Chapter -9

CONCLUDING OBSERVATIONS AND POLICY RECOMMENDATIONS

9.1 Chapter wise Concluding Observation

Small scale industries play a vital role in the economic development by contributing large share in the industrial output, exports and provide more employment to people. Punjab’s small scale Industries provides an employment to millions of the people and has made a significant contribution towards the nation’s Industrial production as well as the overall export from the Punjab. The presented study entitled “Role of Small Scale Industries in Economic Development of Punjab during 1990-2010” that has been carried out with specific objectives:

1. To analyze the growth and performance of Small scale industries in Punjab in terms of Number of SSI units, fixed Investment, employment and production
2. To examine the Partial Productivity, Total factor productivity and Production Function of Small Scale Industries in Punjab.
3. To analyze the Impact of Domestic Inflation and Domestic Demand on Export Performance of Small Scale Industries of Punjab.
4. To observe the role of Small Scale Industries in Industrial Development of Punjab.
5. To study the Impact of Labour Productivity of Small scale Industries on State Per capita Income of Punjab.
6. To investigate the causality between Small Scale Industries growth and Economic Development of Punjab.

The following hypotheses were examined in this study;

1. There is significant Growth of Small Scale Industries in Punjab in terms of Production, Employment, fixed Investment, Number of units and export
2. There is significant growth of Partial and Total Factor Productivity of Small Scale Industries.
3. There is significant negative Impact of Domestic Inflation and Domestic Demand on Export Performance of Small Scale Industries.
4. There is Unidirectional Causal relationship between SSI growth and Economic development in Punjab.
5. There is significant role of Small Scale Industries in Economic Development of Punjab.

The chapter first of this purpose study is introduction that gives a general background for economic development and industrial development. This chapter gives brief knowledge of classical and modern approaches of economic development. And discuss how industrialization affects the economic development of an economy. Industrialization through small scale industries, classification of industrial sector of India also highlighted in this chapter. Further, it gives brief light on industrial development in India; legal framework of small scale industries includes changing concept of small scale industries in India since 1950. This chapter gives brief profile of Punjab economy: socio-economic indicators, contribution of primary, secondary and service sector, agriculture and industrial profile of Punjab state.


Ghose (2001), Dhanmanjiri Sathe (2002), Subrahmanya and Balachandra (2002), Bala Subrahmanya (2003), Dutta and Singh (2003), Bala Subrahmanya (2004), Hussain (2004) Parameswaran (2004) Deshmukh (2007) Bodla (2008) Sharma (2010) and Bharath and Reddy (2011). From all these studies it was clear that, So far, no attempt has been made to analyze the role of small scale industries in economic development of Punjab in a systematic and relative context. Former researchers have not undertaken their studies in depth, on the small scale industries in Punjab. In our study, we have made efforts to analyze the role of small scale industries in economic development in detail and systematic way. This study focused on various aspects which include growth, productivity, variables that affect export performance of SSI, linkages between exports of SSI sector and production of SSI, linkages between labour productivity and State Per capita Income, impact of in SSI investment, production, employment and exports on state domestic product.

Chapter 3 is devoted to the data base and methodology. This chapter discussed the sources of data, selected variables, time period, and techniques of data analysis and limitations of this study.

Chapter 4 conducted to examine the growth of small scale industries in terms number of small scale units, Production, Employment and Fixed Investment. This chapter also focused on the plan wise and entire study period growth and performance of Small Scale Industry in Punjab.

The results reveal that growth of number of small scale units became negative in the year 2006-07 (-6.30), 2007-08(-12.48) and 2009-10(-1.18). These results show that growth of small scale industries in term of Number of units increased at fluctuating trend. During 2006-07 to 2009-10 found massive decline in small scale units. The result indicate that the annual average growth rate of production, fixed investment, employment, employment per unit were 8.05%, 5.52%,1.85% and 2.40% respectively.
Summary of Growth analysis of Selected Parameters (Compound Average Growth Rate in Percentage)

*H0: There is no significant Growth of Small Scale Industries in Punjab in terms of Production, Employment, fixed Investment and Number of units.*

*H1: There is significant Growth of Small Scale Industries in Punjab in terms of Production, Employment, fixed Investment and Number of units.*

