CHAPTER VII

SUMMARY AND CONCLUSIONS

The small industry is a universal phenomenon and is found to survive even in developed countries where large industry is triumphant. A number of economic, political and psychological factors are attributed to their success. Various dynamic arguments such as that small firms are more innovative and that they constitute seedbed or nursery for entrepreneurs are put forward. In India too, small industry occupies a significant place as in developed countries of the world. Despite various incentives and the government support system small enterprises report problems on various counts. The contribution of small firm sector to the long run health of the economy is vital. The health of an economy requires the birth of new enterprises in substantial numbers and the growth of some to a position from which they are able to challenge and support the existing leaders of the industry.

In the real world situation, small firms face competition not only from within the same sector, but also from large scale units. If units have to survive in the market, they have to be cost conscious. A firm at a point of time has certain objectives so as to enable it to survive and attain growth in the market. In actual practice a firm is constantly adapting it self to rapidly changing world. Hence its objectives to change depending upon the situations it face.

There exists technological interdependence among firms. This interdependence of activities is found to lead to clustering of industries in certain regions. These enterprises possess enough flexibility so as to serve the objective of regional dispersal and at the same time, are bound by technological interdependence. The locational requirements of these firms are found to vary with specific products.

Any firm in a position to reap further economies of scale will find it profitable to grow in size. However, the growth in case of a firm is an organic rather than mechanical phenomenon. The growth of a firm depends not only on its rate of investment but also on the capacity of human and organizational resources of the firm, its adoption and adjustment to changes in scale of operation and to new environment. The managerial constraints in expansion of a firm are implicit in Marshall's analysis. Even in the case of increasing returns to scale, the firm cannot expand very rapidly because entrepreneur cannot go in for too rapid an expansion of his firm because, his enterprise is a delicate organism with complicated labour and managerial relations. Survival and growth of firms in competitive market speak of their over all performance.

The present study is based largely on the primary data collected from small and medium scale chemical enterprises in Baroda region. The sample consists of firms using electricity; of which 95 units are below 100 Horse Power and 10 units are above 100 Horse Power connected. Secondary data also has been used

wherever necessary. For estimating the mortality and survival rates of firms the data from electricity divisions of Baroda Municipal Corporation and Gujarat Electricity Board have been made use of. For analysing the industrial structure of Gujarat, various secondary data sources such as the Annual Survey of Industries, and various publications of C.S.O. were used. Various government publications of Gujarat state have also been used.

While examining the various hypotheses given in chapter one, different statistical methods and econometric methods like correlation analysis, coefficient of variation technique and multiple regression analysis have been used. The detailed ~~discussions~~ results of the empirical findings of the present work are given in summary form in the succeeding paragraphs.

Gujarat state is one of the prosperous states in India and is classified as an industrially developed state. The industrial base of Gujarat is observed to be dominated by few industrial categories such as textile, wool and silk, chemical and products. However the industrial base of the state has under gone considerable changes, as indicated by the reduced importance of traditional industries over time. The main points that emerge out of our analysis of Gujarat economy are firstly, the large scale dependance on agriculture sector and fluctuations in this sector, its influence on the performance of the state economy; secondly, the inter-district and intra-district imbalances in respect of industrial development. Even in developed districts, there are many backward pockets. The recent industrial development is also

found to be centred around relatively developed towns and centres.

Majority of the firms surveyed have been established in late seventies and in the eighties. 77 percent of the enterprises surveyed are partnership concerns and 20 percent are of proprietorship concern. Analysis of the size and ownership pattern in enterprises reveal that the partnership concerns are on an average are larger in size when compared to proprietorship concerns. The heriditary firms are found to be operating on larger scale in comparison with firms managed by first generation entrepreneurs.

Family background is expected to play a crucial role in the establishment and progress of an enterprise. An examination of family contribution to initial funding reveal that ~~in the enterprises~~ a considerable amount was from family sources (i.e. 41.7 percent). If is observed that enterprises being managed by families (family concerns) are on smaller scale but performing better, when profit rate is taken as criteria of performance.

