CHAPTER VI

SUMMARY AND RECOMMENDATIONS
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This chapter offers a summary of the preceding chapters, and makes recommendations on the basis of the findings and conclusions of the present study. The contents of this chapter are as follow:

6.1 - Summary.

6.2 - Recommendations.
6.1 - **SUMMARY** :

This chapter essentially embraces the summary of all the chapters discussed earlier. The first chapter on introduction identifies the problems of the glass industry of Firozabad. Although the glass industry has developed substantially, but still adequate attention has not been paid to the glass industry of Firozabad, by the Indian policy makers and planners. It has been neglected by the government. There is a common problem of low technological advancement and lack of modernisation of glass units.

It is expected that with the increasing emphasis on mass production, these problem are likely to aggravate further. It is also pointed out that the overall environment of the Firozabad district is detoriating fast effecting the health of labour and the general public as well.

It has also been noted in this study that entrepreneurial development in glass industry is lacking. It is opined by the researcher that entrepreneur is one of the most vital factors in the production process. Entrepreneur is the controlling
figure of the economic activity in the business and proprietor of more so under the free enterprise. Industrial development is mainly the outcome of efficient entrepreneurs and entrepreneurship.

Different writers have defined entrepreneurial functions in different ways. Cantillon was the originator of the term entrepreneur. He was first person to use the term entrepreneur. He said an entrepreneur is one who discharges the function of direction and speculation. In modern times an entrepreneur is considered as the self-starter and the one who organises and builds successful enterprise. The entrepreneurship contains the following essential elements

(a) Uncertainty bearing.
(b) Coordination of productive resources.
(c) Introduction of innovation and.
(d) The provision of capital.

Generally, an entrepreneur performs the following functions:

(i) Perception of market opportunities.
(ii) Gaining command over scarce resources.
(iii) Purchasing inputs.
(iv) Marketing of the product and responding
to competition.

(v) Dealing with the public bureaucracy.

(vi) Management of industrial development relations with firm.

(vii) Management of customer and supplier relations.

(viii) Management of finance.

(ix) Production Management.

(x) Acquiring and overseeing assembly of the factory.

(xi) Industrial engineering, minimisation of input with a given production process.

(xii) Upgrading, processing and production quality.

(xiii) Introduction of new production techniques and products.

In November, 1968 government appointed two working groups popularly known as "Pande Committee" and the "Wanchoo Committee" to go into the problem of backward areas. While the pande committee laid down the criteria for the identification of backward areas/districts, the wanchoo committee suggested several fiscal and financial incentives. The accelerated development of industrially backward
areas has been assigned a high priority in the fifth five year plan. The planning Commission declared 247 districts as backward and they now get various incentives for industrial development. As per the wanchoo committee recommendations the government of India has been announcing a number of concessions and facilities for industry, established in selected backward districts/areas from time to time.

This chapter also defines the objectives of the study and discusses the methodology adopted for the study. At the end the format of the project has also been outlined.

The second chapter is devoted to a review of the literature available concerning the glass industry of Firozabad. Various books, papers and articles reviewed in this chapter suggest that the performance and position of glass industry of Firozabad is not as good as if ought to be. There are certain inherent weaknesses of this industry what are hindering the growth and development of this industry.

Most of the work reviewed in the second chapter highlights a number of problems having a direct bearing on the working of the industry and the
life of the workers. Problems are more acute in the area of hygienic and physical working conditions. The child labour is effecting the socio-economic setup of Firozabad in general and that of labour class in particular. However, it is to be pointed out that despite several articles published on different aspects of glass industry, there is hardly any study which offers an in-depth analysis of the working and performance of the Firozabad glass industry.

The third chapter covers the graduals development of Firozabad glass industry. The chapter emphasises that the glass industry of Firozabad produces more than 70% of the glass items in the small-scale sector in the Country and has virtually monopoly in the manufacturing of glass bangles. This industry began essentially as a cottage industry. The first glass industry in the organised sector came into existence in 1890. The manufacturing of glass bangles in its modern shape was invented by Ustad Ashiq Ali and Rustum Ali and the fancy bangles were manufactured for the first time in 1874-75 by Ustad Mushtaq Ali.

