CHAPTER- 9
PROBLEMS, GOVERNMENT MEASURES AND POLICY IMPLICATIONS

Information Technology, a knowledge-based industry, proceeds as a locomotive, for speeding up economic growth, for upgrading the productivity for all sectors of the economy, and for proper utilization of available resources in the economy. It increases employment potential, linkages between private and public sector, enhances access to information, and also creates investment for expansion of industries (Punjab Development Report, 2002). The software industry plays a prominent role in the growth strategy of the economy. The software industry in India is growing very fast and in developing a market for itself on the globe. In India, developing technology parks in the area of information technology has proved a fruitful initiative by policy makers. After observing the impact and benefits of software Technology Park of India and for reaping the advantage of available skilled educated labor and generating export opportunities, the Centre Government took the initiative to develop technology parks related with IT/ITes in Punjab.

Technology Parks stimulate backwards and forward linkages among the firms and create a new level of entrepreneurship and intrigue innovation and investors for economic development by diversifying the traditional industrialization to modern technology and knowledge-based industries. Technology Parks are the best institutional mechanism that promotes technology intensive and knowledge-based SME’s with enormous potential to grow and also construct growth path for other sectors (Unido, 2012).

Technology parks are considered essential components for edifying infrastructure and generating employment opportunities, and they also act as a funnel for policy makers in achieving the objective for sustainable development (Chadha & Kaur, 2012). Such parks urge new enterprises and also create environment for national and international firms to interact with each other and exchange knowledge and technology for mutual benefits.

In the previous chapters, we have already discussed the status of Punjab economy, whether in form of traditional manufacturing sector or in its transformation
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towards the modern sector. No doubt, it is the demand of today economy to transform it from traditional to the modern economy. The deemed performance of Punjab’s economy as already discussed in the previous chapter (chapter -4), and in various studies suggests that the Punjab economy needs diversification. The literature suggests that concentration should be given to promoting the Technology Parks. Technology Park is a very innovative form of industry that promotes the other sectors as well as the whole economy. Technology Parks create a strong linkage among the academics, industries, financial institutions and further generates the spirit of entrepreneurship and trade of the economy. The role and performance of this experiment in the Punjab have already been discussed in the previous chapters and study found positive impact of these selected Parks on state’s economy. With the relevance of these parks, a new hope has been attained for the industries of Punjab. The entrepreneurs have shown their interest in industries of Punjab to the effect that multinational companies have started investing in the economy of Punjab, the educated and skilled youth get the new employment opportunities and the fresh entrepreneurs get the opportunities to prove their management skills and innovative capability. Though these parks are the revolutionary project for the state, but still the firms located in these parks face several problems.

Problems Faced by the Selected Technology Parks in Punjab:

- Chandigarh and Mohali cities, considered IT hubs where many firms set up their business and promote IT sector. These firms make the full use of the location and the available infrastructural facilities, but some of the firms registered in STPI located in different areas of the region cannot get the similar benefits due to which they face several business fluctuations.
- All the schemes introduced in STPI are only for enhancing the growth of exports of software from the state. Exporting of any product requires huge capital investment, distributors, funds for sale promotion, and a large number of employees. Large sized firms comparative to small sized firms can easily afford the sources for promoting exports. Therefore large sized firms dominate small and medium sized firms.
- The small scale firms are crippled by their failure in building their own hardware and communication infrastructure. Small enterprises tend to face
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tough competition from large-scale firms in marketing strategies of exporting goods. As such enterprises find it difficult to cope with large-scale firms in terms of costs, quality, standards, and fulfilling the changing demands of consumers.

- It is observed that the new entrepreneurs pass through numerous challenges in starting a business in technology parks. It includes high-fixed costs, lack of access to equity capital, insufficient technical and market information and weak management skills. The start-up phase of SMEs is associated with uncertainty and also new businesses often have cash flow problems. On the other hand, the small entrepreneurs as well as new entrepreneurs in Technology Parks face problems in accessing the credit as well as other banking facilities due to inequitable interest rates and the need for a warranty.

- The State Government has provided several incentives for boosting the entrepreneurship through technology parks, but still the firms have cut the production costs for avoiding taxes on assets in order to cure the firm’s instability, its low appeal to investors, and problems in copyright protection. Such firms obtain fixed assets, either by taking up lands for manufacturing development or accepting estates and equipment as part of the approved capital stock contribution from their partners.

