CHAPTER - 6

SUMMARY AND CONCLUSIONS

6.01 Introduction

Following the unprecedented economic crisis, the Government of India abounded a package of major Economic Policy Reforms during 1991. The wave of economic reforms is seen as a necessary consequence of a changed world economy system. Its key feature is the element of the heightened economic globalisation, which provides new external challenges as well as opportunities for development. Globalisation became an important perception of policy makers and adjustment to it in the form of economic liberalisation and the shrinking of the state has moved to their forefront of their economic agenda. The structural adjustment programme was undertaken with a view to bringing into balance the aggregate demand and supply by reducing the mounting budget deficit of central government and to make Indian industry internationally competitive

The industrial scene in India today is considerably different from the one we had at the time of independence. Industrial production grew at a rate of 6% per annum during 1950-78 as against 2.0% during 1900-46.The decade wise growth during the period of 1950-1980 shows declining trend in the growth rate. However, during the 1980's the growth rate of the manufacturing sector shows considerable improvement.

With the present trend in industrialisation, globalisation and structural reforms. no industry can remain untouched by the technological development. It is a crucial variable influencing the pace and pattern of development in all countries. Developed countries are positively endowed with favourable conditions for technological development whereas the developing countries are unfavourably placed in this regard. Consequently,

there is a technological distance between developed and developing countries in terms of initial endowments which further seems to be increasing. Often it is argued that technologies are too costly and their use results is perpetual dependence and hence developing countries are not in a position to embark upon a policy of technological development taking place in other parts of the world. The future development of these countries depends on technological progress and hence it has become almost a survival question for the third world countries. The dilemma of the third world estimates from the realisation that technological development has become a compulsion for the survival in the present and given the limited resource base, both the ends cannot be pursed simultaneously.

Major components of technological development are: (a) the knowledge base for technological development; (b) production of hardware; and (c) the skill base to utilise the technology. The desirable process of technological development could have been to start with, the creation of knowledge base (R&D), followed by production of hardware and developing of skills to make use of these technologies on a wide scale.

These changes necessitate the need for skilled manpower more so in an economy characterised by scarcity of skilled manpower. Human resource development becomes essential for improving the efficiency and productivity of the work force as well as the environment in which it works. New technology demands new skills making crafts redundant and functions flexible. The worker needs to be multiskilled to meet the requirements of the new system.

6.02 Review of the Literature

The history and origin of Human Resource Development is not very old. The term came into use only in the early seventies.

The term HRD has been used in various contexts. Therefore, a variety of definitions of HRD are available. To appreciate the importance of HRD, it is necessary to understand the HRD concept because it is multi-dimensional.

In the national context, "HRD is a process by which people in various groups (age groups, region groups, socio-economic groups, community group, etc.) are helped to acquire new competencies continuously so as to make them more and more self-reliant and simultaneously develop a sense of pride in their country. Such self-reliance and sense of pride could be developed through a variety of interventions at national, regional, and organisational level.

HRD is a pre–condition of modern economic growth. "It is only where the working force is sufficiently literate, educated, trained and mobilized to take advantage of new advancements in techniques of production in the organisation that the creation of build in industry of progress becomes possible". It is the most strategic and crucial determinant of the growth of any economy.

The structural adjustment program adopted in a number of countries has brought home the vulnerability of human development variables. The linkages between investment in human development programs and economic development have become sharper. There have been major international developments such as opening of global market, developing countries to produce and market quality products at competitive prices. At the same time a range of concerns, including environmental issues, the new information culture and demand for liberalization and democracy, are influencing policy and practice.

HRD in an organisation is designed with a view to develop capabilities of its employees that are needed to do their job not for present but also for the prospective jobs. HRD help employees to become dynamic, creative, trusting and collaborating. The process of HRD introduced in

several organisation as a tool to judge performance appraisal, counselling, training, career planning, job rotation and exercise related to development of the personality. There is no more important task facing today other than that of the development of human resources. Almost all the organisation have some hidden sources and talents which can vastly improve their performance if tapped at all the levels of management, HRD personnel and managers have their respective role in promoting HRD. Hence, it is clear that the success of an organisation depends to a large extent upon the capability, competence, efficiency and effectiveness of its human resources .The HRD system is an essential tool of management in order to develop a strong sense of capability, competence and responsibility among the employees of a concern. "HRD is an aid to the efficient running of an enterprise". It is now a firm belief that the organisation can improve their effectiveness and productivity through the development of human beings. Thus, HRD is the core of existence and strength of an organisation.

