bear partial burden of this policy of subsidising the agricultural sector, on the other.
- Open access to power must be encouraged by ensuring that wheeling charges are not too high.

- The Delhi-Ludhiana link in the dedicated rail freight corridor must be expedited by getting it included in the Western Express corridor which is being developed in the first phase of the project.
- The government of Punjab must work to promote at least one more new international airport and a number of small daylight takeoff airports to improve connectivity in the state.
- Punjab must promote SEZs in agro-processing, textiles, IT, bio-technolgoy and pharmaceuticals. To promote and facilitate the development of SEZs with world class infrastructure facilities, the government of Punjab should set up a High-Powered Group under the chairmanship of Chief Secretary, which should draw lessons from the successes and mistakes in other states and explicitly put forth a model for facilitating land acquisition for SEZs in Punjab, which is transparent and workable.

6.5 Skill Development and Educational Reform

Skill development to meet the growing demands of industry requires a major effort on the part of the state to revive its defunct infrastructure for training. The state should use the assistance provided by the Government of India and the partnership offered by the private sector in this effort. More generally, quality of education is a major challenge facing Punjab even as the state has a very good infrastructure for basic education and a reasonably good infrastructure for higher education. While the problem of the delivery of education in public sector institutions with little accountability and heavy political interference is not unique to Punjab, it seems to be much more acute in Punjab and more frustrating because a

good infrastructure is in place. Delivering good quality education and health is one of the principal governance challenges facing the state:

- A High Powered Committee under the Chairmanship of Chief Secretary should be set up to review why PPP in upgradation of ITIs for which the Government of India has offered financial assistance, is not progressing well in Punjab and recommend steps to make it work, based on the experience of some other states.
- An Eminent Persons Group must be formed to examine the factors behind the poor delivery of education and its poor quality at all levels. The EPG should recommend measures to address this major governance challenge which stands in the way of Punjab's journey on a knowledge-based path of development.

6.6 Knowledge-based Industries

- The government of Punjab should exploit the synergies in the development of IT, BT, and healthcare to build a world class knowledge city in a location not too far from Chandigarh and Mohali.
- The government should also create new hubs, e.g., Ludhiana for the development of IT and IT-enabled services.

6.7 Tax Reforms and Subsidies

It would be reasonable to argue that the tax-subsidy regime in Punjab is biased against industry. Some of the biases, e.g., industry partially cross-subsidizing the burden of providing free power to agriculture, continuation of

octroi on the use of electricity by industry, and the recently imposed entry tax on goods entering Punjab, as well as the implications of purchase tax and mandi fees for industry in Punjab, are discussed in Chapter 4. The "extortion" at the information collection centers for the entry tax at the borders of Punjab with other states is another major factor contributing to the erosion of competitiveness of industry in Punjab. VAT refunds are also subject to inordinate delays. The recommendations are:

- VAT refunds should be made in a presumptive manner. Online payment and direct refund into the bank account of the manufacturer should be the answer to the menace of delays in refunds. If the refunds are not given within a month, the revenue department should pay interest at a penal rate to the manufacturer.
- Octroi on electricity must go.
- Entry tax must be withdrawn.
- The report has not recommended payment of any subsidies, keeping in mind the overall stress in the state finances. Past promises of subsidies by the government of Punjab must be honoured in order to establish the credibility of the government. Specific allocations must be made in the state budget to clear the arrears.
- The only case for capital subsidy is for industrial development in general and infrastructure development in particular in the Border Area Districts.

6.8 Radical Reform in Administration

Ease of doing business is one of the principal elements influencing the investment climate for any investor. The universal cry of stakeholders in Punjab is

with regard to administrative inefficiencies and bureaucratic delays in getting business done. Feedback from industry associations also suggests that Punjab fares very poorly, compared with other states in this respect. The recommendation is:

- To set up an effective Single Window for industrial approvals.
- To set up a system of deemed approvals after a specified lapse of time.
- To set up a high empowered Administrative Reforms Commission which suggests radical reforms in administration so as to make significant improvement in the investment climate.

6.9 Setting Up New Engines of Growth

The proposed strategy recommends some new engines of growth:

- The new Mittal-HPCL petroleum refinery in Bathinda has opened up the possibility of a large scale petroleum hub around it. To promote a Petroleum Chemicals and Petrochemical Investment Region (PCPIR) at Bathinda, the government of Punjab should find an anchor investor for downstream industries and put forth a proposal to the Government of India to set up a petrochemical industrial complex in Bathinda.
- Special Economic Zones particularly in agri-processing and agri-exports.
- The government of Punjab must start planning for an Industrial Zone along the dedicated rail freight corridor, which can generate a great deal of economic activity in the state. It is important to ensure that the Delhi-Ludhiana link is taken up in the first phase along with the Western Express corridor.
- Attracting investments in logistics and cold chains.

6.10 Establish an Investment Commission

Our final recommendation is that if the Government of Punjab finds the report broadly acceptable, it should put in place an institutional mechanism that can take these recommendations forward, elaborate and modify them, if necessary, prioritise among them and also provide a proactive forum to operationalise the recommendations and monitor the implementation of those accepted by the Government. This can be done by **setting up a "Blue Ribbon Investment Commission" under the chairmanship of an independent eminent industrialist, with the Chief Secretary as a member** and including other industrialists currently operating in Punjab as well as a few that have left Punjab and made a mark nationally and globally. This Commission should discuss the individual recommendations of the report with concerned Ministries / Department to ascertain difficulties, if any, with implementation and then prepare a detailed plan of action to implement the strategy proposed in the report in a proactive manner with clear timelines established for individual elements and an indication of priority. The commission should also proactively interact with industrialists in Punjab, those outside of Punjab in India, and also with NRIs having an interest and commitment to Punjab.

The Commission should be empowered to obtain information from government agencies and should report directly to the Chief Minister. A report proposing timelines for action should be submitted within 4 months of the Commission being established. Subsequently, the Commission can monitor implementation and engage in a pro-active effort to attract investment into Punjab.

ANNEXURE A

DIALOGUE WITH STAKEHOLDERS

The team interacted with stakeholders with regard to the industrial and economic development of Punjab to ascertain their views on the overall industrial policy regime which has guided the process of industrial development in Punjab. The team also discussed their concerns relating to industry-specific issues and derived a sense of the investment climate in the state.

A.1 Stakeholder organisations and locations of meetings

- The Government of Punjab was represented at these discussions by the Departments of Planning, Finance and Industries, and there were also representatives drawn from the Punjab Small Industries & Export Corporation Limited (PSIEC), the Punjab Agro Industries Corporation (PAIC), the Mandi Board and Punjab Infotech.

- Other stakeholders included entrepreneurs largely from small scale industry and also representatives of some of the major medium and large sector units, and representatives of the chambers of commerce and industry. The team also had formal and informal interactions with other eminent persons from Punjab who are knowledgeable about the developmental problems of the state.

- The meetings were organized in the cities of Chandigarh, Mohali, Amritsar, Ludhiana, Jalandhar, Batala, and Bathinda. Industry representatives from neighbouring towns and cities participated in these interactions. The

participation was free and frank. **Annexure A.I** provides the list of participants in these discussions.

A.2 SUBJECTS DISCUSSED

The context of the discussions was the vision statement of the Chief Minister of Punjab, which outlined the following broad objectives for the new **Industrial Policy**:

- To revive the manufacturing sector and to increase its contribution in the GSDP from 14 per cent to 20 per cent
- To attract foreign direct investment (FDI) and to make the state a favoured destination for industrial investments
- To revive sick industry and to strengthen the prominent industries of the State
- To generate more employment and to make the youth more employable
- To upgrade infrastructure in the state.

Besides discussing the state of the economy and the industrial policy issues, the interaction focussed on the infrastructure challenges facing Punjab and the need for reform in government procedures and in the functioning of regulatory institutions.

A.2.1 Role of government agencies

- The role and relevance of the organizations like Punjab Finance Corporation (PFC) and Punjab State Industries Development Corporation (PSIDC) in the industrial development of Punjab formed part of the discussion. The work of

Punjab Infrastructure Development Board (PIDB) in facilitating infrastructure creation was also discussed.

- The tremendous challenges facing the power sector and the functioning of the Punjab State Electricity Board (PSEB) came in for a lot of criticism.

- There was a broad consensus that the facilitation of business through the office of *Udyog Sahayak* left a lot to be desired. It was felt that it ends up being an extra wheel in a cart which already has many wheels.

This chapter presents the key issues which emerged from the discussions. This is followed by a presentation of the industry-specific suggestions made by entrepreneurs in specific industries.

A.3 KEY INDUSTRY ISSUES

The discussions with industry representatives centred on the following major areas:

1. Infrastructure
2. Land Availability
3. Human Resource Development
4. Industrial Facilitation by the Government of Punjab
5. Tax Regime
6. Tax Exemptions to Neighbouring States

A.3.1 Infrastructure

- Punjab is usually credited with a relatively good network of roads. But the feedback from industry representatives in Punjab was that the inadequate

maintenance of roads is leading to a rapid deterioration in the conditions of the roads, and the expansion and widening of the existing roads has also not kept pace with the economic growth in the state.

- There was widespread dissatisfaction with the manner in which *Industrial Estates* and *Focal Points* are maintained. The roads are riddled with potholes and street lighting is poor or altogether absent. The entrepreneurs strongly urged the development of modern industrial estates on the lines of the IMT, Manesar (Haryana) in partnership with private investors.

- They felt that industry is willing to participate in routine maintenance and upkeep of industrial areas, but as of now, the municipalities do not even like a private company to repair a road even when done so at its own cost even though the problem arises from irregular maintenance on the part of the local government. Effluent treatment plants for proper disposal of industrial waste are also few and in poor shape.