<table>
<thead>
<tr>
<th>Period</th>
<th>No. of Units</th>
<th>Production</th>
<th>Employment</th>
<th>Fixed Investment</th>
<th>Employment Per Unit</th>
<th>Investment Per Unit of SSI</th>
<th>Output per Unit</th>
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<tbody>
<tr>
<td>Eight Plan Period</td>
<td>1.62</td>
<td>8.39</td>
<td>2.29</td>
<td>6.41</td>
<td>1.39</td>
<td>4.71</td>
<td>6.65</td>
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<tr>
<td>Ninth Plan Period</td>
<td>0.69</td>
<td>8.64</td>
<td>1.85</td>
<td>7.89</td>
<td>1.15</td>
<td>7.15</td>
<td>7.69</td>
</tr>
<tr>
<td>Tenth Plan Period</td>
<td>-1.15</td>
<td>5.43</td>
<td>0.69</td>
<td>-0.7</td>
<td>1.62</td>
<td>0.46</td>
<td>6.41</td>
</tr>
<tr>
<td>Eleventh Plan Period</td>
<td>-2.06</td>
<td>5.19</td>
<td>2.56</td>
<td>9.39</td>
<td>4.95</td>
<td>11.9</td>
<td>7.39</td>
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<tr>
<td>Overall Period</td>
<td>-0.23</td>
<td>7.89</td>
<td>1.62</td>
<td>5.19</td>
<td>2.09</td>
<td>5.43</td>
<td>8.14</td>
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Null hypothesis is accepted in case of Number of Small Scale Units. While in case of Production, employment fixed investment, employment per unit, Investment per unit and output per unit it was rejected, it means there is significant growth was found in these variables during the study period.

**Chapter five** discusses the partial labour productivity, partial capital productivity and total factor productivity of small scale industries. This chapter also estimated the production function of small scale industries. Cobb Douglas production function has been used to estimate efficiency; elasticity of output with respect to inputs i.e. labour and capital, distribution, return to scale and technological progress. To estimate the technological progress this study used time variable. To estimate elasticity of substitution, the Constant Elasticity of Substitution production function was applied. In this chapter, an attempt has been made to present estimates of factor productivity in small scale industries. We have analyzed the productivity of small scale Industries of Punjab. This chapter attempted to measure and analyzed the growth of partial labour productivity and capital productivity and partial capital productivity and total factor productivity in small scale industries in Punjab especially over the period of 1991 to 2009. Using
the Cobb Douglas and CES production function, we have estimated the parameters of production function and rate of technological progress. Our analysis shows that small scale industries in Punjab recorded significant growth in partial as well as total factor productivity during the period under study. Total factor productivity increased at a rate of 4.43% per annum. Labour and capital productivity showed rates of 6.03% and 2.72% per annum. The capital intensity in small scale industries has shown rising trend, it increased at the rate of 3.31% per annum. The regression analysis for the relationship between labour productivity and capital intensity pointed to a significant positive relationship between these two selected variables. The capital intensity has been positively related with labour productivity. The estimate of employment elasticity with respect to capital and output indicates that elasticity of employment with respect to output and capital was 0.22 and 0.32. This result indicates that elasticity of employment with output is low. The results of Cobb Douglas production function revealed that the share of capital and share of labour was 33: 67. These results of distribution parameter indicate that the labour has greater share than capital in total output of small scale industries. The outcomes of regression analysis shows that elasticity of output with respect to capital and labour was 0.0704 and 2.025 respectively, which implies that output is positively associated with two inputs, but it is highly, positive and significantly related with labour input. The sum of coefficients of two inputs during the reference period comes to 2.09 which was greater than one, it indicates that there has been increasing return to scale operating in small scale industries. The results of technological progress revealed that output grew at 1.7% rate per year. The outcomes of CES production function indicates that total factor productivity grew at a rate of 1.67% per annum. It revealed that labour has dominant share in total output. The result shows that value of elasticity of substitution was less than one, it indicates that labour and capital was imperfect substitute of each other. There was presence of increasing return to scale in small scale industries. The result reveals that 38.46% of labour and capital was substituted for each other.

Chapter six is related to export performance of Small scale Industries. The objective of this chapter was to investigate and analyze the performance of Small scale industries exports and examined the impact of domestic demand, domestic inflation, SSI production, total industrial exports on export performance of SSI. Before going to examine impact of domestic demand, domestic inflation on Export performance of small scale industries, a compound rate of growth
was calculated for whole period and sub periods. Regression was fitted to examine the impact of independent variables on the dependent variable.