The new HRD orientation reflects the process of humanisation that is an inevitable agenda for modern work systems and social life. However, the HRD efforts in an organisation cannot eliminate conflicts and power game as long as social, economic, and political vested interests remain dominant HRD should essentially be adopted as a managerial strategy and not as a status symbol. HRD function should not be regarded as discrete function but it should be recognised and managed as integral parts of a single, comprehensive task of human resources development

"People" is the most important and valuable resources every organisation on institution has in the form of its employees. Dynamic people can build dynamic organisation. Effective employees can contribute to the effectiveness of the organisation. Competent and motivated people can make that things happened and enable an organisation /institution to achieve its goals. The promises and potential of HRD for workers in Indian

organisations have assumed added significance in the context of new liberalised economic and industrial policy. The challenges of globalisation, technological innovations, increasing competition and growth through expansion diversification and acquisition have important implications for human resource development. There are developments today, which heighten the need for HRD for workers. The groundwork is being laid by a number of organisations that have evolved proactive approaches to the complex area of human resource development as a matter of long-term strategic initiative. In the last decade, the HRD efforts by organisations have tended to concentrate on managers and executives and left out workers, more often than not. This neglect is as much due to lack of experience with HRD activities for workmen and low risk capability of organisations, as due to large size of the workforce and numerous unions to deal with. Therefore, HRD is the only approach, which has philosophical understanding, i.e. it encompasses employees as a whole and does not confine itself to development of managerial manpower.

In this competitive environment where industries are facing competition from all directions (national and international), technology is changing fast, etc., the employer need to look on the worker as an asset and take cognition for the need to improve their skill by providing labour aiding machines, better working conditions, etc. Training is another cumbersome expense, which the industrial sector has to incur, what is often forgotten that, though the training cost adds to the cost of every unit produced, but is offset by increase in quantity and improved quality. Simply change in technology would not lead industries to the path of economic development and prosperity. It is the well-trained and retrained workers working on these machines who would make a dramatic difference.

In short, the changing industrial environment in the wake of structural reforms and the resultant fast changing technology necessitates the

formulation of appropriate human resource development policy. It has to be designed, redesigned and continuously upgraded. Moreover, a shift towards market-oriented economic policies in turn brings about changes in the structure of production. The increasing pressure for effective improvement in the quality and efficiency in production is leading to significant changes in work patterns as well. This change in work situation, owing to rapid technological changes and the demand for various types of skill has necessitated human resources development.

6.03 Profile of Vapi

6.03.1 Growth of Vapi as an Industrial Estate

Vapi is an industrial estate developed by Gujarat Industrial Development Corporation. It came into existence three decade ago i.e., in 1967-68. The estate, which was developed in phases, now spreads over 1140 hectares and houses over fifteen hundred industries. Industrial area is spread over 580 hectares and commercial over 30 hectares.

Vapi is on the Western Railway on Delhi-Baroda-Mumbai route. Vapi also falls on the Western Railway on Ahmedabad-Baroda-Mumbai Route. It is 168 kilometres in north of Mumbai and 324 kilometres from Ahmedabad towards Mumbai. The Vapi railway station is a major railway station due to a centre between the union territories of Dadra Nagar Haveli and Daman. It has become more important after the development of a big industrial estate at Vapi. Vapi GIDC Estate is centrally located on the National Highway (Ahmedabad-Mumbai) with the union territories of Dadra and Nagar Haveli on either side.

Basically a "declared" chemical estate, about 70% of the industrial units are chemical and chemical related such as dyes and dyes intermediates, pigments. pesticides, fine chemicals and pharmaceuticals, etc. The remaining 30 % units are paper mills, packaging (both paper and plastic

based), engineering plastics, textile, food processing, paints, printing inks and other products.