- The industrialists felt that Punjab must plan well to reap maximum benefits from the *Dedicated Rail Freight Corridor* and the *Industrial Corridor Schemes* of the Government of India so as to substantially reduce the haulage costs of the products between Punjab and the ports, and also cheaper transport of raw materials from distant locations to Punjab.

- The severe shortages, poor quality and excessive cost of power figured prominently in all industry interactions. Frequent power cuts (both scheduled and unscheduled) cause work interruptions and force capital investment in standby diesel generating (DG) sets.

- The burden of cross-subsidy in power pricing upon industry keeps the high price of power higher than it would otherwise have been, thus eroding the

competitiveness of industry in Punjab. There was strong consensus that power shortages must be resolved urgently by augmenting power generation capacity and reducing AT&C or "transmission and distribution" losses by improving distribution networks.

- In creating additional capacity, captive power generation and co-generation routes must also be explored.

- The long lead time in obtaining an electric connection was highlighted, indicating how corruption is routine and governance standards are going from bad to worse.

New Approaches to Infrastructure Development

- Recognizing the crucial importance of infrastructure in determining the cost competitiveness of individual companies, the Government of India has initiated a number of central schemes to help build infrastructure with the paradigm of public-private partnership. Thus, the *Scheme of Integrated Textile Parks* (SITP) and Food Parks are designed to provide good quality roads, power and other infrastructure facilities such as effluent treatment plant.
- The participants in the meetings felt that the state of Punjab has not partaken of these central schemes as many of the other states have. Small scale units in textiles should be rejuvenated with the help of schemes such as the Government of India's *Technology Up-gradation Fund Scheme*.
- Old clusters of sports goods, leather and textiles should similarly be transformed through new Cluster Development Schemes in a public-private partnership framework.
- In some of the old clusters/industrial estates/focal points, residential dwellings have come up in areas previously designated for industrial use. Rising property prices and shortage of space are feeding this trend. This means that either land

becomes unavailable in the vicinity or it becomes too costly to be viable for industrial expansion.

- To arrest this trend, city-wise Master Plans must be prepared with firm demarcation for the industrial and residential areas as is being done in the case of SEZs.
- Since small scale units dominate the industrial scene, even the old industrial estates which are lying dormant can be promoted as sector-specific SEZs.
- Punjab has not taken adequate advantage of the *Special Economic Zone (SEZ) Act of 2005*, which was notified in 2006. Development of Special Economic Zones to provide world class infrastructure is an opportunity Punjab should exploit for industrialization and economic development.

A.3.2 Land Availability

- Land availability at affordable cost has emerged as an important constraint in the growth and expansion of industry in Punjab. Land along the Grand Trunk (GT) road in the Amritsar–Jalandhar–Ludhiana belt has become too costly to be viable for industrial undertakings.
- Some participants felt that new industrial estates should be located in the countryside, away from the GT road.
- It was also felt that the Government of Punjab should consider developing an alternate industrial hub at Bathinda, exploiting the synergies between the refinery and other downstream petrochemical products.

A.3.3 Human Resource Development (HRD)

- The industry participants at the meetings felt strongly that human resource development should be accorded top priority.

- Skills are emerging as a major constraint on industrial growth in Punjab.
- Upgradation of the ITIs and modernization of the course curriculum in consultation with industry is very important so that the supply of skills is well matched with their demand.

A.3.4 Industrial Facilitation by the Government of Punjab

- There was a strong feeling among the industry representatives that successive governments in Punjab have been very biased in favour of the farmer and have neglected the interest of industry.
- Consistent inadequacies of the government to implement the industrial policy initiatives and make good on the assurances which are routinely announced has also undermined the credibility of the Government of Punjab.
- For example, no provisions were made in the budget for the subsidy commitments made in the *Industrial Policy of 2003*. The government was compelled to make allocations for the subsidy payment by an order of the High Court in 2003 following litigation.
- The Government of Punjab still owes over Rs. 350 crore in subsidies to the industrial sector in Punjab pertaining to the industrial policy of 1996 and the earlier policies.
- The industry representatives indicated that “inspector-raj” continues unabated. Frequent inspections and burdens of compliance continue to draw a substantial amount of management time away from productive use, and are a source of corruption.
- The measures initiated by the government to improve industrial facilitation, e.g., the office of the *Udyog Sahayak*, have not made much of a difference. The continued existence of impenetrable walls between government departments,

compel businesses to pursue applications individually with each of the 17 departments, thereby making *Udyog Sahayak* a mere post box and an extra stop.

- Approvals and clearances take several months to process, and little progress has been made to implement a system of "time-bound clearances and deemed approvals." Also, policy making is not a participatory process with involvement of industry to provide suggestions in a transparent manner.

A.3.5 Tax Regime

A few tax related issues figured prominently at most industry interactions.

- Value Added Tax (VAT) refund is a major source of concern. There are long delays in VAT refunds to exporters, and to those who sell outside of the state, and for tax-exempt industries the delays, at times, stretch up to a year.
- Such delays eat into the working capital requirements of the firms, causing an additional financial burden on the small scale units. E-filing and e-processing of refund claims could help resolve this problem, but this has not happened, and corruption is rampant.
- There was a great deal of anxiety about the recent introduction of the 4 per cent **Entry Tax** imposed by the Government of Punjab on steel, yarn, sugar, and chemicals. These are crucial inputs which are bought from outside of the state for use in the industry of Punjab.
- The **Entry Tax** discourages processing of these inputs by user industries in Punjab.
- While hurting local industry, such actions also go down unfavourably with potential investors who may be contemplating investment in the State.
- The *Information Collection Centres* (ICCs) set up by the Excise and Taxation Department at the points of entry into the state are seen as a major hindrance to

the free flow of cargo, and a source of corruption. Some participants complained of extortion at such centres and expressed a strong view that these should be removed.

- The *Change of Land Use* (CLU) and *External Development Charges* (EDC) recently imposed by the Government of Punjab evoked a great deal of concern. The charges on land developed for industrial use were perceived to be prohibitively high, especially since land prices are already very high in Punjab.
- However, in its latest notification dated January 11, 2008, the Government of Punjab has mitigated this concern to a large extent by substantially reducing the CLU and EDC charges.

A.3.6 Tax Exemptions to Neighbouring States

- The package of incentives and tax exemptions given to the states of Himachal Pradesh, Uttarakhand, and Jammu & Kashmir, by the Government of India in 2003 was universally perceived as a significant deterrent to the expansion of industry in Punjab.
- Many sectors of industry in Punjab have experienced some degree of capital flight from Punjab to the neighbouring tax havens.
- Proliferation of industrial activity at the Himachal Pradesh border indicates that Punjab has suffered considerably from these concessions.

A.4 INDUSTRY-SPECIFIC ISSUES

This section highlights industry specific issues raised at the meetings. For ease of assimilation, this section has been organized under the following heads: textiles, other agro-based industries, leather and sports goods, light engineering, IT and Biotech.

A.4.1 Textiles

The textiles industry needs large tracts of land at affordable cost for expansion. The land in the Amritsar-Jalandhar-Ludhiana industrial belt is costly.

- It was felt that the government of Punjab should consider developing a textile park in the 800 acre plot available with the Department of Industries at Ladhowal or other suitable sites.
- The Bathinda-Mansa-Barnala belt, where the Trident group already has a sizeable presence in the textiles could be developed as an alternate hub for textile industry.
- Industrial facilitation in Punjab was lethargic when compared with other states like Tamil Nadu and Madhya Pradesh.
- Not a single Textile Park has come up under the SITP scheme during the *Tenth Plan Period*, while other states have aggressively benefited from the scheme.
- Labor laws in some of the competitor states like Madhya Pradesh are perceived to be more flexible.

A.4.2 Light Engineering Industry

Technology upgradation, land for expansion, flexibility in labor laws and availability of credit at affordable cost were the main points raised during the discussion.

- Technology up-gradation is an urgent need of the light engineering industry in Punjab. This is particularly because the industry mostly consists of small scale units, some of which are exporting and face stiff competition from technologically more advanced players in China and Taiwan.

- A technology up-gradation scheme on the lines of the “TUFS scheme” for the textile industry was suggested by industry representative to help the transition of more small scale units to global competitiveness.
- Several light engineering goods industries, such as hand tools, valves and cocks, bicycles, bicycle components, auto-components, and machine tools need infrastructure up-gradation urgently.
- A cluster-oriented approach should be developed in collaboration with UNIDO or with assistance from the Government of India to provide good infrastructure facilities on a priority basis.
- The light engineering industry in Jalandhar requires affordable land for expansion. The industry representatives pointed to the 400 acre plot of land available with the Department of Industries at Kapurthala for developing a cluster of light engineering industries.
- More flexibility in labor laws, particularly in the areas of “hire and fire flexibility” and “contract labor laws” was also felt to be necessary for the industry to improve its competitiveness and reach a level playing field with tough competition from China.
- The labor law administration needs to be more industry-friendly and less burdensome.
- An area of prime concern for the small and medium sector is the non-availability of credit at reasonable cost. The problem is exacerbated by the fact that banks are not complying with the RBI guidelines, which permit them to extend collateral free loans of up to Rs.25 lakhs to this sector. The industry representatives also wanted that the sick units, which had defaulted on loans taken from the Punjab Finance Corporation, may be allowed by settling the loans according to the guidelines issued by SIDBI and the RBI which will help in the process of their rehabilitation.

- The bicycle component manufacturing industry has come under some pressure due to cheaper imports from China. The industry advocated imposition of anti-dumping duties on the imports from China.

A.4.3 Other Agro-based Industries

There was consensus that a mix of policy initiatives and infrastructural development would be necessary to facilitate the growth of agro-based industry, e.g., food processing.