**Summary of Export Performance of SSI sector in Punjab**

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<tbody>
<tr>
<td>Compound growth Rate</td>
<td>18.9%</td>
<td>25.5%</td>
<td>3.30%</td>
<td>33.4%</td>
<td>12.01%</td>
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</table>

The above results indicate that SSI exports were significantly increased during the study period it means here we can say that our null hypothesis is rejected. Regression results of selected dependent **Exports of Small Scale Industries (EXPRTS)** and independent variables Domestic demand of small scale Industries Products (DDSP), Total Industrial Export (TIEXPRT), Production of Small Scale Industries (SPROD), Whole sale Price Index of Manufactured Products (WPI). The estimated coefficient of Domestic demand of Small scale industrial product (-3.44), and whole sale price index of manufactured product (-0.50) (used as proxy of Inflation) were found to be significantly negative associated with SSI exports. On the other hand total industrial exports (0.35) and production of small scale industries (4.29) have been positive and significant impact on exports. On the basis of above finding it is suggested that government should try to control inflation in domestic market. Further this chapter investigated the causal relationship between production of SSI and Exports. For this purpose the granger causality test was used. The result of granger causality test found that there was unidirectional causality between SSI production and Exports, and it was running from production to exports of SSI. On the basis of these results it is suggested to government should focus on policies that promote or increase the production of these industries.

The seventh chapter of this study has analyzed the role of small scale industries in Industrial development of Punjab during 1990 to 2010.it has specifically evaluated the role of small scale industries in total industrial production, total industrial employment, total number of industries and industrial Investment. This study also examined the comparative role of small and large scale industries in Industrial development of Punjab.
1. The result show that total industrial units in Punjab is positively related with units of large scale and small scale industry. It means total industrial units are increased with increase in SSI units and large scale industry Units. The result clearly shows that the contribution of small scale industrial units is more than the large scale industrial units.

2. The result shows that there is positive and significant relation between SSI and Large scale industry employment with over all Industrial Employment. It means industrial employment is changes with change in small and large Scale industry employment. The result of this study show that the contribution of small scale industries in employment generation is more in total industrial employment as comparative to large scale industry in Punjab.

3. The findings show that production of small scale and large scale industries have positive and statistically significant impact on Total industrial production. In other words, the total industrial production is fluctuated with LPROD (Production of Large Scale Industries) and SPROD (Production of Small Scale Industries). The result showed that Small scale industry plays a role of major contributor in total industrial production in Punjab.

4. There exists a positive relationship between total industrial production and Small scale industrial investment. The result shows that in Total industrial Investment, the small scale industries capture more investment share as compare to large scale industries.

Chapter eight examines the role of small scale industries in State Domestic Product and Per Capita Income of Punjab. To gauge the impact of small scale industries on these economic development indicators i.e. state domestic product and state per capita income, this study has been used two variables and multivariable regression model. In multi variable regression model State Domestic Product was used as dependent variable and production, investment, exports and employment were used as independent variables. The coefficients of the independent variables expect employment is found to be positive. This implies that state domestic product of Punjab state has increased with increase in small scale industries production, exports and investment. This study also has been attempted the causal relationship among state domestic product and parameters of small scale industries. This relation has been investigated by using popular time series granger causality methodology. The revealed that there was unidirectional causality between production of small scale industries and investment in SSI. It was running from production to employment. It shows production of small scale industries influences the
employment level. The result strongly supports that there was one way causality between exports by small scale industries and State Domestic Product i.e. running from exports to state domestic product. The outcomes indicate that there was unidirectional causality between investment and state domestic product. It was running from state domestic product to investment. It means state domestic product or economic development influences the investment level in small scale industries. The results also revealed that there was one-way causal relation between exports of small scale industries and investment in small scale industries and its run from investment to exports of small scale industries. This implies that exports from small scale industries influenced by investment level in small scale industries. The result also found that there was no causation between state domestic product and production of small scale industries. This chapter has also estimates the impact of labour productivity of small scale industries on per capita income of Punjab state. The two variable regression models have been used for this purpose. Coefficient of labour productivity shows that there was significant positive relationship between labour productivity and state per capita income. This implies that per capita income of Punjab increases with increase in labour productivity. Therefore in this chapter through empirical results, we found there is significant role of Small Scale Industries in Economic Development of Punjab.

9.2 Policy Recommendations

In the past, the government of India and the state government and some other institutions have been adopted various policies for protecting and improvement the efficiency of small scale industries. These policies were focused on the techniques of production, raw materials, sale of final products and finical assistance etc. The main objective of these policies were promotion of employment, saving of capital, full utilization of local resources, regional dispersal etc. it is clear that the goal of economic development cannot be achieved without the active and positive participation of the small scale industrial sector. It is worldwide accepted concept that a vigorous small scale industrial sector is vital to industrial as well as economic development and it also relevant to the achievement of socioeconomic objectives of the society. But these industries fail to achieve its full potential due to lack of proper direction. After 1991 these industries realize that they cannot exist in isolation with backward techniques of production. Therefore these industries should put stress on reducing cost and produce better quality products by using new research technology and capture large size of market. For this they require strong infrastructure
power, transportation and easy availability of credit facilities through banks. But at present these industries have faced various problems like: paucity of raw material, availability of raw material at high price, limited availability of collateral bank loans through public sector, lack of full time power supply, limited size of market, outdated methods of production, high cost of production, heavy competition with large scale industries, high rate of local taxes and illiterate, uneducated workers engaged in these industry are major issues in small scale sector. Due to all these problems the development of small scale sector could not reach at desired stage.