The first industry that was established in Vapi was Mutual Plastics in 1968. Government of Gujarat in order to encourage industries in Vapi gave 15% subsidy on land. Water based industries were encouraged as the town was provided with twenty- four hour water facility and electric facility. Thus, chemical and chemical product industries and paper mills were the first to develop in this area. Other industries were established later on. Vapi G.I.D.C. industrial area is divided into four phases and in all, there are 1200 industries spread in these four phases.

The estate which, over the years, has energized as a major cosmopolitan industrial township is now equipped with all amenities like hospitals, blood banks, schools, community centres, fire stations, water filtration plant, post office, telephone exchange (Electronic), police station, Banks (Major Scheduled and Co-Operative banks), treasury, hotels, guest houses and a common effluent treatment plant, biggest in the country

Being a major commercial centre, it caters to other industrial estates like Sarigam. Umergam, Daman, Silvassa, Gondlav, etc., which are located on the periphery of Vapi.

6.03.2 Self-Governance

Vapi GIDC estate is a Notified Area and the Notified Area Authority administered by the Notified Area Advisory Committee, which has equal representation from GIDC and the industries, performs all civic functions. The Notified Area Tax paid by the industries meets the expenditure incurred by Notified Area.

Vapi Industrial Association, popularly known as VIA, is the most vibrant organ of the Industrial Township. As an integral part of the Notified Area Administrative Committee, VIA has been instrumental in all

development activities that have gone into bringing up the township to what it is today. The Association, which took shape in 1971 with a handful industrialists, now has strength of over thousand members. VIA renders invaluable services to its constituents in all spheres of industrial activities and performs a catalytic role in implementing various policies and programs of the Government.

6.03.3 Service to the Surrounding Villages

Towards fulfilment of social responsibility, drinking water is supplied to the Vapi Town and some of the surrounding villages free of charge for the last 20 years at a capital cost of Rs 136 lakhs. But, together the industries of Vapi GIDC Estate contribute an aggregate sum of Rs 400 lakhs per annum towards supply of water and other development costs for the villages. It has also given impetus to organising several programs like free health camps, eye camps, etc for the benefit of villagers. Some of the industries, on individual capacity, have adopted some backward villages for development and provide schools, dispensaries and other amenities.

6.04 Hypotheses

The study has been undertaken to test the following hypotheses:

1. Structural reforms bring significant technological changes.
2. Human resources development is an essential ingredient of industrial growth and change.
3. Technological changes not only alter the production structure but also the human resources requirements of the industrial sector.
4. Technological changes influence the industrial relations.

6.05 Objectives

The objectives of the study are:

1. What kind of technological changes have taken place in chemical industry after New Economic Policy was adopted in India?
2. What kinds of changes have taken place in sales, marketing, profit, etc. of the chemical industrial units after the introduction of structural reforms and globalisation?
3. Are there any difficulties faced by the industry after the introduction of New Economic Policy?
4. How these technological changes have affected the employment structure of the industry?
5. What has been the change in the pattern of employment in chemical industry in the wake of structural reform?
6. Is there any change in the manpower requirements of the chemical industry after structural reforms?
7. What measures have been adopted by the industry for the development of its personnel and manpower?
8. Is there any change in labour- management relations after the adoption of the technological changes?
9. How does the management perceive these economic changes taking place as a result of the structural reforms?

6.06 Research Methodology

There are 400 chemical industrial units in and around Vapi engaged in the manufacturing of chemical and chemical products. The list of these industrial units was collected form VIA directory. Through systematic

sampling method, 25% of the units were then selected for a primary survey. That means every fourth unit was included in the sample of 100 industrial units. These industries were visited personally for a formal interview. The management of the unit (various personnel at different levels) being surveyed was interviewed through a pre-tested structured questionnaire. Primary data pertaining to general information about the unit, sales and marketing, replacement and modernisation, capacity utilisation, credit facilities, industry and environment, general information about workers, recruitment and training, absenteeism, wages and salaries, welfare activities, health measures for employees, industrial disputes, impact of structural reforms on trade unionism, etc., was collected from the units. This data was then tabulated using SPSS software. Various statistical tools used in the study are measures of central tendency, compound annual growth rate, etc.