- The policy framework must create an enabling environment by amending the APMC Act to facilitate direct purchase of farm produce by the industry, formulating rules for contract farming to promote corporate interest in the agro-economy and offering suitable incentives to attract investments into agro processing.
- The policy initiatives must be backed by creating suitable infrastructure facilities. The Food Park and the Mega Food Park schemes of the Ministry of Food Processing of the Government of India provide tremendous opportunities in this area.

It was also felt that over-exploitation of groundwater due to paddy cultivation might have serious implications for the long term sustainability of agricultural growth in Punjab. Crop diversification through linkages with the food processing sector and modern retail services as well as investment in logistics and cold chains are the only answer.

Another emerging concern for the agricultural economy of Punjab is the increasing non-viability of the small farmer. Dwindling land holdings have made it difficult for small farmers to earn sustenance from farming. Such farmers must be

introduced to more remunerative alternatives such as horticulture and other ways of supplementing their income, e.g., animal husbandry and dairy farming.

A.4.4 Leather & Sports Goods Industries

The sports goods industry is seasonal in nature and therefore dependent on contract labor for execution of its orders. The industry representatives suggested that contract labor laws should be liberalized. Further, to facilitate growth, the industry wanted that land should be allotted for expansion at the proposed industrial park on the Kapurthala road. They also urged the Government of Punjab to persuade the J&K Government to lift the ban on the export of willow.

The leather industry requires an integrated leather complex in Jalandhar for expansion. The effluent treatment plant at the existing leather complex also needs to be upgraded and expanded.

The industry representatives in Jalandhar felt that the Inland Container Depot (ICD) at Jalandhar should be directly linked by rail to the seaports of Mumbai and Gujarat.

A.4.5 IT & ITES and Biotechnology

The foremost need of the IT industry was felt to be the availability of qualified professionals. Only a fraction of the graduates emerging from the training institutes of IT and ITES are employable. The course curricula of the institutes should be revised in consultation with the industry and the quality standards should be raised and strictly enforced.

- The IT industry is growing fast and requires more space. The availability of space in the IT Park of Mohali is in short supply. Increasing the FAR and permitting leasing of space would unlock space for the small and medium companies immediately.
- For the larger players, space availability may be addressed by accelerating the development of more SEZs.
- The Government of Punjab needs to be more proactive in creating an enabling environment for the industry to grow.
- Periodic industry meets should be organized to develop a roadmap for the growth of the industry.
- The processes for approval of building plans and layouts should be streamlined by segregating the areas of responsibility between the offices of GMADA, the Chief Town Planner and the Department of Industries.

The industry representatives felt that **biotechnology** could emerge as a sunrise industry in Punjab. It was felt that the Government of Punjab must help to build the necessary human resource base and infrastructure capabilities to compliment a strong presence of pharmaceutical industry and the proposed National Institute of Biotechnology.

More specifically, the government should set up technical training institutes on the lines of NIPER, Mohali and promote the development of Special Economic Zones in pharmaceutical industry.

Annexure A.I: Representation at Industry Interactions

Industry Associations		**Industry Participation**
Knitwear Club (Regd) Ludhiana		Textile Industry
Shawl Club, Amritsar		Agro Based Industry
All India Cocks & Valves Manufacturers Association.		IT & ITES Industry
Small Scale Industry association of Batala		Retail Industry
Northern Region Exporters Forum (Regd)		Sports Goods Industry
Engineering Export Promotion Council		Pharmaceutical and Petrochemical Industries
United Cycle & Parts Manufacturers Association		Rubber Products Industry
Mohali Industries Association		Leather and Leather Goods Industry
Patiala Chamber of Industries		Light Engineering Industry comprising:
		Small Scale Industry
Industry Representative Bodies		*Hand Tools Industry*
PHD Chamber of Commerce and Industry		*Bicycle and Auto Parts Industry*
Confederation of Indian Industry (CII)		*Machine Tools Industry*
		Foundry Industry
		Farm Equipments Industry
		Other Light Engineering Industries

ANNEXURE-B

AGRICULTURE
THE GREEN REVOLUTION AND THE SUBSEQUENT SLOWDOWN

With its excellent irrigation facilities and favourable agro-climatic conditions, Punjab was ideally placed to usher in the *Green Revolution* in India in the late 1960s. As national food security considerations led to a sustained technology thrust on enhancing the domestic supply of food grains, there was substantial alignment between the political centrality of the middle peasantry in Punjab and the case for public action through encouraging the use of high yielding varieties of imported wheat by subsidizing fertilizers and spreading extension services for wheat cropping. In course of time, the experience was repeated with rice, and the wheat–rice cropping system came to dominate Punjab's agriculture. In this manner, with acceleration in agricultural growth from 3.2 per cent per annum in the 1970s to 4.9 per cent per annum in the 1980s, Punjab led the country in agricultural growth **Table B.1.**

Table B.1

Growth of Value Added in Agriculture

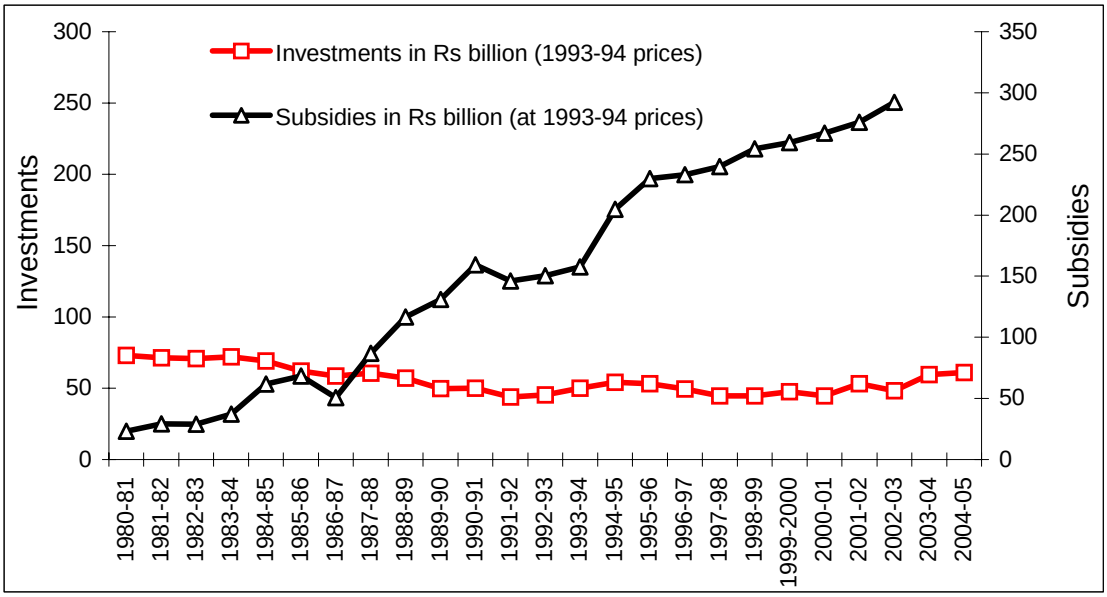
	Punjab	India
1970-71 to 1980-81	3.2	1.8
1980-81 to 1990-91	4.9	3.5
1990-91 to 2000-01	3.1	2.8
2001-02 to 2006-07	2.2	3.2
2001-02	0.8	6.3
2002-03	-1.2	–7.2
2003-04	5.8	10.0
2004-05	2.2	0.0
2005-06	1.7	6.0
2006-07	4.1	3.8

Source: National Accounts Statistics, CSO.

Punjab's contribution to Indian food security is legendary. Even when the *Green Revolution* has spread across a number of states in India, Punjab still accounts for 60 per cent of the procurement of wheat and 30 per cent of the procurement of rice. However, delivering food security to the country has not been without its problems for the economy of Punjab. Input subsidies which were designed initially to encourage farmers in the use of high-yielding variety of seeds continued in the 1980s and thereafter even when they had outlived their usefulness. The increasing budgetary burden of the food and fertilizer subsidies on the Government of India led to a pre-emption of resources away from public investment in agriculture **Chart B.1**, which could have been directed towards proper maintenance of the irrigation systems, for example. Besides, the Government of India's procurement policy for food grains created market distortions in favour of wheat and paddy, with long term adverse impact on agriculture in Punjab, particularly with the large expansion in the area under paddy.

Chart B.1

Investment vs. Subsidies



Source: Gulati Ashok, Kavery Ganguly and Kanupriya Gupta. 2007. *Transforming Indian Agriculture since 1990s.* Paper submitted to ICONE-Hewlett Foundation Project, September 2007.