After world war I, glass wares from Japan and a few European Countries started flooding the Indian market, with the result that the home industry
declined rapidly. However, the period from year 1939 to 1953 was the golden period for the development of glass industry in Firozabad. Firozabad is also known as "Suhag Nagri" and "Kanch Nagri". The growth of glass industry can be attributed to skilled artisans and craftsman of Firozabad.

Today glass has become an essential part of life. Its application is in various fields of life. It has even scientific uses as glass can be manufactured with a variety of compositions. Its consumption are from shampoo bottles to bullet proof wind shields, from television tubes to coffee carafes etc. Firozabad was formerly a town. It became a district on 5th February, 1989 after separating from Agra district. Firozabad is famous in the world for glass bangles and other glass production. Its geographical area is 2362 sq. km. and district Firozabad’s present population is 15,33,054. At present Urban population is 4,07,560 and rural population is around 11,25,494. Firozabad is having 400 units of glass industry. Smaller units are making bangles, glass beads, lamps, jars, bottles, furnaces accommodating 10 to 12 pots, each with a capacity of 400 kg. of glass. This sort of production accounts for 45% of the industry’s total turnover.
The chapter also evaluates the performance and position of the Firozabad glass industry, in terms of production from 1985 to 1993. In 1985 production was 43,500 metric tonnes and in the year 1986 production was 50,000 metric tonnes. The production was 60,000 metric tonnes, 65,000 metric tonnes and 68,000 metric tonnes during the years 1991, 1992 and 1993 respectively. It can be observed that the production was increasing but at the diminishing rate. This was due to the fact that the industry was facing crises on account of lack of resources, shortage of trained labour force, raw materials, power, lack of technological advancement, excessive labour turnover and lack of marketing strategy to increase exports to other countries.

In the fourth chapter an endeavour has been made to make an in-depth analysis of the performance of selected twenty glass units of Firozabad. The chapter shows that the over all performance of most of the glass units under review is not satisfactory in terms of production, sales, profits and investment. It can be observed from this chapter that about fifty per cent of the units under study could increase their level of production. Of the remaining units, forty per cent of the units recorded even
negative growth. Sales were positively correlated with the level of production, in almost all the units under study. It is surprising to note that despite the increasing aggregate demand the units under review could not increase their level of production and sales mainly due to mismanagement and lack of planning.

Regarding profits concerned the picture is even more grim. The present study indicated that increasing labour unrest and lack of government support were the major causes for this state of affairs. However, some units on account of modernisation programme undertaken and satisfied labour force could manage to increase their profitability during the period under study. The study further pointed out that financial constraints also affected a number of units and about fifty per cent of the units under study exprience either a negative or a total stagnation in the investment. This was the major cause lending to lack of modernisation and technological upgradation in most of the glass units.

Although there has been an increase in the number of labour employed almost in all the units under review, however the questionnaire responses
reveal the staggering facts that in almost all the units the workers were found very unhappy with the prevailing working conditions. The situation is even more precarious for the child labour and the immediate remedial measures are called for.

The fifth chapter essentially identifies the problems facing the glass industry. The main factors responsible for this state of affairs were shortage of raw materials, power, cash flow, lack of new technology, trained labour force, excessive labour turnover, lack of marketing strategy, planning and mismanagement. Lack of consistent state and central government policy towards the glass industry and lack of aggressive export policy also contributed to this state of affairs.

In Firozabad glass industry employment of child labour is very common. There are about 50,000 children (below the age of 14 years) who are working in the glass industry in Firozabad. There are health hazards as they work continuously near the hot furnace. Low income level of the families forces the parents to send their children for work. Parents introduce their children into the trade at the early stage to ensure the flow of income from the beginning.
The glass industry of Firozabad has mainly suffered due to lack of modernisation, rationalisation and upgradation of technology. The glass industry crisis are not a new phenomenon, as it has always been in the unorganised sector. If proper remedial measures are taken, the glass industry can play a major role in the economic advancement of the country.