Major Findings

6.07 Sales and Profits

Over the period from 1990-91 and 1999-00, there is an increase in gross sales. But the trends in the gross profits during the period do not show much increase in gross-profits. Sales and profits of the firm have increased during the 90's, but the rate of increase of sales and profits have gone down during the second half of the 90's. Reasons for this cited are lower price of the product to attract customers because of increase in competition, lack of demand for the products, etc.

This clearly indicates that structural reforms have had an impact on the profits. In fact many of the units have started making huge losses but are continuing with their production with a view to turn these losses into profits in the near future.

6.08 Capacity Utilisation

An important factor that has affected the performance of chemical industry in Vapi is underutilisation of capacity due to lack of demand, installation of excess capacity with the expectation of increase in future demand and slowdown in the economy further aggravated the problem. Industrial units are trying hard to solve the problem of excess capacity by retrenching excess staff, product diversification, selling of assets, etc.

6.09 Export Performance of Industry

Firms are trying to increase their exports during the era of globalisation. Though the export performance of the units shows an increase during the 90's, however, firms still face many problems of this front. This they feel is due to inward looking policies for the past many decades, competing in the same market, lowering the price of the product, etc. This is proving unhealthy for the growth of domestic industry. Even after a decade of policy of export promotion, India lacks to become a competitive economy as far as exports are concerned. Hence, in order to keep the volume of exports expanding units are undertaking changes in quality improvement, product diversification and direction of export i.e. emphasis is being given on broadening and deepening the production base.

6.10 Structural reforms and competition

Over the past few years chemical industry has been losing an increasing share of the world market due to intense competition on all fronts due to deteriorating standards. Some of the respondents attribute this to deteriorating standards largely because of the unhealthy protectionism and isolation of Indian industry from the global scenario for a long time when the Indian industry did not bother much for the quality improvement. Almost

all the respondents irrespective of size were of the view that before chemical industry could learn to compete in itself; it has to compete with multi national companies. So now they are facing competition not only at the national level but also at the international level. 64 industrial units are facing competition from large-scale producers i.e. local, within the state, domestic and multinationals. 33 industrial units are facing competition from small-scale producers i.e. local, within the state and domestic from within themselves and also from the large-scale producers. Competition from multinationals has increased over a period of time. They believe that the basic objective of multinational companies is to ensure fuller utilisation of their very high installed capacities and also to earn quick profits at the same time. Not only this, these multinational companies are expanding market for their products by capturing markets through cut- throat competition, going to unexplored markets. They are manufacturing those products that have easy market, rather then those having long-gestation period and need huge investment. All of them agreed that they, the multinational are following expansionist policy, which has adversely affected the local and domestic chemical industry.

Further, they all feel that the present free market oriented economic policy has brought in more competition and the burden has fallen on the industry to see how it can utilise its resources and compete with multinational companies that have a strong hold over the strategy for improving technology, reducing production costs and at the same time believe in the philosophy customer sovereignty so as to cope with ever changing market environment.

Increased competition not only from the domestic industries but also from the multinational companies is increasing pressure on the chemical industry for bringing an improvement in quality and cost reduction. Almost all of the respondents agreed that it is essential. Many respondents are of the

view that the competition in many cases is unequal and though this will lead to efficiency, it will result into non-survival of the inefficient units and especially small industries. Of the 100 respondents, 17% of the respondents feel that their competitor's product is superior. They apprehend that the chemical industry, however efficient will face the giant large-scale companies (domestic) and multinational companies with their command over resources, their vast R&D establishments, and their tremendous strength and global reach.

5.9% of the respondents accepted that their labour efficiency is much lower. The reasons for lower productivity of the workers according to them are the apathetic attitude of the employer towards the improvement of environment at the workplace, which is cost-ineffective in the long run. Moreover, the workers are not treated as long-term assets. Poor working conditions, exploiting the workers by paying them low wages etc. have further affected the productivity of the workers in the industry.

76.5% of the respondents feel that it is the selling and marketing strategy that makes them superior. According to them, large scale (domestic) and multinational companies can penetrate and also capture market as they enjoy sound marketing network. These companies through their better access to advanced information systems and due to their market reputation can successfully capture the consumer markets in the country, which the local chemical industry is unable to do. This according to them is the major reason for failure of the chemical industry.