- As already discussed the profile of the selected technology parks in previous chapters, it is observed that most of the firms are under private sector, neither of the firms under the ownership of public sector nor in public-private partnerships. The government indirectly supports the technology parks by giving incentives, basic infrastructure, and land on the lease but does not directly promote technology parks by promoting the scenario of public – private partnership. The inadequate involvement of public sector compresses the infrastructure investment that further results in investment inequities across the region.

- The technology parks need well-educated, highly skilled, intelligent manpower that has management skills. No doubt the selected technology parks generates the job opportunities for the students, but maximum employees in
these parks have only graduate degree, which is considered as the minimum qualification in such type of Parks.

- Some of the Multinational companies prefer to employ the skilled and talented manpower from their own country rather than from the region. The reason behind this is the companies do not want to bear any loss or do not want to take any risk about the employees. In addition, the multinational companies may find it difficult to accumulate a team of accomplished employees from Punjab who have a diverse set of skills, and this affects the pay scale. Firms in Technology Parks are involved in different types of activities. Therefore, in Technology Parks the enterprises face the potential problems.

- The Parks do not fully fulfill the essentials of Technology Parks. Therefore, these parks face the problems like lack of R&D labs, projects, innovative activities etc.

- The phenomenon of Technology Park was originally conceived with the aim to increase profitability by commercializing the university research and expanding entrepreneurship in the state. But there is a lack of effective interaction system between innovation structures and universities. The firms in the technology parks do not involve in any innovation activities and do not create many linkages with available universities for promoting innovation in the IT sector.

- The technology park tries to fulfill several basic objectives of establishing technology parks. Generating Linkages among firms, government, academics and financial institutions is one of the most important objectives of Park. But somehow, the selected technology parks in Punjab have tried to generate such linkages, but do not conquer much success. Only a few firms are involved in these activities. Some of the firms do just a formality by selecting the students for placement in their firms but never appoint them or put several terms and conditions in front of them like training for six months to one year, less salary, long probation period etc.

- Technology Parks in Punjab fails to attract the investors in Punjab because of the absence of the active investor attraction tools like providing more incentives to the investors, project funding by the government. The innovation is not affected by the local universities and the education of entrepreneurs.
Technology parks’ location only attracts the entrepreneurs for the status and prestige rather than for technology transfer and information flow.

- Further, throughout the study period the share of domestic investment is more as compared to foreign investment. This may be due to reluctance on the part of entrepreneurs outside the country. It is also observed that in Punjab these firms face several structural hurdles like small domestic markets, capital scarcity and less developed competitive software market, which further restricts the multi-national companies for performing their trade practices.

- The firms located within the Park face the problem of increased rent according to the occupied space. The provision of rent is very flexible. The firms have to pay rent every year more than the previous year to the owner of the land.

- Another problem faced by the firms is the official formalities between the firms and STPI. The owner of the registered firms have to do lot of paperwork that includes, report writing about the performance of the firms every month, filling forms every year for paying the registration fee, monthly meetings with the dealing officers of the STPI, attending several seminars organized by STPI, etc. This creates hurdles in the performance of the firms.

- The government of Punjab fails to arrange innovative projects for the firms in Technology Parks. Only two or three firms are involved in education and training projects that have been associated as NSDC Partner for UDAAN scheme. It seems that the firms are associated with the park with the objective to access the benefits and incentives provided in several industrial policies.

- There is a lack of well-developed strategic and legal framework for Technology Parks in Punjab that involves the preparation of finance and co-finance schemes, Institutional framework, well-established and separate body or institution for Technology Parks.

- The STPI generate maximum employment in the cities of Chandigarh and Mohali but the rest of the region does not show much potential in creating job opportunities for the youth. The reason being that most of the well-reputed firms prefer to establish their firms in these two hi-tech cities as these cities are linked through roads, railway lines and airports with other states of the country. The increasing preference for the location of the firms encourages the migration of manpower within the state.
There are some social issues observed during the survey that the employees whether women or men with economic independence choose to live single. To most of them, career has become more important. This has delayed their entry into marriage leading to late marriages and consequent social and health problems. The IT industry has transformed the lifestyle of people completely. The traditional way of eating together with homemade food is disappearing. People prefer social life rather spend time with their families and near ones. Instead of these, the employees in the studied Parks suffered from several health issues like cervical, problem in the spinal cord, vision problems, depression, etc.