6.2 - RECOMMENDATIONS:

On the basis of the above discussion it may be interpreted that the performance of the glass units of Firozabad in general is not as good as it ought to be. The need of the time is that some immediate remedial measures are required. The present study makes certain recommendations and it is hoped that if those steps are taken in a committed way, it shall put the glass industry on the path of faster growth.

1. The entrepreneurs of Firozabad glass industry in general are not trained and educated so education must be considered as an essential pre-requisite for the entrepreneurial development. Training facilities may also be provided to the entrepreneurs by the training institutions
like Industrial Training Institute (I.T.I.), Indian Institute of Technology (I.I.T.) and other management and financial institutions. Training creates the conducive working environment, helps to give due feed backs and also helps in the minimisation of cost and wastage of men, money and materials.

The following are some of the suggestions to improve the entrepreneurial efforts in the glass industry of Firozabad.

1.1 - Entrepreneurs should be provided with more and more information on various aspects such as the selection of products, marketability of the products, design of the products and the alternative product profiles. Market surveys should be conducted in a more intensive manner and information relating to the market feasibility of products has to be provided.

1.2 - There should be suitable organisational arrangements for disseminating information about appropriate technology to the prospective entrepreneurs and the entrepreneurs should be given proper training in the technology to be adopted.

1.3 - Entrepreneurs should be provided full
assistance not only in the preparation of project reports but also in meeting the financial requirements.

1.4 - The Entrepreneurial Development Programmes (EDPs) should aim at providing adequate information to the entrepreneurs in respect of rules and regulations connected with setting up of new industrial ventures and organisation to be contacted.

1.5 - For successful entrepreneurship development, it is necessary that emphasis is placed on adequate follow up support.

1.6 - As the training inputs can notably influence the quality of entrepreneurs, care should be taken to design the course and the Entrepreneurial Development Programmes (EDPs) should have a specific and well defined target group.

1.7 - As selection of the participants for the Entrepreneurial Development Programmes (EDPs) is an important factor, the methods of selection suggested by the expert committee should be rigidly followed and the selection process may be reviewed at periodical intervals by the concerned experts.
1.8 - Sponsoring of Technical Consultancy Organisations (TCOs) for providing necessary facilities and guidance to entrepreneurs is also an important suggestion which deserves serious attention.

1.9 - Preparation of a directory of industrial, technical and management experts so as to enable the entrepreneurs to take their help in the formulation and implementation of the projects specially where TCOs are not ready to make their services, guidance and consulting, etc. be made available to them.

1.10 - Efforts aimed at establishing a greater degree of cooperation, liaison, closer working relationship and a better understanding between the various financial, technical institutions and organisations and the different departments of the Central and State Governments engaged in entrepreneurship development activities should be intensified.

1.11 - Intensive efforts should be made to impart more technical training to the entrepreneur trainees in the Entrepreneurship Development Programmes (EDPs). Greater emphasis should be laid on the practical aspects during these
training programmes.

1.12 - Field visits should be of longer duration to give a greater practical insight into the various aspects of industrial organisation, planning management and development etc.

2. The second most important aspect of Firozabad glass industry to be taken care of, is the financial aspect. It has already been pointed out that almost every unit of the glass industry is facing financial problem in one way or the other.

The following are some suggestions to cope up with this problem.

2.1 - It is high time to adopt the idea of limited partnership with a view to boost up the financial resources in small-scale units and to encourage the small entrepreneurs to bear the risk within the limited liability.

2.2 - More finance should be made available to the small units keeping in view their long term and short term requirements. The financial institutions and commercial banks must encourage the entrepreneurs in the initial stages of the operation of new units and consider their credit worthiness.
2.3 - The banks should act as consultants to small-scale units, for the purpose of planning their financial needs, selecting appropriate manufacturing and testing process, building up proper marketing strategies and setting up appropriate financial controls. In this manner the financial institution and commercial banks can provide accurate financial assistance and credit facilities and also professional guidance to small-scale units.

2.4 - The timely disposal of credit proposals should be stressed upon to save the small entrepreneurs from paying exorbitant rates of interest to the unorganised sector.