6.11 Technological change, industry and workers

Majority of the respondents in chemical industry feel that they have lived in a protected industrial environment for a long time. But after 1991, the scenario has changed completely. Though the industry has made super normal profit in the past; with the change in policy after 1991, small-scale

units have apprehensions about their very existence in the long run. This apprehension is leading to down sizing, no further investment in improving production, reducing the number of person hours, mergers, etc. However, all of them agreed that in order to remain productive and profitable, industries have no alternative but to remain competitive at all time, in terms of quality, cost, labour, supervision, material, etc.

Increased competition has forced these chemical units to adopt changes in technology in order to reduce the cost of production. This has affected employment in industry and has led to investment in human resource development. Technological change is driving workers out of job. In 63% of the units visited, overall employment has decreased.

Out of 86 units that have adopted technological change, in 78% of the units, proportion of skilled labour has increased. The technology has provided the management with an option either to use it for enhancing human capital by retraining or reskilling the workers or to use it as a means to lower the employment through direct displacement or substitution of unskilled workers by skilled workers. In 70% of the units unskilled labour has decreased. After the adoption of new technology the existing workforce or directly substitute the unskilled workers by skilled workers.

Many respondents are of the view that the new industrial policy has a chain effect. On the one hand it has led to competition in the product market changes in the production process and also resulted in to new forms of industrial organisation and reorganisation of the production system itself; on the other hand, there is a need for change in the skill composition of the workforce. Just as some portion of the labour force may become surplus / redundant in the industry, the industrial units if did not prepare themselves for the competition, may themselves become redundant/non-competitive and therefore face closure.

So far as adoption of technology is concerned the industry would

adopt technology, which is suitable for it. They opined that in the economic restructuring, opportunity if geared appropriately towards the development of industries by using suitable technologies using their own surplus manpower by training and retraining their workers would yield wonderful results.

Technological changes have caused and will continue to cause displacement. Unemployment tends to be concentrated among the unskilled. The outlook for employment and adjustment to technological change, uneven growth and decline in occupations and industries, is a challenge for the economy as a whole. Numbers of skilled job are rising as compared to unskilled jobs. The only solution to the problem, according to them, is that training and re-training programmes for employees must increase at a faster rate than the rate at which the changes are taking place in industries

6.12 Reaction of the Workers Towards Technological Changes

39% of the industries did not face problems in adopting new technology, as the workers were indifferent and in 35% of the industrial units workers behaved favourably. This was possible only because units involved management, union and workers in the implementation process. This was done to make workers and union understand how new technology would benefit the industry and in turn how they would be benefited. In 12% of the units workers were hostile as they feared that management will attempt to introduce these changes by using their prerogative to hire and fire them.

6.13 Industry and environmental degradation

Environmental degradation is not a new problem as far as Vapi is concerned. Increased economic activities in this region associated with development are leading to environmental degradation. Which in turn is

giving rise to infinite number of problems. All the industrial units believed that treatment of effluent is necessary.

The challenge before Vapi chemical industrialists is to ensure quality of life and if necessary enhance it without weakening the pace of industrialisation, whether it be in the large, medium or the small sector. A solution needs to be sought in the direction of a better and clear environment by reducing pollution to a minimum level.

The respondents were of the view that efforts should be made not just for the abatement of pollution but also for developing a policy of environment protection in this region. This however requires advance planning for all the industries in this area. There is an urgent need for the introduction of new process and of co-ordination activities in such a way that the wastes and effluents become usable resource rather then a problem not only for the people residing in these areas but also for the community as a whole. Environment protection should be a part of industrial policy so that right from the beginning an environmental assessment takes place.

Main reason for environmental degradation in Vapi is identified as lack of proper monitoring and enforcement of existing environmental protection laws and regulations; inadequacies in environmental, economic and social data including difficulties in data collection and processing and lack of knowledge of past trends. This is a major limitation for planning, preparing and implementing environmental management programs. Industries in Vapi now prepare detailed environmental audit reports. Efforts are made to identify polluters also to ensure that new units reduce emission at source by making use of environmental management plans at the firm level. prior to setting up new units. There has to be a continuous R&D for the development of technologies for maximising the output while minimising the pollutants / wastes.