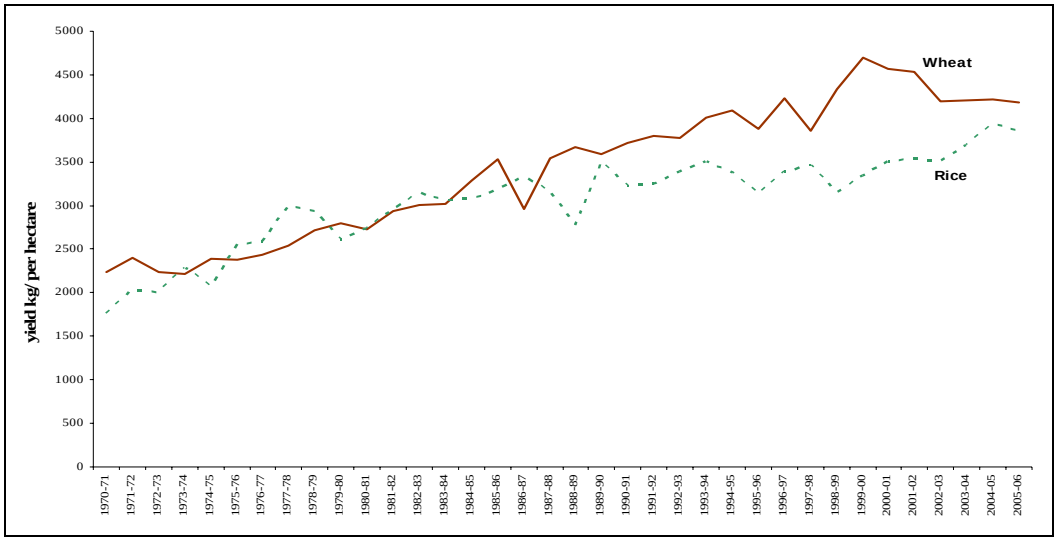
As yield growth of wheat and paddy began to slow down in the 1980s, and the slowdown continued in the 1990s **Chart B.2**, the *Green Revolution* began to lose steam in Punjab. Agricultural growth slowed from 4.9 per cent per annum in the 1980s to 3.1 per cent per annum in the 1990s and further to 2.2 per cent per annum in the period from 2001-02 to 2006-07.

The most significant challenge to sustaining agricultural growth in Punjab comes from the severe deterioration in the natural resource base over the years. Punjab has the highest percentage of groundwater exploitation in the country with over 85 per cent of its 141 blocks now classified as "overexploited" or "dark" blocks. The absence of economic pricing of water in Punjab has led to general overuse of water and more than optimal area cultivated under paddy which is a highly water-intensive crop. The policy of free electricity for farmers has led to excessive use of pump sets for accessing groundwater. As the water table declines, the economic cost of pumping water also rises along with its large environmental cost.

Chart B.2

Yield Per Hectare of Wheat and Rice: Punjab

(Agricultural year – July to June)



Source: CMIE

The irrational subsidy regime for fertilizers has significantly adversely affected the quality of soil in Punjab. Since urea is over subsidised, it leads to inadequate application of potassium and phosphate fertilizers with consequent adverse impact on soil quality and yield. Excessive use of nitrogenous fertilizers has also led to depletion of micro-nutrients in the soil. Not only is there no subsidy on micro nutrients, until very recently fertilizer companies had no incentive to add micro-nutrients to the established packages of subsidized fertilizers because they were not allowed to increase the retail price of such "fertilizer plus" products even to cover the cost of micro-nutrients. In April 2008, the Government of India has allowed fertilizer producers a margin of 5-10 per cent to increase the retail price in situations where micro-nutrients are added. While this policy reform is very welcome, this has to be accompanied by a major campaign by the government of Punjab to make farmer aware of the need to use micro-nutrients in order to attain ideal levels of productivity. Most soil testing laboratories in Punjab as in the rest of the country do not have the equipment to test for micro-nutrients in the soil, and this situation needs to be corrected urgently.

The acceleration of growth and associated rise in incomes in the country has led to consumption patterns which are predictably creating growing demands for vegetables, fruits, pulses, milk, eggs, etc. But institutional mechanisms for risk mitigation for high value crops are lacking, not that this has prevented many of the farmers in Punjab from going ahead and responding to market signals where connectivity and other conditions permit. The *National Horticultural Mission* provides an avenue to farmers to tap resources from the Government of India to move towards horticulture farming, but Punjab has not adequately availed of this opportunity.

Modernization of retail services offers a new set of opportunities for diversifying into high value crops. A growing expression of interest by private parties such as

Reliance, Bharti, and ITC in marketing, logistics and retail speaks of the potential in this sector. Avenues for effective marketing of crops are crucial if high value agriculture is to become widespread in Punjab. But there is tremendous resistance from *Arhtias* (the established intermediaries). After a failed attempt, the Government of Punjab is again working on an amendment of the *Agriculture Produce Marketing Act* to provide wider scope to the private sector in the marketing of crops. A number of other states have already amended this Act, in line with the "model amendment" suggested by the Government of India. Speedy amendment of the Act will enable market forces to generate economic activity and employment at a rapid pace in a manner in which economic prosperity is shared between the rural and the urban areas of Punjab.

ANNEXURE C

INDUSTRIAL POLICIES: PUNJAB AND COMPARATOR STATES

This annexure analyzes the 2003 Industrial policy of Punjab alongwith the industrial policies of its comparator states. These states are Haryana, Gujarat, Tamil Nadu, Maharashtra and Karnataka. Haryana is a neighbouring state and therefore an immediate competitor for investments and business. The other states are leaders in industrial development when measured on parameters like industrial growth, employment generation, foreign direct investment, exports, and industrial output. A look at their industrial policies will provide valuable insights into where Punjab stands today and what needs to be done to bolster its industrial growth. The comparison is done under the following heads:

- Ease of Doing Business
- Infrastructure Development
- Development of Skills
- Incentives

C.1. Ease of Doing Business

Given the importance of “ease of doing business” in today’s world, all the comparator states have talked at length about their initiatives on creating an investor friendly climate in their states through initiatives such as availability of a single window for clearance of applications, reduced burden of regulatory inspections, introduction of a system of self certification in compliance to certain laws and amendment to some labor laws. However, some states seem to have gone an extra mile.

Gujarat

While most states are working toward strengthening their delivery systems by establishing single window clearance facilities, Gujarat moves a step ahead by converting their District Industries Centre (DICs) into one-stop resource needs for an entrepreneur. The government intends their DICs (now called DIDCs – District Industries Development Centers) to be a friend, philosopher and guide to the entrepreneurs. Following are some of the initiatives in this regard:

- Use e-governance as a tool to deliver quality services to the entrepreneur, as also to improve co-ordination between different departments. Establish an on-line grievance redressal mechanism for entrepreneurs.
- Establish information kiosks in all the DIDCs to disseminate authentic information to entrepreneurs. This would empower entrepreneurs to take educated investment decisions.
- Single window to expedite clearances and approvals and for this:
  - Devolution of powers for speedy clearance.
  - Amendment to enable the DIDC to function as single window mechanism through an inter-departmental committee headed by the District Collector.
- Self Certification by entrepreneurs for compliance to the provisions under labor laws and environment laws. Gold Pass would be issued to conforming members who would then be subject to minimal inspection.
- To protect against frequent inspections under various provisions of Industrial laws, a Single Business Act is proposed. This Act would cover all relevant provisions of the law and a pool of private agencies having expertise in the relevant fields will carry out inspections.

Haryana

- Single window facility for investors with time bound approvals and clearances.
- Self certification in respect of labor laws.
- Appointment of chartered engineers to perform inspections under the following acts:
  - Approval of building plans
  - Indian Boilers Act and,
  - Standard of Weights and Measures Act.
- Simplification of process under pollution control administration.
- To set up Haryana Investment Promotion Board (HIPB) headed by the Chief Minister to: Attract domestic investment as well as FDI to the state, Recommend customized package of incentives for projects having investment of Rs.30 crore or more, Review implementation of FDI projects as well as Mega project proposals.
- Set up Investment Promotion Councils in Delhi and Chandigarh to disseminate all relevant information to investors, and Assist investors to submit applications for approval/clearances.
- Set up a Grievance Redressal Committee, headed by the Financial Commissioner, Industries to handle investors' grievances.

Maharashtra

- Single window facilities to be made available for timely processing of applications for approvals and clearances. District level and state level committees to provide approvals depending on the size of the project.

Computerization of application processing would be undertaken to facilitate e-processing of the applications. The committees to provide clearances/approvals within 30 days as far as possible.

- Restructuring of the Industries Department:–Delivery capability of the department to be improved by:
  - Departmental re-organization and up gradation of skills of the staff to make it more efficient in service delivery.
  - Information to be made available to the investor at the click of a button.
  - Registration of SSI units and filing of statutory returns to be made on-line.
- Self-certification cum Consolidated Annual Return Scheme for various shops, establishments and factories and amendments to Section 9(a) of the Industrial Dispute's Act, 1947 exempting industries from requirement of prior notice for varying service conditions of work men.
- Other Proposals under consideration include:
  - Allowing employment of contract workers provided the workers are employed for at least 200 days in a year.
  - Working hours to be increased to 60 hours a week from the present 48 hours.
  - Lay-off of workers to be permitted on payment of adequate compensation.
  - Allowing female workers to work in night shift as well as allowing 12 hour shifts.
  - Amendments to section 25 (M), 25 (N), and 25 (O), of the Industrial Disputes Act 1947 to provide flexibility to units, which are exposed to vagaries of fluctuating market demands, change in technology and intense global competition
  - Reducing the burden of inspections on industrial units

- Extending the exemption of identified state labor laws as provided in proposed Maharashtra SEZ and Designated Area Act to the units in less developed districts.

- District and Taluka level resource availability mapping to be accomplished by engaging reputed consultants. This would be employed as a marketing tool to show case the state's talent and potential.
- A marketing agency to be contracted for maintaining a website, publishing a magazine and conducting seminar/ workshops to attract investment.