The business background of the entrepreneurs play a crucial role in the performance of the enterprise. ~~From the study it is revealed~~ The study reveals that enterprises managed by entrepreneurs with business background are operating on small scale with lower amount of capital employed per firm, but show better performance with greater average profit rate and value added per firm. This leads us to the conclusion that firms managed by entrepreneurs with

business background perform better than enterprises managed by entrepreneurs without business background.

Education and technical background of the entrepreneurs play an important role in day to day activity of the entrepreneurs. An examination of the performance of these enterprises managed by the entrepreneurs with educational levels, graduation and above, and with technical background separately give the following results. The firms managed by graduates indicate on an average lower profit rate, but a higher value added per firm. Therefore no definite conclusion can be drawn pertaining to their performance. The firms managed by entrepreneurs with technical background are found to clearly exhibit better performance taking value added or profit rate as criteria.

Migrants form 2/3rd of the sample and they ~~are found to originate~~ come from different states of India. The general belief is that the natives have an advantage over the migrants and their performance is expected to be better. The results obtained indicate that the performance of the migrants when measured by average profit rate and value added per firm is much higher than the natives.

The performance of an enterprise is influenced by a number of factors which are both internal and external to the firm. An attempt was made to examine the performance of enterprises taking characteristics of entrepreneurs and that of firm. We have examined the performance of enterprises, using multiple

regression analysis with cross section data. Profit rate, value added per man day of labour and value added are taken as indictors of performance. The results indicate that the enterprises managed by entrepreneurs with technical background are performing better than those managed by entrepreneurs without technical background. Capital intensity (capital employed per man day of labour) is another explanatory variable, which significantly explain variations in the performance of enterprises.

The mortality rates of the small scale enterprises in Baroda region were examined using the secondary data. The findings indicate that the smallest and the youngest of enterprises have greater mortality rates in comparison with large and older firms. 18.54 percent of the electrified industrial units have been permanently disconnected. The mortality rates are found to differ across industries. The coefficient of correlation between age of the firm and mortality rates is found to be -0.4721 and significant at 1% level, for all industries in Baroda region, indicating an inverse relation between age and mortality rate. On an average 75 percent of the deaths occur before firms attain 10 years of age.

From the growth experience of firms surveyed, it is found that majority of the firms attained growth over time. Fifty-four 54 percent of the firms are observed to have attained growth by all the three indicators of size used (employment, sales and capital invested). Firms show higher growth rates by sales criteria than

by other two criteria. However, it is not necessary that a firm showing good performance by one criteria indicate a similar performance by other criteria too.

When growth rates are analysed by firm's age, the result lead us to the conclusion that the age is strongly related to growth rates. (As reported earlier the mortality rates of the younger firms are found to be higher). The growth rates estimated by all the three criteria indicate that in general firms established in the latter years have grown faster. The correlation coefficient between age of firms and growth rate (by all three criteria) was negative and significant at 1% level. The growth of firms established before 1975 (old firms) show substantially lower growth rates than firms established after 1975 (new firms).

The analysis of growth of firms by their size do not yield concrete results. Over all the firms above 100 H.P. exhibit higher growth than firms below 100H.P. size and growth are not found to exhibit significant correlation. The coefficient of variations are relatively lower for large sized firms.

'In general the chemical industry exhibits high capital intensity. Even the tiny firms use large amounts of capital per unit of labour or output. The capital employed per man day of labour is found to vary from Rs. 324 in other chemicals to Rs. 650 in Fertilizers and pesticides. The capital intensity and productivity of enterprises is found to vary across industries.

Further examination of capital intensity by size of firms reveal some interesting results. Except for organic chemicals, fertilizer and pesticides the capital coefficients are lowest for middle size groups. In general the largest of the firms are found to reveal highest capital coefficient. The capital value added ratio is generally found to be lowest in middle size groups and are highest for the largest size groups.

