

**“A study of marketing mix strategies with
reference to chemical industries in Pune
district”**

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Submitted By

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March, 2017

DECLARATION

I hereby declare that the thesis entitled “**A Study of Marketing Mix Strategies with Reference to Chemical Industries in Pune District**” completed and written by me has not previously formed the basis for the award of any degree or other similar title upon me of this or any other University or examination body.

Place: Pune

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CERTIFICATE

This is to certify that the thesis entitled “**A Study of Marketing Mix Strategies with reference to Chemical industries in Pune District**” which is being submitted herewith for the award of the Degree of Ph. D. in Management of Tilak Maharashtra Vidyapeeth, Pune is the result of original research completed by **Dilip Nana Aher**, under my supervision and guidance.

To the best of my knowledge and belief the work incorporated in this thesis has not formed the basis for the award of any degree or similar title of this or any other University or examining body upon him.

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SYNOPSIS

1. Introduction to Marketing :

One of the greatest needs of managers of business is to understand and develop marketing programs for their products and services. Business success is based on the ability to build a growing body of satisfied customers. Modern marketing programs are built around the "Marketing concept," which directs managers to focus their efforts on identifying and satisfying customer needs and earn profit.

Any marketing program has a better chance of being productive if it is timed, designed and written to solve a problem for potential customers and is carried out in a way that the customer understands and trusts. Marketing is a very complex subject, it deals with all the steps between determining customer needs and supplying them at a profit.

The chemical industries focus on Marketing mix strategy for effective execution of product.

1.1. The Marketing Concept:

The marketing concept rests on the importance of customers to a firm and states that:

- a) All company policies and activities should be aimed at satisfying customer needs, and
- b) Profitable sales volume is a better company goal than maximum sales volume.

To use the marketing concept, businesses should:

- a) Determine the needs of their customers (Market Research)
- b) Analyze their competitive advantages (Market Strategy)
- c) Select specific markets to serve (Target Marketing)

a) Market Research:

In order to manage the marketing function successfully, good information about the market is necessary. Frequently, a small market research program, based on a questionnaire to be filled by customers giving feedback, can disclose problems and areas of dissatisfaction that can be easily remedied, or new products or services that could be offered successfully.

b) Marketing Strategy:

Marketing strategy encompasses identifying customer groups (Target Markets), which a small business can serve better than its larger competitors, and tailoring its product offerings, prices, distribution, promotional efforts and services towards that particular market segment (Managing the Market Mix). A good strategy implies that a business cannot be all things to all people and must analyze its markets and its own capabilities so as to focus on a target market it can serve best.

The Marketing Strategy should focus on:

1. Focus on Core Competence
2. Strengthening Technological Competence
3. Improving Basic Management Capabilities
4. Adhering to Environmental Norms
5. Focus on R&D
6. Collaboration
7. Consolidation
8. Marketing and Promotion

c) Target Marketing:

Owners of small businesses have limited resources to spend on marketing activities. Concentrating their marketing efforts on one or a few key market segments is the basis of target marketing.

1.2. Marketing Mix:

Marketing Mix consists of 4P's of marketing, i.e – Product, Price, Promotion and Place (distribution)

1. Product strategy:

Product strategy is the element of the marketing decision making comprises activities involved in developing the right goods & services for the customers. It also involves decision about package design, brand names, trademarks, warranties, product life cycles, positioning & new product development.

2. Price strategy:

Pricing involves fixing profitable & justifiable exchange values for the goods & services. The price is the amount a customer pays for the product. It is determined by a number of factor including market share, competition, material costs, product identity and the customer's perceived value of the product. The business may increase or decrease the price of product, if other competitors have the same product.

3. Place (Distribution) strategy:

It involves getting the right product at the right place at right time. It involves mode of transportation, warehousing, inventory control, order processing and selection of the marketing channels, taking the product from the producer to the final customer

4. Promotion strategy:

Promotion is an element of marketing decision making that involves appropriate blending of personal selling, advertising, public relations & sales promotion for communicating with & persuading customer.

2. Purpose of the research:

1. Indian chemical industry is placed well below the global rivals reasons are many. Considering its growth potential, it has become essential to develop it to global standards, for which researcher has decided to identify and verify marketing mix strategies of making chemical industry globally competitive.
2. To make business more economical it is essential to know the priorities of handling issues, hence researcher thought of assessing significance of marketing mix strategies and evaluating order of the same.

3. Objectives:

The following are the objectives for the purpose of study

1. To study the Marketing mix strategy of chemical industry in Pune district.
2. To find out the problems of chemical industries with relevance to the marketing mix strategy.
3. To identify the important methods of promoting sales for effective marketing in the present competitive environment.
4. To offer suggestions for designing better promotional strategies with a view to improving the overall performance of the company.
5. To gather the major suggestions from the manufacturer and end user

4. Hypothesis:

1. There is no significant relationship between years of establishment of company with customer's choice to purchase product.
2. There is no significant relationship between product discount & consumer buying behavior.
3. There is no significant relationship between the variation in the price and profit.
4. There is no significant relationship between price consideration and impact on sales.
5. There is no significant relationship between number of distributors and increase in sales.
6. There is no significant relationship between promotion type & percentage increase in sales.

5. Research Design:

5.1 Sample Technique: Simple Random Sampling

5.2 Sample Size: 80 companies including small, medium, and large scale (by applying formula, $n = t^2 \times (1 - p) / m^2$ and data available from District Industries Center (DIC), Pune, total 1060 industries are manufacturers of Chemicals in 2014.

5.3 Sample unit: Managerial position and above.

5.4. Sources of Data:

Both Direct and Indirect method of collection of data is used.

- 1) Primary Data
- 2) Secondary Data

1. Primary Data:

The primary data is collected from the field work through the structured questionnaires, interviews, survey, as well as observations.

2. Secondary Data:

Secondary data means data that are already available i.e. they refer to the data which have already been collected and analyzed by someone else. The secondary published data will be gathered from reports published by various agencies; journals, newspapers, report, websites etc. and the latest information is gathered personally from the various authorities as the case may be.

5.5. Data Analysis:

Chi- Square test and SPSS was used for data analysis.

6. Hypothesis Testing:

H1. There is no significant association between number of years of establishment of the company and customers choice to purchase product.

Researcher has used Chi- Square test to validate the above hypothesis. It was observed that the P – value is 0.429, which is higher than the significance level 0.05. The results of the test statistics indicate to accept null hypothesis and reject alternative hypothesis. Hence there is no significant association between number of years of establishment of the company and customer purchases product.

H2. There is no significant association between product discount and consumer buying behaviour.

Researcher has used Chi- Square test to validate the above hypothesis. The results of the test statistics indicates to reject null hypothesis and accept alternative hypothesis, as p value of the Chi-square statistics -is 0.001 which is less than 0.05. Hence there is significant association between product discount and consumer buying behaviour.

H3. There is no significant relationship between variation in price and profit.

Researcher has used Chi- Square test to validate the above hypothesis. The results of the test statistics indicates to reject null hypothesis and accept alternative hypothesis, as p value of the chi-square statistics is 0.001 which is less than .05. Hence there is significant association between profit and variation in the price. The figures of the count and expected count indicate that if there is more decrease in price then profit also decreases.

H4. There is no significant relationship between price consideration and impact on sales.

Researcher has used One proportion test validate the above hypothesis .The results of the test statistics indicates to accept null hypothesis and reject alternative hypothesis, as p value of the statistics is .363 which is more than .05. Hence there is no association between price consideration and impact on sale.

H5. There is no significant association between number of distributors and percentage increase in sales.

Researcher has used Chi- Square test to validate the above hypothesis. The results of the test statistics indicates to reject null hypothesis and accept alternative hypothesis, as p value of the chi-square statistics -likelihood ratio- is .057 which is less than .05. Hence there is significant association between number of distributors and percentage increase in sales.

H6. There is no significant association between promotion type and percentage increase in sales.