**Government Measures Taken to Promote Technology Parks in Punjab:**

Industries in any region need the government involvement in order to promote manufacturing activities, and to create a market for the product and for balanced regional growth. Industrial development is regarded as a strong catalyst for economic growth. For the industrial development, the industrial policies and statements are evolved with the objective to evoke entrepreneurial role, ascertain a socialistic pattern of society through economic growth with self-reliance, a high growth rate, reduction of foreign dominance, building up of native capacity, cheering small scale industry, bringing about balanced regional growth, hindrance of attention towards economic power and also shrink the income inequalities (Jadhav, 2005). Industrial policy is a complete package of policy measures which wraps various matters associated with different industrial enterprises of the country. The pace, design, and structure of industrialization in a country is precisely designed by its industrial policy. The industrial policies also take into account of all the policies related with fiscal, monetary, tariff, labor issues, and government’s attitude towards the escalation of public and private sectors in the country. These policies are required for devising control on the industrial enterprises in the country (Dhar, 2007).

Keeping in view the numerous constraints faced by the industries of Punjab, the state government of Punjab, has introduced various policy measures from time to time that could restructure and rebuild the economy of the state. The Technology Parks in order to encourage the entrepreneurship as one of the incentives were first
introduced in industrial policy of the year 1996. Afterwards, in every concerned policy, several incentives were announced with the objective to promote technology parks in Punjab. A view of Government measures to embolden the technology parks in Punjab through several industrial policies and schemes are given below:

**Industrial Policy of 1996:**

The state Government introduced the state industrial policy in March 1996 with the objectives to set up industries with the modernization of techniques, better infrastructural facilities, and the establishment of export promotion zones. The targets and package of incentives were:

- A special package of incentives and enhanced infrastructural facilities were promised to exporting units, electronic units, agro-based industries, information technology units set up in rural focal points.
- Incentives for strengthening the facility of the single window and of time bound clearances for setting up new industries in the state (Government of Punjab, 1996).
- Furthermore, the state also takes full advantage of the schemes of Agri-Exports Zones (AEZs) and Special Economic Zones (SEZs). The Committee further accentuated that EOUs were recognized as one of the thrust areas and friendly enabled environment and helped to them to meet the challenges of quota free regime (Raikhy and Nanda, 2006).

**Industrial Policy of 2003:**

- The State Industrial Policy 2003 was formulated in the radiance of recommendations of the Chief Advisory Committee on Industrial Growth (2002). With other objectives, the policy has the objective to create a productive investment climate for infrastructure creation and generate facilities to make existing industries competitive through enhanced technology, product eminence and marketing, and special emphasis on the areas that had an edge in terms of costs and competitiveness.
- For the development of Mega Projects that include the development of technology parks, a special package of incentives for the facilities of relaxation of rules and regulations and providing the legal, institutional and financial exemption for new as well as existing industrial units was offered.
The limit of fixed capital investment was increased from Rs. 25 crores and above.

- For development of IT/ITes, electronic industries, Knowledge Parks and Bio-Technology Parks, incentives like minimum floor level of sale tax rate, no restriction on movement of capital equipment, rationalization of Octroi, no power cuts, exemption from property transactions from stamp duty and registration fees for three years, relaxations in floor spacing index to the extent of 50 percent, exemption from land and building tax was commenced (Government of Punjab, 2003).

**Industrial Policy of 2009:**

- With the fast changing global economic scenario, the state government decided to enclose a new well directed industrial policy to improve the state’s economy. For enhancing the growth of technology parks the government suggests to create funds for development of clusters, common facilities centers, providing infrastructural support, promote IT/ITes in the state.

- For the escalation of industrial parks, the incentives like exemption from Punjab Apartment and Property Regulation Act (PAPR) 1995, no stamp duty will be levied on the first deal/transfer of first sale/transfer of developed infrastructure by the developer of industrial parks and also vacant land in focal point was suggested to devour for developing industrial parks.

**Industrial Policy of 2013:**

- The State Government asserted its new incentive-based industrial Policy 2013. Under this Policy, the state provides a liberal platform of fiscal incentives for the manufacturing sector, electronic hardware, and information technology with the aim to facilitate the investment in the state.

- In the foremost step to make S.A.S Nagar and Amritsar as IT hubs of the state, the government has announced incentives including 80 percent exemption from VAT, releasing 24-hour power and exemption from payment of electricity duty, exemption from stamp duty and property tax. The units can avail these incentives for 10 years. (Government of Punjab, 2013).

Further in various Five-year plans, the state government has also introduced several schemes for promoting technology parks in the state. Facilities like credit and marketing, training centers, up gradation of technology, strengthening of R&D, and
also export promotions of industrial products, promoting the IT/Knowledge based industries by providing them capital subsidy of 20 percent of fixed investment, 100 percent compensation on stamp duty and registration fee on land acquired by the developers for the construction of IT Park were introduced in these five-year plans.