Industrial belt from Vapi to Mehsana has a high number of chemical

industries. It is also called "Golden Corridor of Gujarat". Vapi one end of the "Golden Corridor" facing environment problems. Efforts made by few units will not solve the problem. All the industries as well as the society have to come forward to tackle these problems.

6.14 Employment Scenario

There is a trend towards industries downsizing their employees due to increased competition making it difficult to withstand competition. Industries under survey showed changes in the pattern of employment i.e. overall decline in employment. Not only this but another interesting fact that was observed was that restructuring of the industrial environment have affected almost all the segments of the workforce in industry.

80% of the respondents are of the opinion that they would prefer to recruit fresh workers and train them as per their requirement to suit the changing environment of industry. Training has always been a necessary part of industrial efforts to recruit and effectively employ people in its ongoing process. Particularly, because, they have not always been able to recruit and properly assign individuals whose knowledge, attitudes, skills, perfectly match the requirements of the job. Training, therefore, has been viewed as a means of closing this gap. 43% of the respondents prefer workers from other units, 36% of the respondents prefer workers with technical education and skill, while 15% of the respondents prefer workers with at least formal education.

6.15 Training Facilities

These chemical units are searching for global markets for which these industrial units have adopted changes in technology and will probably adopt more in future. This will have certain implications for the workers. There will be higher demand for skilled workers and the industry will have to develop talent to be able to succeed in the global context. According to

them, though there is no scarcity of unskilled labour but the manpower that this industry requires is in short supply. The existing labour is getting redundant. Therefore, the industry has not only to spend time and money to develop employees but also to provide for training continuously, to be able to retain as well as develop talent. All the industrial units under survey revealed that training has increased in its importance commensurate with the fast changes in technology and work process. The belief that training is key in improving productivity arising out of the belief that training is associated with organisational performance; many firms have extended their training activities. Hence, the demand for the 'developed' human resource is on rise. Not only do the firms try to evaluate the impact of training on their employees, but they also evaluate the training programs and know the limitations of these programmes. The proportion of such firms is more than 50%. Two important limitations of these programmes mentioned are lack of finance and awareness among the workers and hence no appreciation from the group for which these programmes are held.

Hiring practices are changing and temporary and part time workers are becoming increasingly common, especially at the lower end.

6.16 Incentive Scheme

Global competition is posing a difficult challenge for this industry. Human resource managers in these units are trying to develop human resource programmes that would improve productivity and enhance industrial effectiveness. To enhance productivity of employees performance is linked to awards through incentive pays. Incentive is gaining greater acceptance in Vapi chemical industry, so as to motivate employees for better performance and long-term industrial relationship. 80% of the units provide incentives. These 20% of the industrial units are either loss making or low profit making units. Workers are not paid eve the bonus in these units.

6.17 Benefits and Allowances

In this rapid changing environment benefits and allowances have acquired added importance. Even management has realised the importance of their role in providing these ea amenities. These respondents were of the view that these benefits and allowances also seems to attract more experienced worker from the competing firms.

6.18 Health Facilities

In Vapi, almost all large and medium industries provide health facility to serve the well being of employees. The extent to which these facilities are offered can usually be determined by the number of workers the industry employs and the type of work involved. The larger the industrial unit, better the health facilities. The small-scale industries provide health facilities under ESI scheme.

HRD departments of the industrial units under survey are taking greater responsibility in this matter. Industries have started treating employees as a valuable asset instead of replaceable assets and according to them ensuring the physical well being of employees at the work place is the responsibility of the management. Firms were of the view that in this ear of competition protecting the well being of employees at the work place is to protect not only the industry's most valuable resource, but also to avoid the negative public image of the firm associated with it among other competitors. Awareness and consciousness of the management towards the health of its employees has increased in the recent times.