Researcher has used Chi- Square test to validate the above hypothesis .The results of the test statistics indicates to accept null hypothesis and reject alternative hypothesis, as p value of the Chi-square statistics is 0.234 which is more than .05. Hence there is no significant association between product promotion type (magazine and journal) and percentage increase in sales.

7. Findings:

A) Product:

1) Based on data analysis of question no. 1 out of 80 chemical units in Pune district, it was found that 60 percent of the Companies are the small scale industries, 30 percent industries are Private Ltd Companies, 10 percent industries are Public Ltd. Companies and no MNC company. Hence it can be seen that majority of the chemical industries are small scale industries.

2) Based on data analysis of question no.2 out of 80 chemical units in Pune district, it was found that 2.5 percent companies are newly established company, 12.5 percent companies are engaged in the chemical business for 5 to 10 years, 32.5 percent companies are engaged in the chemical business for 10 to 15 years and 52.5 percent companies are engaged in the chemical business for more than 15 years. Hence it can be seen that majority of the chemical industries are engaged in the chemical business for more than 15 years.

3) Based on data analysis of question no. 3, out of 80 chemical units 47% companies are manufacture Basic chemicals, 25% companies are manufacture Specialty chemicals and 28% companies are manufacturing Knowledge chemicals. Hence it can be seen that majority of the chemical industries are manufacturing Basic chemicals.

4) Analysis of question no. 5 suggested that, 55 percent companies do not have marketing department, while 45 percent companies have marketing department .Hence it can be seen that most companies do not have Marketing department.

5) Analysis of question no. 6 suggested that, 50 percent company's regular customer are up to 25 who purchase the products, 22.5 percent companies' regular customers is between 25 to 50 who purchase the products. 17.5 percent companies regular customers is between 50 to 100 and 10 percent companies regular customers is more than 100.Hence it can be seen that most up to 25 customers are the regular customers.

6) Analysis of question no. 7 suggested that, 50 percent customers are preferred for good quality product by the manufactures. 27.5 percent customers are preferred for timely delivery, 35 percent customers are preferred for reasonable price and 12.5 percent customers are preferred for easily availability of the product from manufacturer. Hence it can be seen that most of the customers are preferred for good quality product from manufacturer.

7) Analysis of question no. 27 suggested, 35 percent company's products are seasonable, while 65 percent company's products are non-seasonable. Hence it can be seen that most of the company's products are non-seasonable

B) Price:

8) Analysis of question no. 11 suggested that, 7.5 percent respondents are “ Strongly Agree” with Small decrease in price (up to 3 percent) will gain extra market share, 20 percent respondents are “Agree” with small decrease in price (up to 3 percent)will gain extra market share, 2.5 percent respondents are “ Strongly disagree” with Small

decrease in price will gain extra market share, 42.5 percent respondents are “Disagree” with small decrease in price (up to 3 percent) will gain extra market share and 27.5 percent respondents are Neutral. Hence it can be seen that small decrease in price does not gain extra market share.

9) Analysis of question no. 13 suggested that, 7.5 percent respondents are “Strongly Agree” that Small decrease in price (up to 3 percent) having positive impact on sale. 30 percent respondents are” Agree” that small decrease in price(up to 3 percent) having positive impact on sale, 2.5 percent respondents are “Strongly Disagree” that small decrease in price (up to 3percent) having positive impact on sale. 32.5 percent respondents are “Disagree” that small decrease in price (up to 3 percent) having positive impact on sale and 27.5 percent respondents are “Neutral”, Hence it can be seen that small decrease in price there is no effect on sale.

10) Analysis of question no. 14 suggested that , 42.5 percent respondents are agree that up to 5 percent sales increases due to small change in price. 15 percent respondents are agree that up to 5-10 percent sales increases due to small change in price. 2.5 percent respondents are agree that up to 10-15 % sales increases due to small change in price and 37.5 percent respondents are neutral regarding this opinion. Hence it can be seen that sales increases due small change in price.

11) Analysis of question no. 15 suggested that when the price decreases by 1percent the profit decreases by 10 percent , when the price decreases by 3 percent the profit decreases by 14 percent , when the price decreases by 5 percent the profit decreases by 18 percent , when the price decreases by more than 5 percent the profit decreases by 22 percent. Therefore it shows that there is significance association between variation in price and profit.

12) Analysis of question no. 16 suggested that, 42 customers are new customers or placing small order, hence companies are not offering trade discount. The 38 customers are loyal customers & placing bulk and continuous orders, the companies offers the discount, hence it was observed that companies offered 1 percent discount for most of the customers

13) Analysis of question no. 17 suggested that, 75 percent respondents agreed that product quality is taken into consideration while deciding pricing structure of product, 10 percent respondents agreed that discount offered is taken into consideration while deciding pricing structure of product, 5 percent respondents agreed that required service is taken into consideration while deciding pricing structure of product and 10 percent respondents agreed that competitor's policy is taken into consideration while deciding pricing structure of product. Hence it can be seen that the product quality is taken into consideration while deciding pricing structure of the product.

C) Place :

14) Analysis of question no. 19 suggested that 5 percent companies criteria for appointing distributor is nearer to the market place. 5 percent companies criteria for appointing distributor is large storing capacity, having their own warehouse. 12.5 percent companies criteria for appointing distributor is own transporting facility. 35 percent company's criteria are Fast payment transaction and 42.5 percent companies does not have their own distributors. Hence it can be seen that most of the companies do not have their own distributor.

15) Analysis of question no. 20 suggested that, 5 percent manufacturer prefer the distributors which are nearer to the workplace while appointing distributor, 5 percent manufacturers prefer large storing capacity(warehouse) while appointing distributor. 12.5 percent manufacturer prefer those who having own transporting facility /capacity while appointing distributor, 35 percent prefer fast payment, while 42.5 percent manufacturer do not have their own distributors. Hence it can be seen that most of the manufacturer do not have distributors.

16) Analysis of question no. 21 suggested that 7.5 percent sales increased by appointing less than 5 distributors. 17.5 percent sales increased by appointing 5 to 10 distributors. 22.5 percent sales increased by appointing 10-25 distributors. None of the companies

have more than 25 distributor and 52.5 percent companies does not have even one distributor. Hence it can be seen that most of the companies does not have distributors.

17) Analysis of question no. 4 suggested that 15 percent companies are selling within Pune district, 22.5 percent companies are selling within Maharashtra state, 37.5 percent companies are selling within India and 25 percent companies are export oriented. Hence it can be seen that most of the chemical companies business are within India.

D) Promotion:

18) Analysis of question no. 23 suggested that, 65 percent companies have used advertisement for improvement in sales and 35 percent companies have not used advertisement for improvement in sales. Hence it can be seen that most of the chemical companies prefer advertisement for sale improvement.

19) Analysis of question no. 24 suggested that 10 percent respondents are “Strongly Agree” that business is successful without promotion. 17.5 respondents are “Agree” that business is successful without promotion. 2.5 percent respondents are “Strongly Disagree” that business is successful without promotion. 47.5 percent respondents is “Disagree” that business is successful without promotion and 22.5 percent respondents are “Neutral” for business promotion. Hence it can be seen that business is successful by using promotion strategy.

20) Analysis of question no. 25 suggested that 30 percent companies have used Magazines & Journals for product promotion, 12.5 percent companies have used E-portal for product promotion, 2.5 percent companies have used Hoardings for product promotion, 42.5 percent companies have used Web-site for product promotion and 12.5 percent companies do not use any type of media for product promotion. Hence it can be seen that most of the companies use Web- sites for promotion.

21) Analysis of question no. 26 suggested that 40 percent company’s sale increased less than 5 percent by effective promotion. 27.5 percent companies’ sales increased between 5–10 percent by effective promotion. 12.5 percent company’s sale increased up to 10-15 percent by effective promotion. 7.5 percent companies’ sales increased more than 15

percent by effective promotion. And 12.5 % companies do not apply any type of promotion. Hence it can be seen that sales increases due to effective promotion.