Tamil Nadu

- Single window approvals at state and district levels.
- Simplification of inspection and certification routines.
- Enact acts for speedier acquisition of land for industrial use. Allot government plot for industrial use where beneficial
- Automatic conversion of land use when government approves an industrial park
- TN Industrial Guidance and Export Promotion Bureau was set up to:
  - To attract investments
  - To function as a single window facilitation and documentation center for major investment proposals. This is provided as a fee base service
  - Provide comprehensive information support to investors about Federal and State government policies, infrastructure support, taxation, investment opportunities etc. (same as in Gujarat)
  - Facilitate NRI investments
  - To monitor implementation of Foreign Investment proposals

Punjab

- The policy amended the Indian Boilers Act, 1923, the Weights and Measures Act, 1985, the Water Act (Prevention and Control of Pollution), 1974, the Air Act (Prevention and Control of Pollution), 1981, and the Electricity Act, 1910 and Indian Electricity Rules, 1956. The amendments were made to reduce the burden of inspections by government inspectors. For this, chartered engineers were appointed with the powers to perform inspections under the above Acts. The entrepreneurs would now have an option to have the inspections conducted by the chartered engineers rather than by state inspectors. District level oversight committees were also constituted with participation from the local industry associations to perform random checks on 5 per cent of the industry.
- A Self Certification Scheme was introduced allowing entrepreneurs to file compliance documents under the Labor and Employment Act, certifying their adherence to the requisite rules and regulations. This was in response to the burdensome and frequent inspections performed under the act by government inspectors.

The ease of doing business in Punjab appears to be significantly weak than its comparator states. The single-window system is practically non-functional and the “inspector –raj” has still not been dismantled. Punjab must begin by ‘creating’ an investor friendly climate on the ground and then use it as a selling point in its industrial policy. While some efforts have been made, these have not made much difference on the ground.

C.2. Infrastructural Development

Infrastructure creation occupies center stage in the industrial policies of comparator states like Gujarat, Maharashtra, Haryana and Tamil Nadu. In these states several initiatives are proposed to address infrastructural needs of the industry:

Gujarat

- SEZs are seen as a major growth driver. Various ordinances have been issued to attract manufacturing to the SEZs such as: Single window clearance to units within SEZs, to administer labor legislation, all powers of Labor Commissioner would be shifted to Development Commissioner, Electricity duty exemption for 10 years for power generated by Captive Power Plants etc.
- To augment the condition of existing industrial estates, an Industrial Estate Development Fund (IEDF) would be created. Proceeds for the fund would be raised by levying a charge on conversion of existing lease hold industrial plots to free hold. The funds would be deployed by active involvement of industry associations to maintain the estates and also to encourage setting up of such projects as solar street lighting, common power plants and de-salination plants etc.
- Subsidy would be allowed for setting up industry specific trade centers.
- Development of civic amenities and other social infrastructure would be encouraged
- Develop 3 economic corridors within the state.

Haryana

- Encourage private participation in the development of infrastructure.

- HSIDC, now named HSIIDC, would be in charge of developing industrial infrastructure (on the lines of TIBCO in TN)
- Pursue SEZs and promote private participation in the development of SEZs
- Development of Kundli-Manesar-Palwal Expressway would throw open opportunities to develop economic hubs at strategic locations along the expressway
- Industrial Model Townships – an innovative and successful development (first built in Manesar) of HSIIDC. These integrated townships include campuses for large industries, industrial plots, residential colonies, labor housing, entertainment and institutional areas along with such amenities as solid waste management and effluent disposal facilities.
- Develop a petrochemical hub at Panipat capitalizing on the feedstock available from refineries
    - IOCL setting up 2 mega petrochemical projects
    - Set up a "Central Institute of Plastic and Engineering Technology" in collaboration with Central Government.
- Develop a Gems and Jewellery Park.
- Identify FEZs within the state where the Industry could set up units without the need to seek 'change of land use'. Setting up of these zones will enable the development of semi-urban areas in the economically backward regions of the state
- Social Infrastructure: Develop a world class education city to be named as Rajiv Gandhi Education City, Develop a Medicity, housing state of the art healthcare institutes and super specialty hospitals.
- Set up International Trade Centers.
- Develop online portal to facilitate networking between state manufacturers and international buyers (on the lines of the portal in Gujarat).

- Promote private participation in generation, transmission and distribution of electricity.
- Set up dedicated power plants and distribution facilities for IMTs, SEZs and other large industrial estates.
- Facilitate availability of natural gas for industrial use.

Maharashtra

The state recognizes infrastructure to be a key growth driver.

- Public–Private Partnerships to be forged for the development of infrastructure.
- To provide four-lane connectivity between Mumbai-Nashik, Pune-Nashik, and Mumbai-Aurangabad for faster connectivity.
- To establish Natural –Gas Grid and distribution network in the state
- Broad-band connectivity and expansion of communication network across the state to ensure efficient communication.
- Power generation through aggressive Public private ventures, greater recognition/ incentives to energy conservation and non-conventional energy initiatives.
- Industrial Townships – The state government would notify the industrial areas across the state as industrial townships. These townships would be responsible for issues concerning development, maintenance, and up gradation of infrastructure as well as provision of basic urban services to the industries.
- Maharshtra has passed an enabling bill for SEZs. Multi-product and product-specific SEZs would be encouraged. The private sector would be encouraged for setting up SEZs.

- To set up world class International Exhibition Centers at Mumbai and Pune through public-private partnership

Tamil Nadu

- Encourage private participation in infrastructure creation.
- Up gradation of Chennai International Airport to international standards. Also, up grade other airports.
- Pursue central government to upgrade Chennai and Ennore seaports
- Widen major traffic corridors and create a 6 lane IT corridor linking Chennai to the planned Bay Area.
- Encourage co-generation of power and use of non-conventional energy
- Industrial Parks
  - Up gradation of existing parks with involvement of user industries
  - Concessional Stamp Duty for privately developed industrial parks
  - 10 per cent back ended investment subsidy (cap of 1 cr.) for private industrial parks, provided: 50 or more units have located to the park, Industrial park has provided employment to at least 2500 people
- SEZ – a major growth driver
  - SEZs being promoted in backward and dry areas
  - 46 SEZ's approved for TN, 8 already operational
  - TIDCO (TN Industrial Development Corporation) initially set up to promote large and medium enterprises, is now refocused on developing SEZs and IT parks. TIDCO has undertaken several projects including
    - Developing software parks in collaboration with private sector
    - 6 laning of IT corridor
    - A 60 lakh tonne oil refinery in collaboration with NOCIL

- Multi product SEZ at Ennore

- TIIC (TN Industrial Investment Corporation) funded several Wind Mill projects at concessional rates of 12.5 per cent. TN generates over 3000 MW of power using wind mills.

Punjab

- All Infrastructure to be developed by private players or in joint collaboration with private players.
- Maintenance of Industrial Parks would be done on a self sustaining basis by levy of user charges.
- Earnest effort to be made to take advantage of the following assistance schemes of the Central Government:
  - Set up atleast 3 SEZs, 1 in border areas
  - "Apparel Parks for Exports" scheme of the centre would be used to set up apparel parks at suitable places; first such park to be set up in Ludhiana by PSIEC in collaboration with private players.
  - Avail assistance under the "Industrial Cluster Development Scheme" of Government of India to strengthen the following clusters in the first phase: Machine Tools at Batala, Bicycles and Bicycle Parts at Ludhiana and Re-rolling Steel Mills at Mandi Gobindgarh. And the following clusters in the second phase:
    - Sports Goods, Rubber Goods, Hand Tools, Leather and Leather Goods at Jalandhar
    - Gems and Jewellery at Amritsar
    - Diesel Engines at Phagwara
    - Handicrafts at Hoshiarpur

- Automobiles and Auto Parts in Ludhiana
- Wooden Furniture at Kartarpur
- Combines and Agricultural Implements at Bhadson

- Take advantage of the "Textile Centres Infrastructure Development Scheme" to accelerate the development of the textile industry

Public –Private –Partnership appears to be emerging as the favored vehicle for infrastructure creation among the states. States are exploring such partnerships in setting up state of the art industrial townships and SEZs, augmenting power supply, building airports and sea-ports and in practically all other areas of infrastructure creation.

Tamil Nadu and Haryana emphasized the importance of infrastructural development by re-assigning certain departments to the task of infrastructure creation. TIDCO in Tamil Nadu and HSIIDC in Haryana facilitate the development of industrial estates, SEZs and other infrastructural projects. Industrial Model Township (IMT) in Manesar, Haryana is a state of the art industrial park developed by HSIIDC.

In its Industrial policy 2003, even Punjab proposed to develop infrastructure by private players or in joint collaboration with private players. However, several infrastructural bottlenecks remain to be addressed within the state.

- Immediate steps should be taken to improve the upkeep of the focal points in the state.
- Public-private partnerships should be aggressively pursued to set up state of the art industrial estates, on demand basis, on the lines of IMT, Manesar.
- Power generation capacity and supply need to be improved.

- Punjab must plan well to extract the maximum benefit from the proposed freight corridor and industrial corridor schemes of the Government of India. These corridors can help offset the locational disadvantage by improving connectivity and hence reducing the cost of transportation between the state and the rest of India.

C.3. Human Resource Development

Gujarat

- Set up educational complexes in each region of the state.
- Regional Level Committees comprising of educationists, industrialists and government officials would identify training needs, design course curricula, and promote student-industry interaction through on the job training and participation in industry R&D assignments.
- Promote centers of excellence and R&D centers.

Haryana

- Entrepreneurship development programs to generate self-employment.
- Industry participation in defining skill needs and course curricula for technical institutions.

Maharashtra

Following initiatives would be taken to ensure availability of industry ready skilled work force:

- Labor Market Information Cell – The cell would compile and disseminate information about trends in the labor market, nature of skills in demand, and the nature of skill sets and training available. By linking the labor market with industry trends the cell would coordinate a training effort which would be more responsive to the industry's needs.
- Service training Institute – Recognizing the shortage in skilled labor availability to cater to the explosive growth in the service industry, the government would set up a Service Training Institute (STI)
- Efforts would be made to encourage the vocational training institutes to provide training which is more appropriate to the industry needs. For this, such institutes would be given greater autonomy to change course curricula to suit the needs of the industry

Punjab

The 2003 industrial policy did not identify HRD as a focus area nor did it reaffirm the states commitment to the goals identified in the 1996 policy.