2.5 - The payment of bills must be made promptly to the small-scale units. The government should set some guidelines to avoid the delay in payment of bills by large units of the public and the private sector.

2.6 - The borrowing should be made cheaper by lowering the rates of interest on lendings of commercial banks especially for short term loans.

2.7 - The re-orientation programmes, workshops and seminars should be organised at District or
Division level to provide the latest informations to the small-scale entrepreneurs regarding the avenues of creating finances.

2.8 - The compulsory registration of small-scale units with State level agencies can assist the whole government machinery and Financial institutions in allocation of credit and other facilities.

2.9 - Deterrent punishment should be set for the entrepreneurs found misusing the funds or otherwise seeking financial assistance in bogus names. A preventive strategy should be chalked out to provide a check on malpractices of the larger units playing in the name of small-scale units.

2.10 - The objective of establishment of these units was to bring higher exports thereby earning foreign exchange, so that they not only meet their own requirement but also help the introduction of new technology to obtain final products at reduced costs. But most of these units manufacture float glass not for exports but for indigenous consumption.

2.11 - Float glass units were expected to restrict the thickness of the products so that
conventional sheet glass plants could co-exist. This is not being practiced by the float plants and as a result the sheet glass industry is facing extinction.

2.12 - Indian financial institutions should stop their involvement in unreinumerative ventures and call back the loans on defaults in repayments.

2.13 - Exceptional and extraordinary reliefs and concessions should be withdrawn.

3. The profitability is very low in the small-scale units of Firozabad glass industry. To raise the profitability of the various units, attempts should be made to increase the operational efficiency through the use of modern management techniques like those of Management by Objective (M.B.O.), Project Evaluation and Review Technique (P.E.R.T.), Critical Path Method (C.P.M.) which will go a long way in decision making and controlling.

4. Productivity of small-scale units of Firozabad glass industry can be increased through the social acceptance of its employees and labourers. Workers involvement in the units, social acceptance of employees and job security will reduce
the negative attitude of labourers and its unions and shall contribute to the productivity enhancement of these units.

5. For the establishment of new unit, at the initial stage units face excessive formalities to be completed at different places and through different offices of executives. This problem of running around and completing formalities of documentation etc. in various offices should be removed. This system should be replaced by the introducing the "Single Window System" concept in entrepreneurship development in Firozabad glass industry. Single Window System minimises the formalities and procedural problems and centralises all the formalities at the single floor. The entrepreneurs themself do not run to locate the offices and executives but the offices and executives themself come to a single office. So the hush money "Rishwat Khori" problem can be minimised and entrepreneurs energy, time and extra money may automatically, be saved substantially.

6. Another crucial problem of Firozabad glass units is industrial sickness. There are various causes of industrial sickness in these
glass units. The main causes can broadly be classified into: managerial, financial, social, economic and political. The impact of industrial sickness on small-scale units could be very serious. The glass industry of Firozabad should formulate a separate policy for sick units and also establish a social audit unit for better "feedback" mechanism and improvements in the performance of glass units.

7. The manpower planning is not done in the glass units of Firozabad. Some units have shortage of employees while others have overstaffing problem. So, the glass industry of Firozabad should go for proper manpower planning and personnel audit and personnel research etc. for achieving balanced growth in the area of Human Resources Development (HRD).

8. Firozabad glass industry should review and modify its polices and procedures in the context of changing economic environment and adopt uniform policies in respect of wages, labour, inventory management, energy and fuel etc. It should be done on the basis of cooperation among the various units of glass industry.
9. Firozabad glass industry is suffering due to lack of efforts for importing training facilities at the top middle and lower levels of management. So the glass industry should establish a separate training institution which must have specialised staff, trained in industrial development particularly in glass technology and glass industry activities. This staff should provide proper guidelines and training to the entrepreneurs as well as to employees. It can minimise the cost and improve the quality of glass products that can face the global competition in international market and improve export earnings of glass units of Firozabad.

10. The government should form a proper technical consultancy committee on the glass industry of Firozabad. This committee can play an advisory role among the entrepreneurs and employees.