22) Analysis of question no.28 suggested that 50 percent respondent's Indian market for business is very important. According to 27.5 percent respondent's Indian market for business is almost important. According to 17.5 percent respondent's Indian market for business is mode rant important and according to 5 percent respondent's Indian market for business is less important. Hence it can be seen that Indian market is very important for business.

23) Analysis of question no. 29 suggested that 50 percent respondent said that there are excellent opportunities for chemical industries in next five years. According to 37.5 percent respondent there is Good opportunities. According to 10 percent respondent there is Average opportunities for chemical industries in next five years. And 2.5 percent respondent said that there are very less opportunities for chemical industries in next five years. Hence it can be said that there is excellent opportunities for chemical industries in future.

24) Analysis of question no. 30 suggested that 35 percent respondents viewed India as important destination for investment due to availability of manpower, 12.5 percent respondents opined that India is an important destination for investment due to availability of raw material, 10 percent respondents opined that India is an important destination for investment due to Stable Government, 42.5 percent respondents viewed India as an important destination for investment due to huge market potential. Hence it can be seen that in India huge market potential for investment exists.

8. Suggestions:

- 1.** Chemical organizations ought to endeavour for ceaselessly enhancing its generation procedures and items by putting assets in innovation advancement. The chemical business ought to attempt process advancement and innovation with the target of decrease in expense of generation.
- 2.** Small scale Chemical organizations need to concentrate on R&D in one or different territories by setting up of in-house R&D facility or outsourcing the R&D exercises, so that new item advancement and improvement happens.
- 3.** The company should focus on new products development and downstream product to support in the business sector.
- 4.** Manufacturers should urge authorities to reduce tax burden for controlling cost of input.
- 5.** Merger and Acquisition helps in cost reduction as well as reduction in overheads.
- 6.** The company should focus on distributors for timely delivery domestically as well as internationally.
- 7.** Brand building should be taken up as a part of promotional strategy.
- 8.** Chemical organizations will need to expand its promotional expenses to increase, expand the market share, hence the clients to understand that they are getting the right honour for the products they purchase, and henceforth organizations need to concentrate on advancement.
- 9.** Free samples are very useful in stimulating sales for chemical products which create favourable attitude for small scale chemical company, which is more effective than advertisement. In order to encourage distributors to stock the varieties, discounts, free gifts, joint promotions must be used as strategy.
- 10.** The organization ought to think about the proper media profiles for client scope and match client profiles to media profiles.

9. Conclusion:

1. As per Q. 7 and their results state the, negligence efforts towards increasing Research and Development expenditure, even after a long stay in business. The customers who are quality conscious, hence it is necessary to work on this area.
2. As per Q. 8 and Q. 9 and their results state that, the shape and reshape the business the strategic market planning is essential for choosing the right products, for the growth of markets at the right time.
3. As per Q. 16 and their result state that , customer could be happy for getting price discount, it is possible with significant efforts towards building quality infrastructure in the form of latest technology and equipment's.
4. As per Q. 18 and their results emphasized the need for marketing of quality product, which is consistency for customer loyalty and business sustainability.
5. As per Q.19 and Q. 20 and their results states that the need for appointing distributors for increasing sales as well as for timely delivery.
6. As per Q. 23 and Q. 24 and their results state the need for conducting GAP analysis for assessing customer needs and suppliers abilities to cater those, also need to develop communication channel for consistent dialogue which can help improve sales.
7. As per Q. 24 and Q. 25 and their results, the customers can be informed about the nature and type of products, it's uses and benefits , offered price and it's availability in the market place, this can be achieved by developing suitable promotional strategies.
8. As per Q. 25 and Q.26 and their results, sales increase due to various Medias use for the promotion. Personal selling and Web-sites are the effective media for the product promotion.

Evaluation of Marketing Mix order:

Variables are identified for each marketing mix and current practices are evaluated against a scale, mentioned below revealed the order as shown in the table.

(By using measured scale like (0-20 = 1, 21-40 =2, 41-60 = 3 , 61-80 = 4 , 81-100=5)

Parameter	Findings	Ref. Q. No	Data Analysis	Score	Total Score
1.Product	Produces more Basic chemicals	3	47%	3	13
	Preferred good quality product.	7	50%	3	
	No proper Marketing strategy	9	55%	3	
	Produces non seasonal product	27	52.5%	4	
2.Promotion	Prefer Advertisement for sales improvement	23	65%	4	12
	Business growth is depend on promotional effort	24	50%	3	
	Web-site use for promotion	25	42.5%	3	
	Focus on effective promotion	26	40%	2	
3.Place	Distributors are nearer to the market place	19	5%	1	9
	Companies with distributor centric approach	20	47.5%	3	
	Focus on timely delivery	22	40 %	2	
	Doing business with in India	30	42.5%	3	
4.Price	Decrease in price is resulting into increase in market share	11	27.5%	2	7
	Decrease in price is resulting into increase in profit margin	13	7.5%	1	
	Discount offered to trade customers for constant orders	16	47.5%	3	
	Pricing is competition driven	17	10%	1	

On the basis of above results, we conclude that companies could define Marketing mix strategies as follows:

1. The Product score is highest (13) because, product plays vital role in this industry, hence continuous efforts must be undertaken to enhance quality of product. Companies are produced more Basic chemicals by focused on quality product constantly throughout the year but it would be better if companies adopt better marketing strategies.
2. The Promotion score is second highest (12) because, advertisement are considered as effective promotional tool, media is selected for it however to make promotion more effective dedicated efforts are necessary. Attention is required for promoting company's competencies; hence more focus on the advertisement.
3. The Place (distribution) score is lower (9) because, building dedicated marketing channel might prove decisive in encashing growth opportunities across the market, hence manufacturer has to give more focus toward the distribution and distribute the right product at a right time. Majority companies are doing business within India with distributor centric approach but lacking on timely deliveries and identification of distributors nearer to the market place.
4. The Price score is lowest (7) because, buyers are not price sensitive, he prefers only good quality product, and hence if there is any price changes, it should not affect on product sale. Price reductions, discounts are not benefiting companies as this is not competitive market, where in prices are competition driven.

10. Limitation of study:

- i) For the purpose of study Pune has been selected at primary level. It was observed that in Pune district most of the chemical companies are located at Kurkumbh (Tal-Daund), Pirangut (Tal-Maval) and Pimpri-Chinchwad (Tal – Haveli) and very few of the companies are in Khed,Bhor and Jejuri area, and remaining Tehsil there is no chemical industry.
- ii) It was not possible to gain access to the confidential decisions and policies of the Chemical Company for their Marketing team and Management operations. The interpretations of the data and observations about findings are based on whatever information we could gather from conversations with the officials of the company.
- iii) This study was also hamstrung by the fact that there was no previous study done exactly on the same theme. Thus, we had no trailblazer to develop our hypothesis and test our results against previous benchmarks. We had to develop our own methodology and analytical framework that also, in a way, acted as a constraint.

11. Contribution of Research to the Society:

- a) Setting up of Chemical parks or Mega Chemical Estate, the industry may be encouraged to set up mega chemical plants which will offer substantial employment opportunities both for skilled and unskilled persons. It generates indirect employment opportunities for the Chemical engineering, Logistics and Marketing persons as well, thereby increasing the productivity.
- b)With the help of cluster development and partnership with educational and research institutions like Indian Institute of Technology(IIT) for new product innovation/development takes place very easily.
- c) It is possible to reduce imports and improve exports, ultimately helping to build exclusive foreign currency and pushing domestic economy on growth trajectory, which is beneficial for the nation.
- d) With the help of Eco- Friendly technology, Industry should evolve clean development mechanism and emphasize on utilization of production process, where bi-product

formulation is minimized and the waste generated is bio-degradable to minimize the pollution. The solvents are recycled in the process and the industry should achieve the target of zero effluent, which will go a long way to keep the environment clean.