C.4. Incentives

Gujarat

Small Scale Industry

- Interest subsidy to an SSI unit of 5 per cent per year with a cap of 5 lakhs for 5 years.

- Cluster Development
    - Legal recognition to clusters of up to 50 firms manufacturing similar products and located within a radius of 10 kms
    - Financial assistance to clusters for developmental work
    - Common Facility Centers such as R&D labs, co-operative banks, data banks, fund for common marketing and branding etc would be promoted.
- Technology Up Gradation
    - 3 per cent interest subsidy per year per unit on purchase of equipment with a cap of 3 lakhs for 5 years. Max. of 15 lakhs per unit.
    - 50 per cent subsidy on R&D expenditure, max of 5 lakhs/unit.
    - 50 per cent cash subsidy on expenditure incurred in registering patents
    - 50 per cent subsidy on expenditure incurred in securing specified quality certification, cap of 2 lakhs.
    - Create a revolving fund to acquire technologies from abroad for the benefit of local industry

Haryana

SME Sector

- Set up a Centre for Competitiveness for SMEs.
- Scheme to encourage SSI units to undertake modernization and technology up gradation.
- Scheme for re-imbursement of expenses incurred in acquiring specified quality certifications.

- Re-imbursement of 50 per cent of expenses incurred in registering patents. Universities and private R&D labs will also be included in the scheme.
- For new SSI units set in backward areas – 50 per cent sales tax would be reimbursement to investors for 5 years as interest free loan. It would then be payable back to the state after 5 years.
- Take advantage of the Government of India scheme for "Up Gradation of Industrial Infrastructure" to develop: Textile Cluster, Panipat, Light Engineering Goods Cluster, Faridabad, Auto Parts Cluster, Gurgaon.
- Flatted factories for SSIs in Industrial Estates to check their unorganized growth.
- State to book space in leading international trade fairs and allot the spaces at concessional rates to SMEs.
- Assistance would be provided to clusters for marketing products under a common brand name.

Mega Projects

- Special package of incentives for investments exceeding 30 cr.
- Backward Areas: Exemption from LADT for 5 years, 50 per cent sales tax would be reimbursement to investors for 7 years as interest free loan. It would then be payable back to the state after 5 years.

Thrust Areas

Food Processing

- Modify APMC to allow direct procurement from farmers.
- Develop Food Testing Labs for testing of processed foods.

- Develop 4 food parks to develop food processing industry.
- Central government is setting up 6 Mega Food Parks and "National Institutes for Food Technology, Entrepreneurship and Management". Effort would be made to locate at least one each in Haryana.
- No minimum demand charges for electricity during a closure period of more than 3 months.
- No market fee for purchase of agricultural raw materials with the exclusion of wheat, rice, mustard oil and cotton.
- 75 per cent sales tax would be reimbursement to investors for 5 years as interest free loan. It would then be payable back to the state after 5 years.
- Charges for change of land use would be 50 per cent of the normal rates in backward areas.
- Wines/Liquors/ Brandy etc. made from 100 per cent fruit juice would be exempted from excise duty in backward areas.

IT and ITES – A major Thrust Area

- Exemption from electricity duty for 5 years
- Preferential allotment of land for IT industry.
- Uninterrupted power supply for IT industry.
- FAR of 250 per cent (general industry – 125 per cent)
- Maximum height of the industrial building: IT Industry – 30 meters, Cyber Park – 60 meters (general industry – 21 meters).
- Rebate on stamp duty/registration fee: 60 per cent for 2005-06, 45 per cent for 2007-08.
- LADT exempted for importers of goods of IT industry.
- IT – priority sector for lending.

- IT software units employing 20 or fewer people would be allowed to operate in residential areas.
- HSIDC to set up a venture capital fund in collaboration with other institutions in public or private sector to promote such frontier technologies as Nano Technology, New Materials Development, Genetics, Biotechnology, Chip Manufacturing, Communications Technology, Mobile Computing, Robotics, Energy Saving and Development of New sources of Energy.
- Special incentives will be considered by HIPB for setting up R&D labs.

Maharashtra

- New SSI/MSI/SI (including IT/BT) Units – Such units would be eligible for an Industrial Promotion Subsidy (IPS) of 25 per cent of any relevant taxes paid by the unit to the state or to any of its departments or agencies. A ceiling, as a percentage of the fixed capital investment in the unit, is imposed which varies depending on area where the unit is located. For SSI, no benefit is available in A areas, a ceiling of 20 per cent is imposed for units in B areas and a maximum ceiling of 60 per cent is available for industrial units set up in areas classified as "No Industry District". The eligibility period also varies depending on the area of location.
- Expansion of Capacity – Units expanding capacity by 25 per cent or more, over the previous year's capacity, would also be entitled to an IPS, which would be 75 per cent of that available for setting up new units.

- Zero VAT Units – would be eligible for employment based incentive in lieu of the IPS, in the form of 75 per cent reimbursement of expenditure on account of contribution towards Employees State Insurance (ESI) and Employees Provident Fund (EPF) for a period of 5 years.
- The eligible SSI units coming up in Industrial Clusters/Parks to be notified by the state government and in Agro based Industries, Textiles, Auto and Auto Component, Electronic Products, Pharmaceuticals, and Gems and Jewellery would be eligible for the IPS applicable to the one step higher category. Similarly, IT, ITES, and Biotechnology units coming up in C, D and D + areas only, would be eligible for the IPS applicable to a higher category of incentives.
- Special incentives would be given to units established in the 10 districts, lowest on the Human Development Index (HDI). Such units would be eligible for 75 per cent reimbursement of their contributions to the Employees State Insurance (ESI) and Employees Provident Fund (EPF) for a period of 5 years, subject to a maximum of 25per cent of the fixed capital investment.
- Mega Projects – quantum of incentives to be decided by the high powered committee headed by the chief secretary. The definition of a mega project is linked to its area of location as follows:
    - A, B Areas – Investment of 500 crores and employment to 1000 people
    - 10 Low HDI Districts – Investment of 100 crores and employment to 250 people
    - Rest of the State – Investment of 250 crores and employment to 500 people

- Other incentives include exemption from payment of Electricity Duty, Waiver of Stamp Duty and Refund of Octroi paid to the local authority. Graded, incentives are available for exemptions from stamp duty and electricity duty depending on the area of location
- Seed Money Scheme – Seed money is available to educated, unemployed youth for starting self-employment ventures at the terms below:
  - Seed Money Assistance – Max. of 25 lakhs
  - Interest Rate – 6 per cent
  - Penal Rate (for delay in payments) - 1 per cent

SSI Units

- An interest subsidy of 5 per cent for any new SSI unit in the textile, hosiery, knitwear, and readymade garments sectors. The cap and the eligibility period vary depending on the area of the location.
- 5 per cent subsidy on capital equipment for technology upgradation limited to Rs. 25 lakhs.
- 50 per cent subsidy on the expenses incurred for quality certification limited to Rs. 1 lakh.
- 50 per cent subsidy on expenses incurred for patent registration limited to Rs. 5 lakhs.
- 25 per cent subsidy on cleaner production measures limited to Rs. 5 lakhs.
- The state would promote cluster development by developing appropriate infrastructure including common facilities depending upon the needs of specific industries. Further, the state would earmark an area for the SME sector in and around bib industrial projects to

facilitate appropriate linkage between the SME and the Large Industries sector.

- Revival package would be made available for viable SSI sick units. One Time settlement scheme would be available for settlement of outstanding dues to the government by sick units shutting down operations.

Tamil Nadu

No Entry Tax on goods imported from abroad for manufacturing in TN

Mega projects

- For projects with investment between
- 50 crores and 100 crores, Capital subsidy of 25 lakhs, Exemption from electricity tax for 3 years
- 100 crores – 200 crores, Capital subsidy of 50 lakhs, Exemption from electricity tax for 4 years
- 200 crores – 300 crores, Capital subsidy of 100 lakhs, Exemption from electricity tax for 5 years
- Above 300 crores, special package would be considered
- Capital subsidy would be 150 per cent of the limits above if the project is located in a government promoted industrial park
- Capital subsidy of 25 per cent (cap of 25 lakhs) for setting up critical infrastructure such as effluent treatment plants etc.

SSI

- Technology up gradation – 15 per cent capital subsidy , cap of 15 lakhs
- 3 per cent interest subsidy on loans taken for: Starting a new enterprise, R&D, Acquiring a quality certification
- A 1.5 Cr. allocation (spread over 3 years) for setting up Centers of Excellence in collaboration with industry

Technology Up Gradation

- 50 per cent reimbursement of cost of patent registration (cap of 1 lakh)
- TUF for Textiles – a government of India scheme.

Punjab

Small Scale Industry

- Modernization and Technology Up-gradation Scheme – 25 per cent subsidy on investment with a cap of 25 lakh per unit. Annual allocation of Rs. 25 crore was sanctioned
- Revival of sick small scale industrial units – A cross functional committee of various stakeholders was constituted under the chairmanship of Principal Secretary, Industries called the “State Level Industrial Revival Forum” The forum would take up units on a case by case basis and select units on merit to award various concessions and tax deferrals.
- SSI in Border Areas – A capital subsidy of 30 per cent of fixed investment with a cap of 30 lakhs. Annual allocation of Rs. 25 crore was sanctioned.

- Contributed Rs. 1 crore to the setting up of a Center for Competitiveness jointly with CII.

Exports

- Freight subsidy of 1 per cent of FOB for transport to shipping ports was announced with a cap of Rs. 50 lakhs per unit. An annual allocation of Rs. 50 Cr. was made for this purpose.