Other than these incentives, the government has introduced several inducements for promoting technology parks. These are:

- **Single Window Service:**
  Punjab Information and Communication Technology Corporation Limited for IT and Punjab State Council for Science & Technology for Biotechnology will function as single window services agencies and provide assistance in getting statutory clearances to the entrepreneurs/investors related with IT, ITes, and Biotechnology.

- **Tax Rationalization:**
  Sales Tax will be levied at the minimum floor rates and no turnover tax, additional sales tax, surcharge or any other additional tax should be applicable to IT and Biotech products and services and the movement of any capital equipment will be free from any restriction. Further, no octroi will be charged on any IT and Biotech related product. In addition to it 80 percent exemption from VAT and CST will be provided to the newly located units in industrial parks for the period of 10 years on IT and Electronic hardware products made and sold within the boundary of the state.

- **Electric Power Benefits:**
  Up to 10 KVA of electric power will be provided without any locational restrictions to the industries of Software, Electronics, and Bio-Informatics. For the industries of IT, ITes, Electronics, and Biotech, no commercial tariff will be levied and these industries will be exempted from the payment of electricity duty for 5 years. Further, the captive power generation installed by such industries will be completely exempted from the payment of electricity duty.

- **Infrastructural Facilities:**
  The complexes of IT, ITes, Electronics and Biotech as authorized by Department of Industries and Commerce, Government of Punjab or Punjab Information and Communication Technology Corporation Limited will be exempted from the payment of stamp duty for three years and Rs. 1000 maximum registration fee will be charged from such units. Further, the buildings that are involved in IT,
ITes, Electronics and Biotech activities will be exempted for 5 years from property tax, and IT, ITes, Electronics and Biotech industries in the towns and other than towns will avail 50 percent and 100 percent of relaxation of floor spacing index by the state government (IT Vision, 2010).

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- **Patents and Intellectual Property Right:**
  Government shall reimburse up to 50 percent of the actual cost with the maximum limit of Rs. 1 Lakh for filing domestic patent and Rs. 5 lakhs for the international patent.

- **Certification:**
  For obtaining quality certification by the IT Software Company, the government shall reimburse 50 percent of expenditure incurred subject to the maximum ceiling of Rs. 5 lakhs.

- **Incentives for Mega Projects:**
  For the development of Mega Projects, a special package of incentives with the facilities of relaxation of rules and regulations and provision of legal, institutional and financial dispensation for new as well as existing industrial units has been offered. The limit of fixed capital investment has increased from Rs. 25 crores and above.

- **Software Technology Park Scheme:**
  - Single Window Clearance.
  - 100 percent Foreign Equity is permitted.
  - All the imports in the STP units are duty-free.
  - Domestic purchases are completely excise duty-free.
  - The sales in domestic tariff area are permissible up to 50 percent of the value of exports.
  - Re-export of capital goods brought on loan/lease/free of cost is permitted.
Electronic and Hardware Technology Park Scheme:
- EHTP units may import all types of goods, including capital goods, required for manufacture, services, production and processing will be free of duty.
- Units may procure goods required for manufacture, services from bonded warehouses in DTA setup under EXIM policy.
- The units shall also be permitted to import goods required for approved activities, free of cost or on loan from clients (Software Technology Parks of India, 2015).

From the above discussion related to various incentives, it is clear that there is no doubt, that the State is putting its efforts in order to transform industries of the state into a meaningful and substantial engine of growth of the economy, and introduction of technology parks has given new and effective look to the industries for sustainable development of the economy.

Policy Implications:

Technological dynamism has become an essential requirement for industrial growth that can be attained by swapping the traditional/backwards techniques with advanced techniques of production (Sutcliffe, 1971). The dynamic strategy of technology parks is an attempt for endorsing entrepreneurship, expansion of knowledge–based industry and economic growth within the regions (Research & Industry, 1986, Link & Scott, 2003). In order to take full advantage of such incentive the following suggestions should need to be implemented:

- A legal framework for the establishment and operation of Technology Parks is needed for refining the development of Technology Parks, the Government should make several policies to expand this framework, to take all essential measures to fascinate not only domestic, but also multinational firms, capital, technology, and advanced technology.
- The Government should encourage the technology parks by getting assistance from the international community and international organizations like UNIDO, in order to attract investors within and outside the country that create a mutual benefit and effective cooperation to create a technology park in the region.
The government should organize seminars in order to motivate the entrepreneurs of IT sectors in which the government should promote the sector-based international collaboration platforms in which the entrepreneurs will share their experiences.

The Government should increase the incentives to instigate the entrepreneurship in the state.