12. Scope for further study:

The study will open up ample scope for further research in the area of marketing promotions in speciality chemical industries as well as other big industries in India. The objective of our research work was to make analysis of promotional elements for designing better promotional strategies for effective marketing in a competitive environment. The promotional elements especially advertising, sales promotion, direct marketing, database marketing, customer relationship marketing deserves special attention for the purpose of future research. Moreover, the companies, which are burdened with obsolete technology, surplus manpower and operational problems in marketing, can also be taken up for investigation.

a) Green Chemistry:

Green chemistry protects the environment, not by cleaning it up, but by inventing new chemistry and new chemical process that do not pollute. The fundamental idea of green chemistry is that the manufacturer of a chemical needs to consider what will happen to human life after the chemical is generated and introduced into their society by rethinking chemical design from the ground up, green chemists are developing new ways to manufacture products that fuel the economy and lifestyle, without the damages to the environment that have become all too in recent years.

b) Research can be extended to other district, other states and national level.

c) The companies which are burdened with obsolete technology and operational problems in marketing can also be taken up for investigation.

Chapter No.1

Chemical Industry: Introduction

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Chapter No.1

Chemical Industry: Introduction

1.1. Why this topic?

The Indian Chemical industry, twelfth biggest in production in the world, is developing at average rate of 12.5%, hence modernization of existing technology through innovation or foreign collaboration could encourage improve development and growth.

Increasing local production requires global competitiveness to withstand imports as well as for export surplus, the success factors are availability of feedstock at competitive cost, access to advanced technology, low cost capital, investment in Research and Development and talent development.

The boost demand of the chemical products, there is necessary for chemical companies to grow. The Government is ensuring that this demand be met through domestic production.

For Indian companies marketing mix strategies are important as the Indian economy is now a part of the global economy and Indian companies need to complete globally.

Presently Indian chemical industry holds a perceived position in the worldwide, however there are few elements which impedes the development of the business it incorporates:

a) Lack of cheaper raw material availability:

Chemical industry utilizes either regular gas or raw petroleum as feedstock for assembling process. Feedstock and force are basic inputs for both organic& inorganic chemicals industry. Expenses of these crude materials are high in India when contrasted with nations like China, Middle East, Thailand and Indonesia, likewise the variances in oil costs influence on the expense of item and the development gauge of the organization.

b) Fragmented Small Scale Industry:

The Indian chemical industry is having a fragmented structure with more number of units in small-scale sectors spread in various parts of the country. The installed capacities in most of the small-scale units are smaller as compared to global scales. The limitation in capacity in the small scale industries put them in unfavourable position while tapping export opportunities with large volume.

c) Low levels of Research & Development (R& D):

The level of R&D investments in the Indian chemical sector is low at around 2% of net sales. The areas for strengthening of R&D in chemical industry include improvements in manufacturing process for reduction in cost of production, application development to diversify demand, and new product development.

d) Low Level of Information Technology (IT) interface:

The usage of information technology in Indian chemical industry is relatively lower, as most of the units are in the small-scale sector. Application of information technology in the chemical sector is required for equipment design, chemical engineering, and process simulation that have helped in reducing product and process development time. Information Technology should also be increasingly used in the area of R&D, especially in collaborative research.

e) Low Level of Brand Development:

Indian chemical producers, excepting a few large producers, generally sell their products as generic products without brand development. There is also low level of interest amongst small scale producers for brand development, product development and also for market development.

f) Low Level of Common Infrastructure:

The chemical industry requires certain basic infrastructure facilities, both in the process chain and in the supply chain. At present, each unit has to create specialized facilities on its own which leads to repetition of efforts and investment. If chemical units are clustered in close proximity, the required infrastructure could be vertically integrated resulting in cost reduction.

g) Logistic Issues:

The logistics is a remarkable issue for chemical businesses, larger part chemical industries are primarily manufactured in the Gujarat and Maharashtra, however the makers appreciate simple access to crude materials, yet they confront trouble in supplying to completed items to the end-use ventures which are situated in Southern and Eastern areas, this builds the transportation cost, henceforth the item gets to be costlier, along these lines making imports less expensive when differentiate with inside transport. (Approx.US\$ 50 per metric ton cargo cost from Western part to Eastern part when compared with US\$ 30 to US\$35 per metric ton cargo for imports).

Due to above reasons, researcher have chosen this topic for research.

1.2 Purpose of the Research:

1. Indian chemical industry is placed well below the global rivals reasons are many. Considering its growth potential, it has become essential to develop it to global standards, for which researcher has decided to identify and verify marketing mix strategies of making chemical industry globally competitive.
2. To make business more economical it is essential to know the priorities of handling issues, hence researcher thought of assessing significance of marketing mix strategies and evaluating order of the same.

1.3 Chemical industry scenario:

Chemical industry is one of the most established ventures in India. It is evaluated that the measure of Indian chemical industry is around US\$ 30 billion. Volume of creation in chemical industry positions India as third biggest maker in Asia (alongside China and Japan), and twelfth biggest on the planet. The industry, containing both large scale and small scale organizations, which creates a few a huge number of items, bi-items and downstream items. The chemical business contributes around 20% of national income by method for different expenses and demands and 5% of the National GDP.

Source –1. Trade Map, International trade center, 2016

Export – Import Bank of India, Indian Chemical Industry: A sector study

1) Table 1.1 State wise production share Chemicals:

S. No	State wise share in production	% of Share
1	Gujarat	53 %
2	Maharashtra	9 %
3	Uttar Pradesh	6 %
4	Tamil Nadu	6 %
5	Madhya Pradesh	5 %
6	Punjab	4 %
7	Others	17 %

(Source 1. -Chemical News - July, 2014)

2. India- Chem, TATA Strategic Management Group.

In the state wise production, Gujrat state the chemical manufacturing hub have maximum share it is upto 53 % followed by Maharashtra state 9% , rest of the states like Uttar Pradesh & Tamilnadu 4%, Madhya Pradesh 5% and Other states 17 %.

1.4 Global Scenario:

Worldwide chemical generation is developing and the development is contributed by the chemical business of creating nations. The measure of the worldwide chemical industry is roughly USD 1.75 trillion. The business is right now failing to meet expectations and is in the trough of the business cycle. USA is the single biggest nation with an offer of 22% (US \$ 380 billion) in world chemical deals, trailed by Japan (10% - US\$194 billion) and India (1.9% - 34 billion)

Table 1.2 Global sales of chemicals

S.No	Country	Global sales with share
1	USA	22 %
2	Japan	10%
3	China	9%
4	Germany	7%
5	France	5%
6	India	1.9%

Source: Indian Chemical Industry: A sector study

3) Table 1.3 Leading Chemical exporters:

S.No	Country	Leading Chemical exporter
1	Germany	11%
2	USA	11%
3	France	6%
4	Japan	6%
5	China	4.3 %
6	India	4%

Source –1. Trade Map, International trade center, 2016

2. Indian Chemical Industry: A sector study

The main Chemical exporter are Germany and USA having 11% offer , took after by the France and Japan having 6% offer, China 4.3 % and India 4% individually, henceforth it can be reasoned that India is less chemical exporter

as contrast with alternate nations because of high household utilization, less creation limit and less centre towards trade.

1.5 Strategies to be framed by the manufacturer:

Indian Chemical industry has extremely solid residential market yet frail fare center. In the event that India needs to wind up greater chemical maker and in addition greater exporter on the planet, then the makers needs to concentrate on the accompanying terms.

a) Focus on Core Competence:

Innovation in the marketing, select the marketing area becoming an important factor to focus on core competence and to become a leading player in specialty products. In the above context, it is important for the Indian chemical manufacturers to focus on select business segments / target the specific area where competitive advantage exists.

b) Strengthening Technological Development:

Indian chemical industry ought to strive for constantly enhancing its generation procedures and items by propelling assets in innovation advancement. In the mass items section, the chemical business ought to attempt process advancement and in addition operational development with the target of decrease in expense of creation. What's more, the industry needs to put resources into innovative assets that would prompt particular item advancement.

c) Focus on Research & Development (R & D)

Indian chemical industry needs to concentrate on Research and Development. The essential chemical area ought to concentrate on procedure advancement, product advancement, concentrate on downstream product and reinforce their intensity through upgrades in light of execution and nature of items. Chemical industry ought to concentrate on R&D with the target of accomplishing item authority and procedure advancements.