Tax Administration

- Intra –state Octroi was removed and replaced by LADT (Local Area Development Tax) to be collected at inter-state barriers. This was done to facilitate unhindered movement of freight within the state barriers – however, as the industrial meet suggested, ICC's still continue to operate defeating the purpose of LADT.
- VAT was implemented w.e.f April 1, 2003. All industrial raw materials to be taxed at a concessional rate of 4 per cent.

Industrial/Agro/Information Technology Parks

- Exemption from payment of External Development Charges – significant in light of the new Change of Land Use (CLU) policy imposing hefty external development charges on all lands requiring CLU.
- Change of Land use required only for industrial units falling within:
  - The Chandigarh Capital Periphery Control Act.
  - Planning Area declared under the Punjab Regional and Town Planning and Development Act, 1995 and
  - Controlled areas declared under the erstwhile Punjab Schedule Roads and Controlled Areas Act, 1963

- No registration fee on property transactions relating to IT and ITES units, Electronics Industry, Knowledge Parks and Biotechnology units for a period of 3 years w.e.f April 1, 2003.
- For IT and ITES units, knowledge Parks, Biotechnology Units, Electronics Industry and Industrial Parks the FAR will be relaxed by 50 per cent over the FAR sanctioned in the zoning plans.

Multiplexes

- Multiplexes built with an investment of over Rs. 20 Cr., in an area of at least 4000 square yards and having a seating capacity of at least 1000 will be entitled for concessions like Exemption from entertainment tax for 5 years, Exemption from payment of stamp duty for first transfer of built up property, Power tariff rates as applicable to industry.

Agro Industry

- Empowered committee would award the concessions to suitable agro industries after an evaluation of the merits of each proposal like Direct procurement from farmers.
- Exemption from market fees and rural development fees.

ANNEXURE D

AN OVERVIEW OF THE ELECTRICITY REFORMS IN PUNJAB AND THE ELECTRICITY ACT, 2003

- The Electricity Act, 2003 is a landmark act as it initiated the process of reforms in the power sector. It provided a framework for efficient growth of the power sector to address the vast energy needs of the country. Some important components of the framework include:
- Constitution of Central and State Electricity Regulatory Commissions with the responsibility to regulate tariffs for generation, transmission, and distribution of power. This measure depoliticized the process of tariff regulation and provided for a rational and pragmatic approach to electricity pricing.
- Encourage private investment in generation, transmission and distribution of power.
- Re-organize State Electricity Boards (SEBs) into more focused generation, distribution and transmission companies. This step is meant to increase operational efficiencies, improve service delivery to consumers and to prepare the public utilities for competition with private players.
- Infuse competition and efficiencies by promoting open access to transmission and distribution networks.
- So far, Punjab has shown a reluctant compliance to the Electricity Act, 2003. It implemented the initial provision of the Act by installing Punjab State Electricity Regulatory Commission as early as in March, 1999 under the Electricity Regulatory Commissions Act, 1998. The commission passed its first Tariff Order in the year 2002 and since then it has passed a total of six Tariff Orders.

- The commission initiated steps to encourage open access by eliminating the surcharge for wheeling/transmission of electricity in its 2007-08 Tariff Order. However, more needs to be done to facilitate captive generation and co-generation of electricity.
- Punjab has, however, failed to re-organize its electricity utility, Punjab State Electricity Board (PSEB). The attempt to restructure PSEB started in earnest with the appointment of Ernst & Young as consultants to suggest an appropriate structure for unbundling. Also, the government sponsored a study by National Council for Applied Economic Research (NCAER) to draw a road map for the reform process in Punjab. The study extracted learnings from the failure of the reform process in Orissa among other things. Thereafter, the government has failed to evolve a restructuring model and it has been seeking repeated extensions (eight till now) of the deadline for unbundling the State Electricity Board.
- Meanwhile, several other states have moved ahead with the reform process. As many as nine states have unbundled their State Electricity Boards (SEBs). Besides, 22 states have constituted their SERCs (State Electricity Regulatory Commissions) and 18 of these have already issued Tariff Orders.

ANNEXURE E

IT POLICY OF 2001: AN ASSESSMENT

- The 2001 IT Policy identified IT, IT Enabled Services and Biotechnology as the three focus areas for the policy period. The policy aimed at promoting the industries using a mix of three principal instruments:

- Addressing the Manpower Needs: The policy announced a number of measures ranging from introducing language classes at the school level to setting up Centers of Excellence for addressing the manpower requirements necessary for the growth of the industries. CAL-C, a Government of Punjab institute, operates over 100 branches and imparts software training to students all over the state. Meanwhile, several software, hardware, and language institutes in the private sector have mushroomed within the state supplying potential employees for the IT and ITES industries. However, as the industry representatives pointed out during their interactions with our team, only a fraction of these graduates are employable. Much more needs to be done to raise the standards of education both at the private and the government run institutes. A good starting point for enforcing standards would be to tap into NASSCOM's National Assessment of Competence (NAC) program which assesses candidates on key skills through a national standard assessment. The Government of Punjab will have to work with the industry to take the effort forward. Meanwhile, the manpower needs of the Biotechnology industry must be mapped and addressed.

- Building Infrastructure: Provision of ready-to-move-in spaces and high quality infrastructure was the central point of the policy. The government undertook to work with private developers to ensure that constraints of space would be

addressed. Investors were also assured of swift power connections, reliable electricity supply and well maintained industrial parks. For the Biotechnology sector, the government planned to spend liberally on infrastructure creation. However, constraints of space continue to be an important impediment to growth for both the SME sector as well as for large players. Electricity supply is unreliable and it takes up to three months for businesses to obtain an electricity connection. Maintenance of industrial parks is far from satisfactory.

- Facilitating Business Growth: The policy announced single window services for business facilitation and administration of both IT/ITES and Biotechnology industries. It was announced that suitable amendments would be made to labor laws, Punjab Shops and Commercial Establishments Act, 1958, and self-certification would be permitted under various Acts such as the Factories Act, to ease business conditions. Moreover, the government would assume the role of a facilitator and "Escort Executives" would be made available to investors for assisting in administrative procedures. The ground reality is however much different. Single windows are non-functional, areas of responsibility for different departments are not clear, and entrepreneurs often have to wade through the procedural maze to obtain clearances and approvals. Despite the promise of self certification under various acts, business owners continue to be visited by corrupt inspectors. If the industries are to take off, business facilitation would need to be strengthened and the government will have to proactively partner with the business owners and investors.

ANNEXURE F

STATISTICAL TABLES

Table F.1

Growth of GDP: Major sectors

(15 Major States)

	GDP			Agriculture			Industry			Construction			Services		
	1980-81 to 1990-91	1990-91 to 2000-01	2000-01 to 2005 -06	1980-81 to 1990-91	1990-91 to 2000-01	2000-01 to 2005 -06	1980-81 to 1990-91	1990-91 to 2000-01	2000-01 to 2005 -06	1980-81 to 1990-91	1990-91 to 2000-01	2000-01 to 2005 -06	1980-81 to 1990-91	1990-91 to 2000-01	2000-01 to 2005 -06
Punjab	5.3	4.7	4.2	4.9	3.1	1.8	9.1	6.2	3.9	1.0	7.9	13.0	4.5	5.7	5.2
AP	5.0	5.4	6.5	3.7	4.2	3.6	6.3	4.9	7.2	5.1	6.2	7.9	6.0	6.5	7.8
Assam	4.2	2.5	5.4	2.5	0.5	2.1	7.0	1.5	10.1	4.9	3.1	6.9	5.4	4.7	6.0
Bihar	4.9	3.9	2.8	3.6	3.3	-1.5	6.9	4.8	4.0	6.6	8.7	12.3	5.9	5.4	5.3
Gujarat	5.9	6.3	10.2	8.9	2.8	16.4	8.8	8.0	9.5	2.3	10.9	15.5	6.9	7.8	8.5
Haryana	6.6	5.2	8.3	5.3	2.2	1.6	10.0	6.1	7.7	2.0	3.1	18.1	8.0	8.3	11.0
Karnataka	5.2	7.4	5.9	2.6	6.0	-0.6	7.4	6.1	8.3	2.8	10.8	6.9	7.3	8.8	8.4
Kerala	3.7	5.6	6.8	2.2	2.6	2.8	4.0	7.0	3.0	1.9	6.3	12.5	5.3	7.0	7.9
MP	5.2	4.2	4.5	3.6	0.2	8.3	8.6	5.9	2.7	-0.8	13.6	5.6	6.5	5.4	3.9
Maharashtra	6.1	6.1	7.1	4.4	3.8	3.1	6.7	5.0	5.2	3.7	1.5	12.9	7.5	8.4	8.4
Orissa	3.3	4.3	8.0	0.9	1.4	5.7	6.5	5.9	14.1	9.1	1.9	-0.4	5.1	6.7	8.3
Rajasthan	8.1	4.9	5.8	9.4	1.3	11.6	8.0	9.0	2.7	9.8	6.9	9.4	8.6	6.5	5.3
TN	5.7	6.3	5.0	5.2	3.8	0.8	5.5	5.1	3.6	9.4	7.9	6.2	6.4	8.2	6.8
UP	5.1	3.6	4.2	3.0	2.7	1.0	9.9	4.0	5.2	1.8	6.0	12.2	6.3	4.2	5.0
WB	4.4	6.5	6.3	4.3	4.7	3.0	3.1	6.0	7.5	6.0	6.1	14.6	5.1	8.0	6.9
India	5.4	5.6	7.0	3.5	2.8	3.0	6.7	5.7	6.3	4.7	5.1	11.3	6.6	7.3	8.5