6.19 Accident and Safety

All the industrial units under survey have reduced their injury rate to a fraction. Efforts are made by the management, regardless of size of the unit. or financial condition to eliminate its work accidents. According to the management main reasons for accidents taking place in the plant is lack of

personal care by the workers. But they feel that the accidents can be prevented mainly by giving practical knowledge to the workers about the operation of the machinery and providing safety equipments. Respondents feel that safe work environment demands continuous, committed and concerted safety provisions. HRD efforts should not only be concerted with ensuring usage of safety appliances but safety has to be a part and parcel of work culture of industry. Safety should act as powerful HRD mechanism for strengthening the involvement of employees in performing safe work.

6.20 Working Conditions

The movement of restructuring the workplace for better quality of work life is directly hit by reforms. The conditions under which the workers carry out their everyday work have a great influence on their overall health. Industrial units under survey were of the view that the environmental aspect of the quality of work life also includes the provision and upkeep of working conditions. This is an area in which continuous improvements have to be ensured.

6.21 Industrial Relation

More than 40% of the respondents say that trade union membership has decreased. This is mainly because technological, structural and other changes taking place in the industry have affected has left the union with little membership. Some of the respondents feel that changing com position of the labor force as well as the flexibility in the labour force have resulted in declining unionisation, the direct interaction between the management and the workers is encouraged in the changed industrial environment. Also, there is a growing trend towards the employment of more contracted workers at the lower end and these workers do not participate in trade union activities, as they are scared to loose jobs. The management feels that direct interaction between the employer and employee should be encouraged in the changed

industrial environment.

The change form traditional supervision to developmental supervision, participation of workers and collaboration are some of the features of new work environment. So trade unions are required to redefine their role. Besides management and HRD departments are taking on the responsibility of workers development.

6.22 Management View about New Industrial Policy

Unemployment remains a major cause for concern and there have been doubts about the capacity of structural reforms to resolve the problem. There is a widespread belief that slow growth combined with polices encouraging high-tech modernisation of industries, which are more capital, and less labour-intensive have resulted in increasing unemployment. This could throw a challenge for HRD departments, since the workforce will have to reorient itself to the changed situation by improving skills through training and re-training. Many respondents perceive that there would be decrease in the workforce after the modernisation of workforce, very few respondent perceive that there wound be no change in fact they feel that there is a misconception about skill shortages in factories and the inability to use the old workforce without extensive retraining.

Hence it can be said that instead of creating addition to employment, the structural adjustment program is throwing up additions to unemployment presently. There is also a feeling among some that workers are acting as a barrier to the introduction as well as success of structural adjustment program. The country is facing a serious economic problem, the spectrum of large-scale unemployment and the resulting social and economic unrest now looms large over Indian industries.

6.23 Respondents View About Impacts of Reforms on Employment and Output

Respondent's perception on the impact of structural reforms on the employment scenario shows that structural reforms are expected to bring sea change not only in economic sphere but also in social sphere. Higher level of production is called for meeting the global competitive environment and 24% of the respondents perceive that this will be accompanied by higher level of employment. These respondents believes that employment effects of structural adjustment are, therefore, likely to be positive and beneficial to job seekers. There would be aberrations in the short run, but in the long run employment opportunities are bound to increase. Employment is not only expected to increase rapidly but the employment generation is also likely to be skill intensive. 54% of the respondents argued that structural reforms would result into higher level of unemployment since new policy is in favour of technological changes, which is more capital intensive rather than labour intensive. Increase in underemployment is perceived by 23% of the respondents. It is believed that underemployment is bound to be more widespread than unemployment while 7% of the respondents are of the view that structural reforms will have no change on employment. It will remain the same as it was before the introduction of structural reforms.

Many respondents agreed that the skilled men who would run the system would be those who are competent, have high motivation level and willingness to learn. Firm and the industry must therefore invest in human resources by continuously investing in training and upgrading the skill of workers. This will help in creating a better worker culture and for this flexibility on the part of management is equally needed.

6.24 Multiskilling and Employment

The respondents feel that the rate at which the total scenario is changing the worker of today needs to be adaptive and multi-skilling. 82% of the respondents have agreed that success of industry depends not only on adopting to changed industrial environment but also on workers being multi-skilled so that he can adapt to different situations and perform various activities.