The zones for R&D in chemical industry incorporate changes in assembling process for lessening in expense of generation, application advancement to expand request, new product improvement and exploration identified with application. In this way the Chemical division ought to

concentrate on procedure advancement, product improvement and reinforce its intensity through upgrades in view of execution and nature of items. Be that as it may, the current R&D power of the chemical business is low, it is just 2% on net sales when contrasted with the internationally 18.5%.

d) Collaboration:

The chemical industry needs to upgrade their cooperative endeavors keeping in mind the end goal to enhance aggressiveness. Cooperation amongst great players in the chemical industry could happen both at bunch level, for sharing of basic base, for example, R and D, Logistics, Warehouse and sharing of learning and innovation. Coordinated effort with firms crosswise over fringes for innovation and venture would likewise give a support to the industry. What's more, the players ought to likewise accomplish more prominent level of industry-institutional association for learning improvement, sharing and to get the ability.

e) Merger and Acquisition:

The new pattern in chemical industry is contending through organization. Chemical organizations, through mergers and acquisition are currently accomplishing economies of scale everywhere throughout the world. Merger and Acquisition helps the chemical industry in decrease of expense in their acquirement and generation, additionally for diminishment in overheads, advertising costs, and expanded efficiencies in inventory network administration and improved nearness in different areas. It is imperative for Indian chemical industry to relate their operations and develop as worldwide victors.

In the year 2010, Kiri Industries Limited (KIL) procured the German base DyStar Group one of the world's biggest makers of colors and Intermediate through SPV Kiri Holding Singapore Pvt Ltd. Dystar procurement is thought to be a chronicled advancement in the worldwide Dyes industry in India. These acquisitions, consolidated with natural development, are controlled to change the state of the chemicals industry in the medium term.

f) Import Substitution:

India's share of chemicals has been progressively expanding step by step. India still has a deficiency on the exchange account in the chemical segment. India's share of chemicals in 2015 remained at US\$ 12.7 billion (4.3%) though imports had touched US\$ 19 billion (4.1%) a sign of solid local interest for chemical items.

Source: Trade Map, International Trade Centre, 2016 & Import –Export data

Be that as it may, there are chemical items which India is trading and additionally importing. Sending out a specific item in sensible amount authenticates that India has the abilities to deliver the same, yet per capita utilization of chemical items in India is much underneath utilization levels when contrasted with created nation, inadequate generation limit because of low capital arrangement which can nourish just in-house utilization consequently less concentrate on share, because of this it needs to depend on imports. This would infer that had suitable limits been in presence, the nation would not need to depend on imported chemicals.

g) Setting up of Chemical Parks or Mega Chemical Estates:

Keeping in mind the end goal to address the issue of limit extension and for formation of basic framework offices, the chemical industry, with backing of Government and budgetary organizations could build up selective Chemical Parks. The chemical industry requires certain fundamental framework offices, both in the process chain and additionally in the store network. The basic foundation prerequisites incorporate a typical gushing treatment plant, and a successful green belt isolating the modern units from human settlements. In the last mentioned, the basic prerequisites incorporate an effective port, chemical stockpiling terminal and stockrooms, and satisfactory landing offices. The generation and share profit of this area would get an enormous bounce, if a mechanical domain committed to the chemical industry could be set up.

In the event that chemical units are grouped in close nearness the required foundation could be vertically incorporated bringing about cost lessening. In this setting, the German model of Chemical Parks, which underpins the

chemical destinations the nation over, could be appropriately adjusted. The ventures in the German model work intimately with the legislatures of the individual states, colleges and monetary improvement organizations under open private association model.

h) Collaborative Endeavours: Inter- Firm and Institutional

The chemical industry needs to enhance its collaborative efforts in order to improve competitiveness. Collaboration among players in the chemical industry could happen both at cluster level (for sharing of common infrastructure) as also at firm level (for sharing of knowledge and technology). Smaller players need to cooperate in 'clusters' where infrastructure, resources, commercial intelligence, common trade centres and even knowledge can be shared at lower costs and improve competitiveness of producers. Collaboration with firms across borders for technology and investment would also give boost to the industry. In addition, the players should also achieve greater level of industry-institutional partnership for knowledge development and sharing. For transforming ideas into new products, partnership between industry and academia is a must.

Thus, Indian chemical industry should leverage the potential of educational and research institutions to source intellectual as well as human capital. The educational institutions could play a greater role for development of Indian chemical industry by offering courses and conducting research proactively. The research and academic institutions may also open local offices and business incubation centres within chemical clusters to facilitate greater level of interactions. Such incubation centres could accelerate the successful development of entrepreneurial companies in the chemical sector through an array of business support resources and services.

i) Marketing and Promotion:

Indian chemical industry ought to concentrate on advertising and advancement to accomplish more noteworthy offer in worldwide chemical exchange. The industry ought to focus more on issue, for example, brand building, send out advancement and business sector improvement, there is a need to edge such sort of procedures for product advancement and in addition market advancement, then and after that exclusive the client gets the understood

the correct source of the product. The advancement of the product with the assistance of Personal selling, free sampling, advertisement in news magazines too in Journal, displays, the client gets pull in towards the product and buy the product, along these lines the brand creation taker place.

1.6 Contribution of Research to the Society:

a) Setting up of Chemical parks or Mega Chemical Estate, the industry may be encouraged to set up mega chemical plants which will offer substantial employment opportunities both for skilled and unskilled persons. It generates indirect employment opportunities for the Chemical engineering, Logistics and Marketing persons as well, thereby increasing the productivity.

b) With the help of cluster development and partnership with educational and research institutions like Indian Institute of Technology(IIT) for new product innovation/development takes place very easily.

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d) With the help of Eco- Friendly technology, Industry should evolve clean development mechanism and emphasize on utilization of production process, where bi-product formulation is minimized and the waste generated is bio-degradable to minimize the pollution. The solvents are recycled in the process and the industry should achieve the target of zero effluent, which will go a long way to keep the environment clean.

Chapter No. 2

Review of Literature

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Chapter No.2

Review of Literature

2(a) Research papers and Articles:

According to Jerome McCarthy¹ (1960) was the first person to suggest the 4 P's viz price, promotion, product and distribution which constitute the most common variables used in constructing a marketing mix. According to McCarthy the marketers essentially have these four variables which they can use while crafting a marketing strategy and writing a marketing plan. In the long term, all four of the mix variables can be changed, but in the short term it is difficult to modify the product or the distribution channel.

Another set of marketing mix variables were developed by Albert Frey² (1961) who classified the marketing variables into two categories the offering, and process variables. The "offering" consists of the product, service, packaging, brand, and price. The "process" or "method" variables included advertising, promotion, sales promotion, personal selling, publicity, distribution channels, marketing research, strategy formation, and new product development.

According to George R. Terry³ (1965), Marketing mix refers to the combination, the designing, and integration of the elements of marketing into a programme or mix which on the basis of an appraisal of the market force will best achieve the objectives of an enterprise at a given time the concept proposes that once markets are known, marketing management can mix the elements in proportion that will produce the most profitable marketing result. It assumes that the proportions of the mix will change as a market conditions change or the company's position in market change There are always several combinations of marketing methods and policies which can be adopted by a marketing manager in arriving at a marketing strategy. But there is always one optimum mix of them which leads to the most profitable result with minimum cost.