Source: NAS. CSO

Table F.2
Poverty Headcount Ratio: by state

STATE	Uniform Reference Period												Mixed Reference Period			
	1973-74		1977-78		1983		1987-88		1993-94		2004-05		1999-00		2004-05	
	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN
Punjab	**28.2**	**28.0**	**16.4**	**27.3**	**13.2**	**23.8**	**12.6**	**14.7**	**12.0**	**11.4**	**9.1**	**7.1**	**6.4**	**5.8**	**5.92**	**3.82**
Andhra Pradesh	48.4	50.6	38.1	43.6	26.5	36.3	20.9	40.1	15.9	38.3	11.2	28.0	11.1	26.6	7.46	20.74
Assam	52.7	36.9	59.8	32.7	42.6	21.7	39.4	9.9	45.0	7.7	22.3	3.3	40.0	7.5	16.99	2.40
Bihar	63.0	53.0	63.3	48.8	64.4	47.3	52.6	48.7	58.2	34.5	42.1	34.6	44.3	32.9	32.90	28.95
Gujarat	46.4	52.6	41.8	40.0	29.8	39.1	28.7	37.3	22.2	27.9	19.1	13.0	13.2	15.6	13.90	10.15
Haryana	34.2	40.2	27.7	36.6	20.6	24.2	16.2	18.0	28.0	16.4	13.6	15.1	8.3	10.0	9.20	11.35
Karnataka	55.1	52.5	48.2	50.4	36.3	42.8	32.8	48.4	29.9	40.1	20.8	32.6	17.4	25.3	12.04	27.18
Kerala	59.2	62.7	51.5	55.6	39.0	45.7	29.1	40.3	25.8	24.6	13.2	20.2	9.4	20.3	9.64	16.36
Madhya Pradesh	62.7	57.7	62.5	58.7	48.9	53.1	41.9	47.1	40.6	48.4	36.9	42.1	37.1	38.4	29.81	39.26
Maharashtra	57.7	43.9	64.0	40.1	45.2	40.3	40.8	39.8	37.9	35.2	29.6	32.2	23.7	26.8	22.20	28.97
Orissa	67.3	55.6	72.4	50.9	67.5	49.2	57.6	41.6	49.7	41.6	46.8	44.3	48.0	42.8	39.84	40.27
Rajasthan	44.8	52.1	35.9	43.5	33.5	37.9	33.2	41.9	26.5	30.5	18.7	32.9	13.7	19.9	14.28	28.08
Tamil Nadu	57.4	49.4	57.7	48.7	54.0	47.0	45.8	38.6	32.5	39.8	22.8	22.2	20.6	22.1	16.88	18.81
Uttar Pradesh	56.5	60.1	47.6	56.2	46.5	49.8	41.1	43.0	42.3	35.4	33.4	30.6	31.2	30.9	25.26	26.30
West Bengal	73.2	34.7	68.3	38.2	63.1	32.3	48.3	35.1	40.8	22.4	28.6	14.8	31.9	14.9	24.22	11.22
India	56.4	49.0	53.1	45.2	45.6	40.8	39.1	38.2	37.3	32.4	28.3	25.7	27.1	23.7	21.79	21.70

Source: Planning Commission

Note 1: Poverty Headcount Ratio is defined as per cent of population below poverty line.

Note 2: The poverty estimates of 2004-05 based on Mixed Reference Period is roughly (but not strictly) comparable with the poverty estimates of 1999-2000.

Table F.3

Gini Coefficient: A Measure of Income Inequality*

	1993-94		2004-05	
	Rural	Urban	Rural	Urban
Punjab	0.26	0.28	0.28	0.39
Gujarat	0.24	0.29	0.27	0.31
Haryana	0.30	0.28	0.32	0.36
Maharashtra	0.30	0.35	0.31	0.37
India	0.28	0.34	0.30	0.37

Source: Planning Commission.

* Lower the Gini Coefficient, more equal is the Income Distribution.

Table F.4

Sectoral Shares in GDP*

Agriculture	Punjab	Haryana	Gujarat	Maharashtra	All India
1980-81	49.1	53.4	37.3	26.7	35.7
1990-91	44.0	43.8	27.9	22.0	29.3
2000-01	35.9	30.4	14.8	15.2	23.4
2005-06	31.8	21.7	16.8	12.4	18.3
Industry	Punjab	Haryana	Gujarat	Maharashtra	All India
1980-81	14.3	16.2	25.3	29.8	20.1
1990-91	18.3	21.7	31.7	28.2	21.5
2000-01	18.1	22.4	35.4	22.7	20.4
2005-06	16.6	24.6	36.4	21.1	20.8
Construction	Punjab	Haryana	Gujarat	Maharashtra	All India
1980-81	5.7	3.6	5.2	6.3	4.6
1990-91	5.5	3.4	4.7	6.7	5.4
2000-01	4.9	7.4	5.7	4.9	5.8
2005-06	6.1	10.4	6.4	6.9	6.8
Services	Punjab	Haryana	Gujarat	Maharashtra	All India
1980-81	30.9	26.8	32.3	37.2	39.6
1990-91	32.2	31.1	35.8	43.1	43.8
2000-01	41.1	39.8	44.1	57.3	50.5
2005-06	45.5	43.2	40.3	59.7	54.1

Source: National Accounts Statistics, CSO

* At Current Prices

Table F.5

Ludhiana and Tirupur Hosiery Clusters: A Comparison

	Ludhiana	Tirupur
Production (Rs crore)	2000	4000
Exports (Rs crore)	600	3000
Share in exports of garments from India (per cent)		
1996	2.4	11.9
1997	3.0	12.7
1998	3.2	12.6
Per piece price realisation from exports (Rs)		
1996	169.4	75.5
1997	169.9	75.6
1998	196.3	75.7
Technology Status	Latest machines in few units and conventional machines in most, indigenous machines	Latest machines in most units,imported machines
Use of Information Technology	To a lesser extent	To a greater extent
Generation of Entrepreneurs	Third generation	First and second generation

Source: Rathore, Sharma and Saini(1999)

Table F.6

Industrial Estates: Occupancy Status

Rural

Rural Industrial Estate	Vacancy
Jalandhar - Rurka Kalan	0
Jalandhar - Adampur	0
Jalandhar - Nakoder	0
Amritsar - Kathu Nangal	0
Amritsar - Lohka Kalan	0
Amritsar - Fatehpur	0
Gurdaspur - Fatehgarh Churian	0
Gurdaspur - Sohal	0
Gurdaspur - Ghuman	0
Hoshiarpur - Dasuya	1 shed
Hoshiarpur - Hariana	3 sheds
Patiala - Banur	1 shed
Ludhiana - Ramgarh Sardaran	0
Ludhiana - Talaa	5 sheds
Kapurthala - Talwandi Chaudhrian	0
Sangrur - Sunam	0
Faridkot - Panjgrain	3 sheds
Mukatsar - Sarainaga	4 sheds

Urban

Urban Industrial Estate	Vacancy
Gurdaspur - Batala	1 shed
Gurdaspur	5 plots
Amritsar - Chharta	1 shed
Patiala	0
Patiala - Rajpura	6 plots
Hoshiarpur	0
Jalandhar	0
Ludhiana	0
Ferozpur	0
Sangrur - Malerkotla	3 plots
Bathinda	0
Muktsar - Malout	
Ropar - Morinda	0
Moga - Bhudika	0

Source: Department of Industries, Punjab

Table F.7
Focal Points: Occupancy Status

(As on 31-08-2007)

S.No.	Name of the Focal Point	Total plots	Plots Unallotted	Plots Allotted			
				Vacant	Under Constr	Under Prod.	Total
1	Amritsar	415	1	50	84	280	414
1a	Amritsar (New)	461	47	394	12	8	414
2	Abohar	79	74	5	0	0	5
3	Batala	136	0	31	31	74	136
4	Bathinda Old	44	0	2	7	35	44
4a	Bathinda New	115	0	2	24	89	115
4b	Bathinda Growth Centre	401	190	169	12	30	211
5	Chanalon	335	3	206	57	69	332
6	Dera Bassi	201	4	15	109	73	197
7	Goindwal	446	81	161	121	83	365
8	Hoshiarpur	120	2	37	19	62	118
9	Jalandhar	507	0	15	92	400	507
9a	Jalandhar (SSGC)	215	1	11	15	188	214
9b	Jalandhar (Leathra)	445	5	125	172	143	440
10	Khanna	130	0	1	2	127	130
11	Kotkapura	113	0	9	13	91	113
12	Ludhiana IV	182	0	3	6	173	182
12a	Ludhiana V	354	0	7	85	262	354
12b	Ludhiana VI	321	0	19	29	273	321
12c	Ludhiana VII	403	1	26	22	354	402
12d	Ludhiana VIII	736	4	172	159	401	732
13	Mohali PH VII	405	1	19	94	291	404
13a	Mohali PH. VIII (A & B)	655	147	273	170	65	508
13b	Mohali PH. IX	532	2	21	183	326	530
14	Moga	209	0	6	29	174	209
15	Mandi Gobindgarh	389	41	244	67	37	348
16	Mukatsar	215	213	2	0	0	2
17	Malout - Growth Centre	286	177	109	0	0	109
18	Mansa	138	137	1	0	0	1
19	Nangal	53	2	29	12	10	51
20	Nabha	104	0	21	20	63	104
21	Nawan Shehar	110	1	17	54	38	109
22	Patiala	662	1	204	250	207	661
23	Pathankot - Growth Centre	368	175	180	8	5	193
24	Rajpura	25	0	2	9	14	25
25	Raikot - Growth Centre	187	168	19	0	0	19
26	Sangrur	129	4	7	19	99	125
27	Tarn Taran	105	3	7	2	93	102
28	Tanda (Mini Growth Centre)	147	64	70	10	3	83

Source: Department of Industries, Punjab