It is observed that there are various IT Colleges, Institutions that are located near the cities of Ropar, Mohali and Chandigarh, but in other regions of the state, such institutions are not available in large numbers. The government should promote IT sector in other regions of the state by establishing such institutions.

The government should provide special incentives to the other districts like Jalandhar, Ludhiana, Hoshiarpur, Amritsar, etc. in order to stimulate the entrepreneurship from these regions also as it is observed that there are very less number of firms registered in STPI from these areas.

Efforts will have to be made in generating self-employment among workers and it should be linked with skill development policies including on the job training, shop-floor skill transmission and apprenticeship schemes. This will not only encourage competitive skill oriented manufacturing sector in the state but also spew up ample employment generation in the manufacturing industry and also bolster up export earnings.

As reflected in the survey, such initiatives like building up specialized Technology Parks for different industries would be very instrumental in stimulating the growth of employment both for male and female workers, besides inducing capital investment in the state. The State has already set up the Technology Parks for Apparels, Food, and IT sector. Such initiative will go a long way in increasing capital investment, diversifying as well as generating employment opportunities for skilled and trained workers.

New Innovations in the economy, is imperative for achieving balanced growth. For attaining global competitiveness, investment by industry in R&D sector should be encouraged. The investment in R&D sector in the state is low. High Productivity leads to a growth of manufacturing sector, and this will only happen if the government realizes to increase their investment in such
sectors, which will result in improved quality of goods. The sunrise sector of manufacturing has already been reinforced by setting up training institutes for pharmaceuticals, biotechnology, biomedical, and petrochemical.

- For bridging the skill gaps, promoting innovation-based entrepreneurship, generating employment to attain sustainable livelihood, creating opportunities and developing high quality skilled workforce/entrepreneurship, especially for youth, women and disadvantaged group, the Center Government has introduced integrated National Skill Development Policy and Make-in-India schemes to form entrepreneurial skills among the workforce.

- A high-level committee should be established for the promotion of IT industry in the state that will formulate various innovative policies to attract more and more investors in the IT industry. The state has to follow the concerted policy of Software Technology Parks of India for revitalizing the software industry in the state for achieving the sustained growth of the economy as well as the generation of employment.

- New entrepreneurs in Technology Parks face problems in accessing the credit. Banking facilities are severely limited by inequitable interest rates and the need for a warranty. New entrepreneurs face several problems. Government should generate easy criteria so that the new entrepreneurs can easily assess the credit.

- The government of Punjab should provide more innovative projects for the firms in Technology Parks. Only two or three firms are involved in education and training projects that have been associated as NSDC Partner for UDAAN scheme. The government should create interest of other firms and entrepreneurs in such innovative projects.

- The government should support the creation of R&D institution/organization, R&D labs, assist the study and business planning of technology parks, design, and implement such phases in order to achieve the international standards.

- The government should provide technical assistance, technical education, and other necessary resources like funding, training, etc. to the entrepreneurs.

- The provision of large paperwork, official formalities between the firms and STPI, report writing about the performance of the firms every month, filling forms every year for paying registration fee, monthly meetings with the dealing officers of the STPI, attending several seminars organized by STPI
should be removed and the formalities related to paperwork should be converted to online process.

- More Transparency is needed while providing land to the entrepreneurs. The state government should reveal the performance of IT Park in annual reports like STPI do.

- During survey it was found that almost all firms belonged to the private sector. The firms under PPP models as well as from public sector should also be encouraged. Further, the international community technical assistance in the development of legislation relating to the PPP model should be generated in order to develop and implement the PPP model.

- The provision of increasing rent every year should be removed. The criteria of collecting rent should be flexible, but the rent should not be increased every year. It should be constant for particular time period say for five years after that a particular percentage amount should be increased. This will lessen the financial burden of entrepreneurs.

- The security for women working within the park should be increased.

- The technology parks need well-educated, highly skilled, and intelligent manpower that has management skills. The only graduated manpower is a hurdle in the growth of parks. The policy makers should generate criteria for selection of the manpower with required education qualification.

- The major objective of establishing the technology park is generating linkages among firms, government, academics, and financial institutions. But somehow, the selected technology parks in Punjab have tried to generate such linkages but they have not attained much success. The government should take necessary steps to promote such linkages in the state with technology parks.

Though State took an innovative step for promoting industries in the state, there has not been any significant progress in the IT industry. No doubt the policies introduced by the state government to push IT industry in the state are quite impressive; even then, the state faces specific constraints in the growth of IT industry. The problems of studied technology parks have generated significant policy implications related to IT sector of Punjab. These are the recommendations sufficient to achieve substantial growth of IT sector in Punjab.