Davis. K⁴ (1975), "The Challenges of Business", McGraw Hill, New Delhi, P.43, Davis advocates that the marketing environment of any organisation is a force that can strategically affect the product/ market/ customer/ brand in terms of their market position and differentiation. Cravens have stated that understanding of an organisation is an essential initial part in developing a marketing strategy. This understanding can be derived from an assessment of (i) organisational capabilities, (ii) threats from environmental forces, (iii) competitors strengths and weaknesses (iv) customers specific needs (v) number of years company engaged in the business (vi) the segments which company operate it, Therefore a comprehensive environmental analysis is very much necessary to counter the evil effects of changing environment.

The factors, which are responsible for assessing the environment, are (i) the replacement of mass markets with micro markets, (ii) rising expectations across virtually all markets and a reduced tolerance to accept poor performance, (iii) the great pace of technological change, (iv) higher levels of competition, (iii) differentiation on the basis of service, (iv) the increased commoditisation of many markets and (v) the erosion of brands.

Shirley, R C, Peter M H and EI-Ansary⁵ (1976), "Strategy and policy formation: A multifunctional orientation, New York, pp-27-30,

The strategy make it clear that it is a long-term approach designed to adapt the operations of a firm to the dynamic environment. Elaborating on the concept of strategy Shirley, Peter and EI- Ansary observes that strategy has a long term perspective covering the following five Issues:

- i) Objectives of the firm to indicate, what the firm wants to be.
- ii) Business mix of the firm to indicate, what specific goods and services the firm wants to offer.
- iii) Customer mix of the firm for each business to indicate what the target groups of the customers are.
- iv) Corporate and business wise competition analysis to indicate, what the degree of thrust and market niche would be.
- v) Geographic boundaries of the market to be served to indicate the operational limit.

Dempsey, W. A⁶ (1978), “Vendor selecting and the buying process”, *Industrial Marketing Management*, Vol. 7, pp-257.

In the industrial marketing, the significant factors of selecting suppliers are :

(i) delivery capability, (ii) quality, (iii) price, (iv) repair and after sales service, (v) technical capability vi) performance history, (vii) production facilities, (viii) help and advice ix) control systems, (x) reputation, (xi) financial position, (xii) attitude towards the buyer, (xiii) compliance with bidding procedures, (xiv) training support, (xv) communications on the progress of the order, (xvi) management and organization, (xvii) packaging, (xviii) moral/legal issue, (xix) location, (xx) labour relations.

Abell. D. F and Hammond J.S⁷ (1979), “Strategic Market Planning: Problems and Analytical Approaches”, Englewood Cliffs, N.J. Prentice Hall, p.9.

The primary responsibility of strategic market planning is always to look outward and keep the business in step with its expected environment. The lead role in meeting this responsibility is played by marketing. As a general management responsibility, marketing embraces the interpretations of the environment and the crucial choices of which customers to serve, which competitors to challenge, and with which product characteristics the business will compete.

Porter, M.E⁸ (1979), “How Competitive forces shape Strategy”. *Harvard Business Review*, Vol- 57, Mar, pp- 137-145

Porter has made an immense contribution to the development of the ideas of industry and competitor analysis, and their relevance to the formulation of business strategies. The state of competition in an industry depends on five basic competitive forces, the collective strength of these forces determining the ultimate profit potential of the industry and the ability of firms in an industry to earn rates of return on investment in excess of the cost of capital.

The five competitive forces are (i) threat of new entrants, (ii) rivalry among competitors, (iii) bargaining power of suppliers, (iv) bargaining powers of buyers and (v) threat of substitute products. The five forces model suggests that competition extends beyond the companies within the industry to include new entries, suppliers, buyers and substitutes. The stronger the force is, the greater the restrictions on companies to raise prices and earn

greater profits. In other words, a strong force is regarded as a threat because it is likely to reduce profits, whereas a weak force is viewed as an opportunity because it allows the company to earn higher profits.

Porter, Michael E⁹ (1980), "Competitive Strategy: Techniques for Analysing Industries and Competitions", Free Press, New York.

Porter defines four kinds of generic strategies by which a firm can achieve competitive advantage in a market. They are (i) cost leadership, (ii) product differentiation, (iii) focus and, (iv) no clear strategy. In a cost leadership strategy, the company attempts to become the lowest cost producer in the market. This can be achieved with economies of scale -an appropriate technology, preferred raw material access and automation. In contrast by the product differentiation strategy, a firm attempts to become unique along some non-price dimensions that are valued by customers in the market. Finally in the case of focus or niche strategy, the firm selects a market segment and tailors its strategy to serving more than the competitors.

Bernard Booms and Mary Bitner¹⁰ built a model consisting of 7 P's (1981). They added "People" to the list of existing variables, in order to recognize the importance of the human element in all aspects of marketing. They added "process" to reflect the fact that services, unlike physical products, are experienced as a process at the time that they are purchased. The Marketing mix denotes a combination of various elements which in their totality constitute a firm's marketing system. These elements are- 4P's. Marketing Mix is the set of controllable marketing tools that firm uses to pursue its Marketing objectives in the target market. Marketing mix is the set of marketing tools that the firm uses to pursue its marketing objectives in the target market.

Lee G. Cooper¹¹ (1983), the domain of this review includes the development and application of multidimensional scaling (MDS) in product planning; in decisions concerning pricing and branding; in the study of channels of distribution, personal selling, and the effects of advertising and in research related to the fact finding and analysis mission of marketing research. In research on product planning, specific attention is given to market structure analysis, to the development of a master configuration of product perceptions, to the role of individual differences, to representing consumer preferences, to issues in market

segmentation, and to the use of asymmetric MDS to study market structure. Author deals with issues in data collection such as the response rate, time, and accuracy of judgments; the validity, reliability, and stability of judgments; and the robustness of data collection techniques and MDS algorithms. A separate section on new-product models deals with the determination of relevant product markets, the identification of determinant attributes, the creation of product perceptual spaces, and the modeling of individual or market-segment decision making.

Doyle, P¹² (1987), "Marketing and the British Chief Executive", *Journal of Marketing Management*, Vol-3, No-2, PP- 121,

The success of business mainly depends on identifying changing customer needs and wants and then designing, producing the products according to the needs and wants of the customers and customer prefers the products of good quality, reasonable price and the timely delivery.

Gupta Sunil ¹³(1988), *Journal of Marketing Research (JMR)*, Nov 88, Vol. 25,

Issue 4, pp 342 " Impact of Sales Promotions on When, What, and How Much to Buy", The effectiveness of a sales promotion can be examined by decomposing the sales during the promotion period into sales increase due to brand switching, purchase time acceleration, and stockpiling. The author proposes a method for such a decomposition whereby brand sales are considered the result of consumer decisions about when, what, and how much to buy. The impact of marketing variables on these three consumer decisions is captured by an inter purchase time model, a multinomial logic model of brand choice, and a cumulative logic model of purchase quantity. The models are estimated with IRI scanner panel data for regular ground coffee. The results indicate that more than 84% of the sales increase due to promotion comes from brand switching (a very small part of which may be switching between different sizes of the same brand). Purchase acceleration in time accounts for less than 14% of the sales increase, whereas stockpiling due to promotion is a negligible phenomenon accounting for less than 2% of the sales increase. Author claims that more than 84 % of the sales increase due to promotion comes from brand switching.

Peter D Bennett¹⁴ (1988), “Dictionary of Marketing terms”, American Marketing Association, Chicago, P.115.

Marketing Association defines marketing *as a* total system of business activities designed to plan price, promote and distribute want satisfying products to achieve organisational objectives. It focusses on two main things:

- i) The entire system of business activities should be customer oriented.
- ii) Marketing should start with an idea about a want satisfying product and should not end until the customers' wants are completely satisfied. The consumer must be recognised and accepted as the focal point of business activities, and the knowledge of customer needs and wants should be the starting point for all major business decisions.

Wilson, R.M.S ¹⁴(1988), “Marketing and the Management Accounting”, Ch.13, pp- 255.