Labour productivity is found to increase with size. The smallest of firms (defined by amount of capital invested) are least productive and the productivity is found to increase with size in general. Inorganic chemical industry exhibit almost an opposite phenomenon with large sized firms being low productive. The firms in this industry are found to be less capital intensive. For all other industrial categories, smaller the size, lower is the productivity.

To find out relative importance and production elasticities of input factors in small scale chemical enterprises, the Cobb - Douglas type production functions are fitted with cross section data. Two sets of production functions are fitted with value added and Gross output as dependent variables.

When value added is dependent variable, capital invested and man days of labour employed are taken as independent variables. These variables explain variations in production to the extent of 98.9 percent to 99.8 percent. The results further indicate that capital invested explain variations in production significantly

in all industrial categories and for chemical industry (pooled). Man days of labour explain variations in production significantly in organic chemicals, and fertilizers and pesticides. In other categories and in chemical industry (pooled), it does not explain variations significantly.

Another set of equations are fitted with Gross output as dependent variable; taking man days of labour employed, capital invested and raw material as independent variables. These inputs explain variations in Gross output to the tune of 83.5 percent to 95.7 percent. The results further indicate that, raw material explain variations in Gross output significantly in all industrial categories and in chemical industry (pooled). The capital invested is found to explain variation in Inorganic chemicals; soap and cosmetics; and other chemicals. The variations in Gross output for the chemical industry (pooled) are significantly explained by capital invested. Man days of labour employed is not found to explain variations in Gross output significantly, except for soap and cosmetics industry. This production function is tested for returns to scale. The results indicate that in case of `Organic chemicals' and `Fertilizer and Pesticides' constant returns to scale are in operation. The chemical industry (pooled) and other categories of chemical industry are not facing constant returns to scale. Therefore they are either facing decreasing or increasing returns to scale.

Further, an analysis of linkage pattern of chemical enterprises reveal the existence of greater forward links to

other industries. The chemical industry is found to exhibit greater input purchase linkages to Basic chemical industry (organic and inorganic). In 6 out of 7 industrial categories more than 33 percent of its inputs are basic chemicals, indicating that chemical industry is highly raw-material based. The disposal linkages of chemical enterprises is much more wide spread, exhibiting links to a number of industries both chemical and nonchemical in nature. However the chemical enterprises are found to sell nearly 25 percent of their output to Drugs and pharmaceutical industry located at various points in India.

An examination of the linkages of chemical industry to the local region reveal that the chemical industry exhibit greater input purchase linkages to the local region (Baroda District) and lower dispersal linkages in the local region., 46 percent of the input requirements are purchased locally and only 18 percent of the output is sold in the district. In value terms, purchases from local region is greater than sales in local region.

Small firms are generally found to exhibit greater links to the local region both in terms of input purchase linkages and output disposal linkages. Firms in 0-10 H.P. range purchase 67 percent of input requirements from Baroda district and sell 31 percent of the output locally. These proportions are found to generally decrease with increase in size.

An analysis of linkages of chemical enterprises with urban centres reveal that, the small scale chemical enterprises in

general exhibit greater backward linkages than forward linkages to the urban centres. 56 per cent of the purchases are done in urban centres and 38 percent of sales are to the urban centres. A similar conclusion is arrived at when linkages with large scale enterprises are analysed. Approximately 55 percent of the purchases are from large scale enterprises and around 31 per cent of sales are to the large firms.

Thus, on the whole, it may be concluded that the modern small scale chemical industry has a significant role to play in development. The small scale industry sector does encourage first generation entrepreneurs, particularly those who have technical background of special training. The chemical industry sector is more formally organized and mostly depends on workers employed from outside the family. These enterprises have access to wider markets, use the well established market channels. They exhibit linkages to various industrial sectors and regions, thus exhibiting its potential of involving in the development process.