1. To increase the exports from small scale sector, it is necessary to make efforts to increase the exports of quality products. For this purpose it will be necessary to assure the adequate supply of capital, appropriate skills and technology and market information particularly that are related with small scale sector. State government as well as Indian government must learn to operate in international environment where protectionism is common. It should adopt such policy measures which minimize the adverse effects of protectionism. These industries should be protected by the government through taxes, subsidies and other different types of direct and indirect measures.

2. Government should take initiatives to promote clusters of enterprises of different sizes and working in different industries. Government should reserve space for small scale units in the existing industrial zones, where cooperative competition would be possible.

3. Both small scale and large scale industries are interdependence. So that policies should be designed to support small scale industrial units in an environment of interdependence.

4. Government should be sharing the costs of common facilities, like training, use of new technology, market promotion and infrastructure development.

5. In small scale Industries, there is need to improve the quality of inputs like capital and labour. For improvement in technical efficiency there is requirement of proper management of capital resources. Research and development activities can also play a major role to bring technical changes in the Industries. Therefore Government efforts should make to increase the research and development activities in the small scale industries. So, that theses industries can play their significant role in Punjab’s growing industrialization process as well as economic development.

6. Government should take a wise decision on the reservation policy and provide proper package of assistance to products affected by de - reservation so that their competitive
power is enhanced. Effective steps are also needed towards up gradation of technology and availability of credit at reasonable rate of interest.

7. A general programme of interest subsidy of technology up gradation should be launched. To strengthen the marketing of small scale industries products, a separate market and export promotion centers of small scale entrepreneurs be created.

8. The most desirable policy would be to provide raw material to local small scale industries at landed cost. It should be without import duties. If such a revolutionary steps will be undertaken, it will give very effective results. It will reduce the cost of production and increase exports.

9. Training institute should be set up to run short courses for managers, owners of firm, unskilled laborers in the industry. These courses should be concentrating on those aspects in which the Punjab’s small scale industries are very weak. Like how to produce standard product, quality control, product design, production techniques etc.

10. Services center should be setup in large numbers to provide testing and other facilities which are too expensive for small individual firms to have in-house.

11. Government should raise the capital subsidy to 25% for all small scale industries in the state.

12. Special incentives should be provided for the industries that are affected by financial, electricity supply and labour problems.

13. Government should provide special incentives to those industries that are based on local raw material and provide large portion of employment. Mainly thrust should be given to rural area.

14. Quality infrastructure should be provided at least one industrial area must be established in each District, Tehsil and Blocks of state. More attention should be paid to far flung areas of state.

15. Government should encourage industry associations and various private organizations to play a role in the technological upliftment of small scale units rather than itself trying to do everything ineffectively as it is doing so far.

16. Government should try to motivate individual units of SSI sector through external support and try to provide education about the changes in the business environment and essential steps for technological up-gradation.
17. Government should make efforts to promote Information Technology sector in small scale industries, for gathering various information related to raw material, product designs, and other market information in very short period of time.

18. Educational system must be reorganized to produce a profile of skilled manpower according to the needs of various types of skills arising in the modern industrial sector. Then this skilled workforce should be used effectively. There should be a change in the academic curriculum according to the needs of industrial sector. At present central government has announced the skill development programs and established various bodies for this purpose. It is suggested that there should be proper coordination between the central and state level units.

19. It is suggested that the government may think over its policies and provide incentives to small scale industries in taxes for imports and exports of products produced by small scale industries. Government should try to gives subsidy in utilities, electricity, gas and other facilities to this sector in order to development of this sector.

20. More attention should be paid to modernization, reorganization and rehabilitation of the existing small scale industries rather than step up of new ones.

21. Policies related to planning of investment and manpower should be overhauling.

22. Government has introduced the policy of considering small scale industries in to priority sector and providing various incentives for Growth and Development of Small scale Industries, all the policies and steps must be effectively implemented.

Finally we can say that if government takes proper and encouraging steps to provide incentives, then this sector can provide more and good opportunities to employment generation, production and exports of an economy.