The essential requirements of marketing are (i) the identification of consumers market (ii) the definition of target market segments and (iii) the creation of a differential advantage Building customer relationship and a customer database for maintaining continued relationship are the important developments in recent times.

Jauch L.R and Glueck W.F¹⁵(1988) “Business policy and Strategic Management”, McGraw Hill, International Edition, Chapter 3 and 4,

According to Jauch and Glueck, economic environment refers to all those economic factors, which have an impact on the functioning of a business. Technological environment exerts significant influence on business. Technological improvements can create new markets, result in proliferation of new and improved products, change the relative competitive cost position in an industry and make existing products and services obsolete. The social factors describe characteristics of the society in which the organisation exists. Literacy rates, education levels, customs, beliefs, values, lifestyles, the age distribution and the mobility of the population all contribute to the social environment. The international environment comprises of all factors related to global issues. The numbers of organisations dealing

with global issues have been increasing with the announcement of globalisation in the country in 1991. Significant factors of international environment include the legislations, Political parties and their practices, cultures and economic situation that prevail in the countries in which the organisation does the business.

Hooley, Saunders and Piercy ¹⁶(1988), “Marketing Strategy and Competitive Positioning”, Prentice Hall, Europe, 2nd edition, p-154,

Competition analysis is a set of activities, which examines the comparative position of competing enterprises within a given strategic sector.

- The set of activities, that organisations are undertaking when analysing competition analysis, are: (i) assessing competitors' current and future objectives, (ii) assessing the competitors' current strategies, (iii) assessing competitors' resources, (iv) predict competitors' future strategies. It helps to (i) provide an understanding of competitive advantage/ disadvantage relative to competitors' positions, (ii) generating insights into competitor's strategies - past, present and potential, and (iii) provide an informed basis for developing future strategies to sustain over the competitors.

Philip Kotler, ¹⁷(1989), “Principles of Marketing”, Prentice- Hall of India, New Delhi, 3rd edition, pp-40-41 and 208-240.

The term "Industrial market" is used to refer to those organisations, which buy goods and services that are used in the production of others. The industrial marketer normally deals with fewer, larger customers than consumer marketer. The markets are geographically concentrated and the demand is derived. One of the major differences between consumer and industrial buying decisions is the buying motive. In consumer marketing the purchases are made by the consumers for personal consumption of utility, but in industrial purchasing, the purchases are made for reducing operating costs, satisfy legal obligations and also provide an input to the manufacturing process. The demand for many industrial goods and services tends to be more volatile than the demand for consumer goods and services.

The stages of industrial buying process are (i) problem recognition, (ii) determination of the general need, (iii) specific description of the required product, (iv) search for potential

suppliers, (v) evaluation of suppliers, (vi) selection of a supplier, (vii) establishing the routine order, and (viii) review of performance and feedback.

Baker, Michael J¹⁸(1992), “Marketing Strategy and Management”, The Macmillan Press Ltd, London.

It distinguishes strategic marketing planning from marketing planning by stressing it with the marketing mix, while the former is seen as planning for all aspects of an organisation's strategy in the marketplace.

Hooley, Graham J, John Saunders and Nigel F Piercy¹⁹ (1993), “Competitive Positioning : The key to Market Success”, Prentice, Hall International Ltd.

has pointed out that the development of marketing strategy could be seen at three main levels. At the first level, the core strategy of the company will be selected, where the marketing objectives and the broad focus for achieving them will be identified. At the next level, market segments and targets (both customers and competitors) are selected and the company's differential advantages in serving the target customers better than the competitors are identified. At the third level, implementation of the strategy into the marketing organisation will be carried out. The marketing department, at this stage is concerned with establishing the marketing mix programmes that can convey both the positioning and the products/services themselves to the target market.

Jain, Subhas C²⁰ (1993), “Marketing planning and strategy”, South-Western College publishing”, Ohio, pp.22-23,

It refers that strategic marketing assists in the development of strategic perspective of the business unit to direct its future course. Marketing strategy is developed at the business unit level, which is an endeavour by a corporation to differentiate itself positively from its competitors, by using its relative corporate strength to better satisfy the customer needs.

Stanton, W.J. Etzel, M.J.Walker ²¹(1994), “Fundamentals of Marketing,” McGraw Hill, Inc 10th edition, P.6.

Marketing as total systems of business activities designed to plan, price, promote, and distribute want satisfying products to target markets to achieve organizational goals. It

comprises all the activities from the time a product is conceived to the time it reaches the consumer.

Cravens, David ²²(1994), “Strategic Marketing”, Cravens' model shows that there are six steps in industry analysis-

1. The first step involves defining the specific industry structure and the number of years the company engaged in the business, for which the analysis is being planned and identifying its dominant characteristics.
2. In the second step, the model points out to identify and analyse the various strategic groups who, are responsible for determining the growth and development of the industry.
3. In the third stage, the analysts need to identify and describe the key competitors who play a vital role in shaping the destiny of the industry.
4. In the fourth stage, it is necessary to evaluate the strengths and weaknesses of the key competitors in order to locate the marketing niche that will exist.
5. In the fifth stage, it is important to anticipate the actions, which are likely to be taken by the competitors. An analysis of the proposed actions of the competitors can reveal which way the industry will be moving and which scenario is going to build up in the days-to-come.
6. In the final stage of the industry analysis, the analyst will seek to identify the new competitors and examine their potential capabilities to seize the market share from the existing competitors. In this connection, it is also important to look into the strength of both existing and new competitors to enlarge the existing market through a variety of marketing strategies.

Philip Kotler²³(1997),“Marketing Management: Analysis, Planning, Implementation and Control”, Prentice- Hall of India, New Delhi, PP-63,

Market oriented strategic planning is the managerial process of developing and maintaining a viable fit between the organisation's objectives, skills and resources with the changing marketing opportunities. The art of strategic market planning is to shape and reshape the company's business and products so that they yield target profits and growth.

Therefore, strategic marketing focusses on choosing the right products for the right growth markets at the right time. But in marketing management, market segments are defined by grouping customers according to marketing mix variables. Strategic marketing involves the inside of planning process as well as outside planning process so that it helps to carry out proactive market strategies with management information system, strategic intent, entrepreneurial thrust, real time management and longer time perspective. Strategic Marketing comes into play because marketing management has more limitations, more uncontrollable settings and specific delineated objectives.

Schiffman, Leon G and Leslie Lazor Kanuk ²⁴(1997), “Consumer Behaviour”, Prentice Hall of India, New Delhi, pp- 82.

Schiffman and Kanuk indicate about the importance of tracing customer needs and have stated that customer needs are the basis of all modern markets. Needs are the essence of the marketing concept. Marketers do not create needs, although in some instances they may make consumers more keenly aware of unmet needs. Successful marketers define their markets in terms of the needs they provide to satisfy rather than in terms of the products they sell. Organisations do not exist solely as a supplier or a customer in a dyadic relationship with another party. They are, firstly part of a complex network of many 'suppliers and customers, and it will be necessary to map this network to understand fully about the forces acting on any individual member or group.

Secondly, there are strategic grouping of customers and other exchange partners, each of who is having similar strategies or acting in similar ways. These groups can be considered, as homogeneous entities if the common aspects of their behaviour patterns are relevant to their exchange decisions.

Thirdly, there are different individual influences on any customer or industrial consumer. The traditional industrial grouping of users, influencers, deciders, advisors and gatekeepers can equally be considered in consumer markets, where family or peer influences can fulfill similar needs. It is therefore essential to identify the roles of different parties in the buying process to explore customer relationships.