11. The Central or State government should determine a long term interest rates policy because it is essential for the glass industry to determine the criteria for entrepreneurial development.
12. The glass industry is process based industry. The production of glass takes place through the various processes in a factory. So the work of various process units must be coordinated to achieve better results. This policy of cooperation and coordination among the various processing units can minimise the wastage of time and avoid the duplication of work for the achieving long term objectives.

13. The glass industry is suffering due to lack of energy resources and power cuts. The glass industry needs continuous power supply due to its regular process. If power is cut in the midst of process, liquid glass raw materials may be converted into solid glass raw materials, which may again require labour, power and time for its liquidation. So, supply of power must be uninterrupted on and proper supply of fuels like coal etc. should be assured.

14. The quota system for coal on the basis of production capacity must be audited and checked. So the black-marketing of coal by those units which are not in functioning can be checked and minimised. Black marketing of coal increases the cost
of production and finally glass products become too costly and consequently the market price of the items becomes highly uncompetitive. This tendency is harmful for the entrepreneurial development of glass industry.

15. The glass industry of Firozabad, has not installed the pollution control devices with the result that Firozabad district is one of the most polluted district of India. Diseases related to eyes, lungs and temporary sickness due to common colds, malaria and soar throats etc. were quite common among the public in general and the employees in particular and if is affecting their productivity and efficiency. So, the government should make mandatory to follow the environmental pollution control devices in glass industry of Firozabad. If the entrepreneurs and owner of the units do not follow the order and do not use the pollution control equipment the units must be closed in the interest of general public.

16. The Union government, together with the United Nations has formulated a comprehensive project for the improvement of the glass industry which includes setting up and improvement of glass industry at Firozabad. It must
be fully implemented as well as progress monitored.

16.1 - Trouble-Shooting services, technical advice on feasible improvement, assessments and advice on the economic and commercial consequences of recommended improvements, practical assistance for their implementation including training of personnel of the manufacturing units are needed.

16.2 - Back-up facilities for the extension services such as testing of raw materials, products etc. should be organised so that they may eventually become part of an institution for promoting industry improvements.

16.3 - It is recommended to assure that the raw materials of standard quality and in required quantity be supplied to the glass industry of Firozabad.

16.4 - Substitution of coal with another source of energy in line with the government current policy should be provided to this industry.

16.5 - Revision of existing financing plans to facilitate implementation of improvements undertaken under the auspices of these plans.

16.6 - Recommendation on measures to the U.P. State
government and implementing agencies for the protection of workers aged below 18 years.

16.7 - Linkage of the availability of concessional finance for coal or gas with the undertaking of improvements in energy conservation.

16.8 - Application of pollution control regulations with a target date for full and strict compliance, allowing for an interim regulation in favor of only those units that initiate efforts to improve furnace operations.

16.9 - Central and State governments and other agencies to strengthen the eradication programme of child labour of Firozabad.

The aims and objectives of this plan in glass industries of Firozabad are as follows:

(a) Development of new products with improved design and decoration, Keeping in mind changing trends in the domestic and international market.

(b) Technical services to the industry in energy conservation, pollution control, improvement of product quality and productivity.
(c) Further improvement of engineering/manufacturing capabilities for developing new technologies as well as processing knowhow compatible with the qualitative and quantitative norms in foreign markets.

(d) Creation of management capabilities in the country.

17. Government should form a specialised promotion council and glass products must be linked to State Trading Corporation (S.T.C.) for getting feedback about new technology and for ascertaining market opinions in foreign countries.

It may be concluded that the glass industry of Firozabad is playing a significant role in the economy. At present its performance is not satisfactory in terms of the criterion of loan sanctions, disbursement, dues recovery, productivity and profitability investment and generation of capital, resources. Also bureaucratic delays, industrial sickness, lack of specialised and trained staff, shortage of power, lack of infra-structures like warehousing, transportation, insurance, banking,
communication and lack of uniform labour policy and also lack of cooperation and coordination with in the glass units, are hampering the development of glass industry. It is hoped that the above suggestions and recommendations will go a long way in streamlining the functioning of the glass industry of Firozabad and that should open a new chapter in the industrial development of India.