The respondents were of the view that the workers 82% of the respondents have agreed that success of industry depends not only on adopting to changed industrial environment but also on workers being multi-skilled so that he can adapt to different situations and perform various activities rather than acting as hindrance of today have to orient and gear themselves to face the challenges of future 82% of the units were confident that their units have adequate training and development program for their employees. While, 13% were not clear about the adequacy of their training programmes.

6.25 Industrial Efficiency and Reforms

70% of the units preferred the mix of imported technology import and in-house R&D. It is a better opportunity for our R&D departments to prove their work and the use of foreign technology will make this industry better equipped with latest information. 24% of the respondents have chosen basis R&D (in-house) as the best method to achieve higher efficiency. They favour basic R&D (in-house) to import of technology because they feel that foreign technology can lead to inefficiency due to lack of proper assimilation or absorption in the given industrial environment in India.

6.26 Management View on Future Strategies to be Adopted

83% of the respondents under survey were of the view that in the face of structural reforms, they are planning to diversify their product. During the survey it was observed that an industry seeks diversification for a number of reasons like it will reduce the vulnerability of business to change in the competitive environment as these units are facing competition from both nationally and internationally. Spreading investment over several businesses will reduce the element of risk. Secondly, they feel that through diversification firms can exploit their strength in innovation. Finally, they all strongly believe that diversification is the only major technique of competition. Maximum respondents (74.7%) perceive that they would go in for expansion in market (geographical). It means maximum numbers of industries are seeking increased sales by taking its current or new product(s) into new markets.

6.27 Despite Adequate Natural Resources and Cheap Labour Available it May still be Necessary to Upgrade Technologies to be Globally Competitive

98% of the respondents were of the view that it may still be necessary to up-grade technologies to be globally competitive. To remain productive and competitive, in the world market, all industries should pay particular attention to technologies used by them to provide quality goods and services. They will have to constantly update, upgrade or adapt new technology. They must learn to anticipate change and rapidly adjust technology. Not only this, but they also mentioned that there should be a link between the HRD and technology so that it leads to economic as well as social development.

6.28 Policy Adopted by the Management to Help the Affected Workers due to New Industrial Policy

Retrenchment is being adopted by many units; it has been favoured by 67.7% of the respondents. They responded that they have opted retrenchment because of the failure of new industrial environment to create and sustain productive employment capabilities as a part of the overall growth strategy and moreover some of their units become unproductive and started making losses as they were not able to withstand the competition. Retraining and transfer to other sister concerns is adopted by 34.4% firms.

6.29 Recommendations

As it is clear from the industries under survey there has been increase in pace of technological change in old as well as new industries. There is not a single industry, which has remained untouched form the waves of changing industrial environment in the 90's. As it is clear from industries under survey that technology have caused and will continue to cause displacement. The unemployment, technological change, under utilisation of capacity, decline in occupations and industries, recession in the economy, and skilled jobs are rising as compared to unskilled jobs, is throwing challenge to industry and workers. Only solution to the problem of change in technology, industrial restructuring and unemployment is that the rate at which the changes are taking place in industries, training and re-training programs must increase at a more rapid rate than in past. These programmes have to be need based. As the flexibility is required in the industrial units to face the ever changing industrial environment, similarly flexibility is also required in our education system. The education system should make adjustment along with change in industry to sub-serve or satisfy the needs of the industry. Simply providing the education and skill will not serve the purpose. What is required is the right type of education that will provide employment to the manpower. Liberalisation should have preceded

globalisation. But by simultaneously adopting the policy of liberalization and globalisation have created problems within the domestic economy. Our industrial sector is not matured enough to compete at the global level. So what is required is that our industry should be provided with some incentives at least till the industry reaches the level of maturity.

6.30 Scope for Further Research

Environmental degradation is a big problem as far as Vapi is concerned. This need further probe.

On-the-job training provided by the industry for the improvement in the performance and its effect on the wages of the workers can be an interesting area for further research.

Though industrial units have responded that quality and productivity has increased but to what extent still remains to be known. Thus, impact of training and HRD on productivity is an important issue for further research.

Over a period of time demand for professionals and technicians has increased and the demand for unskilled workers has declined. Whether this trend will continue in future is another interesting area for further research.