Pamela Alreck & Robert²⁵ (1999) "Strategies for building consumer brand preference", *Journal of Product & Brand Management*, Vol. 8 Iss: 2, pp.130 - 144

The marketer's principal objective is typically to build a relationship with buyers, rather than merely to make a single sale. Ideally, the essence of that relationship consists of a strong bond between the buyer and the brand. Outlines six strategies for building that relationship: linking the brand to a particular need; associating it with a pleasant mood; appealing to subconscious motives, conditioning buyers to prefer the brand through reward; penetrating perceptual and cognitive barriers to create preference; and providing attractive models for buyers to emulate. The choice of an individual strategy or combination depends mainly on the nature of the branded product or service. The success of the strategy depends heavily on the marketer's understanding of the preference building and bonding process. A product or brand preference might be build through one or more of the theories behind the promotion strategies which motivate and stimulate consumer brand preference through the ideas of Maslow's hierarchy of needs, which starts from the Basic needs, and ends with the Self Actualization (self-fulfillment) needs.

Boonghee Yoo, Naveen Donthu and Sungho Lee²⁶, (2000),

The study explores the relationships between selected marketing mix elements and the creation of brand equity. The authors propose a conceptual framework in which marketing elements are related to the dimensions of brand equity, that is, perceived quality, brand loyalty, and brand associations combined with brand awareness. These dimensions are then related to brand equity. The empirical tests using a structural equation model support the research hypotheses. The results show that frequent price promotions, such as price deals, are related to low brand equity, whereas high advertising spending, high price, and high distribution intensity are related to high brand equity, the pricing structure of the products are decided to take into consideration of the product quality, discount offered by the manufacturer and the competitor's pricing policy.

Proctor, T ,²⁷ “Strategic Marketing an Introduction “, Rutledge, London,(2000) pp 174.

Proctor has listed several factors on strengths and resources for sustaining competitive advantages (SCA). Under the strengths, the factors are: (i) specialised knowledge of markets and needs, (ii) customer service orientation, (iii) design expertise, (iv) applications experience, v) trade relationships, (vi) utilising relevant technologies, (vii) system design capabilities, (viii) ability to respond rapidly and with flexibility. Under the resources, they are; (i) coverage of distribution, (ii) availability or access to capital,(iii) business contacts, (iv) low cost manufacturing and distribution systems ,(v) raw material availability.

Jagdish N. Sheth, Atul Parvatiyar,²⁸ (2001) "The antecedents and consequences of integrated global marketing", *International Marketing Review*, Vol. 18 Iss: 1, pp.16 – 29. International marketing is undergoing a transformation to become integrated global marketing. The emphasis has shifted from understanding and explaining between-country differences to identifying transnational similarities; and from country-by-country functional adjustment of marketing mix elements to seeking global cross-functional integration. In this paper, the authors discuss how the contextual factors of international marketing are changing to make between-country differences less relevant for international marketing practice. The emergence of integrated global marketing has a greater potential for theory development in international marketing as it is not contextually bound and thus can be generalized.

Aaker, David A,²⁹(2001),“Marketing Management”, Prentice Hall, Inc, Englewood Cliffs.

Competitors' strengths and weaknesses are based upon the existence or absence of assets of skills. Thus to analyse competitor’s skills and weaknesses, it is necessary to identify the assets and capabilities that are relevant to the industry. Organisational assets are the endowments of a business that has accumulated in economies of scale, location and brand equity, whereas capabilities reflect the synergy between the assets and enable them to be deployed to the company's advantage. Capabilities may be conceptualized as complex bundles of skills and collective learning, which promote the co-ordination of functional

activities in an organisation. Organisational assets comprise things such as; (i) physical assets- land facilities, buildings, equipment, (ii) financial assets- cash, credit rating, (iii) operational assets- machinery, systems and processes, (iv) human assets- employees, their qualities and skills; v) marketing assets-distribution, market knowledge, customer loyalty brand name, reputation, relationship with distributors, (vi) legal assets- patents and copyrights; vii) system - management information systems and decision support mechanism.

Wilson, Richard M.S and Gilligan Colin³⁰ (2001): Strategic Marketing Management, Planning Implementation and Control”, Viva Book Pvt. Ltd. New Delhi, 2nd edition, PP- 44-71.

Wilson and Gilligan have provided a list of factors to be considered for SWOT Analysis.

Strengths

- Strong brand image
- High quality products
- Economics of Scale
- Breadth product line
- Motivated employees
- Strong R&D
- Excellent distribution network
- Good inventory management
- Comfortable debt-equity ratio.

Weaknesses

- Poor bad *image*
- Narrow product mix.
- Weak distribution
- Poor product quality
- Poor receivables
- Poor inventory management
- Outdated technology.
- Excess manpower

Opportunities

- Price Control
- Delicensing
- Import relaxation
- FDI norms
 - Capital market reforms
 - Growth of consumerism
 - Growing disposable incomes
 - De reservations

Threats

- Recession
- Political instability
- Religious battles
- Consumerism
- Import liberalization.

Dr. Mihaela Moisa³¹, (2002), Companies that are doing affairs in B2B field has to adapt Marketing mix variables in order to succeed. Trying to build a long term relationship with the client, companies acting in this area are using specific characteristics for the 4P'S. In B2B area, adapting the Marketing Mix to the characteristics of the field has the decisive role to create long term partnership with companies , clients and in fact ,creating the favourable field for sustainable development.

Sudarshan ,Prof .R..G.Sridhar and K. Arun Jyothi³² (2004).

Consumer involvement refers to the intensity of interest with which consumers approach the market place. It is related to the consumer's values and self-concept, which influences the degree of personal importance ascribed to a product or situation. Consumer involvement varies across different individuals, products, brands and situations. Today, the manufacturers are facing severe competition in marketing their goods and services. As such, there is the need to understand the impact of consumer involvement in buying decisions. A thorough knowledge of various factors that influence the involvement level of the consumers is also needed; the purpose of this paper is to discuss the conceptual framework regarding the impact of consumer involvement on buying decisions.

Sudharshan Prof. R.G Sridhar and K. Arun Jyothi³³ (2004).

Advertising is any paid form of non – personal presentation and promotion of ideas, goods, or services by an identified sponsor. The purpose of advertising is to bring the advertised and its features and uses to the notice of the consumers. It also serves a number of other allied objectives which include creation of image and goodwill of the firm, explaining the various uses of goods and services to the customers; enabling the producer to face competition, removal of doubts and reminding the users to buy the products/services and maintenance of scale demand. The purpose of this paper is to present a conceptual framework regarding socio, cultural, and psychographic dimensions of advertising.

Mitchell J. Lovett and Jason B. MacDonald³⁴, (2005).

In this article, the authors provide a dynamic framework for understanding the relationship between marketing and financial performance. They suggest that firms market to financial markets as well as to consumption markets and that some mixture

provides superior long-term performance. The authors discuss the potential pitfalls of overemphasizing one market to the detriment of another and then provide a theoretical model of the factors that influence the extent of marketing to financial markets. This is followed by a discussion of implications for theory, practice, and future research.

Ganguly P.³⁵ (2005), Positioning is not what you do to a product. Positioning is what you do to the mind of the prospect .The purpose of positioning is to create a distinct position or place for a particular brand in the minds of the target market so that it stands apart from competing brands.

The objectives of this paper

- a) To know by means of perceptual maps, how to target customers perceive one brand vis-à-vis other brands.
- b) To understand how brands are positioned in relation to relevant attributes.
- c) To find ‘gaps ‘or ‘holes ‘for potential opportunities of launching a new product.

To check whether marketing communications have been successful in placing the brand in the desired position.

Ferrel ³⁶, (2005) , the product is the core of the marketing mix strategy in which retailers can offer consumers symbolic and experiential attributes to differentiate products from competitors . It also concerned with what the product means to the consumers. Product is about quality, design, features, brand name and sizes. Many attributes of a company’s products, including brand name, quality, newness and complexity can affect consumer behavior. The physical appearance of the product, packaging and labeling information can also influence whether consumer notice a product in store examine it & purchase it.

Lilien, G.L, Kotter, P and Murthy, K.S (2005)³⁷, “Marketing Models”, Prentice Hall, New Delhi, Lilien et al. 57 prescribe certain techniques of environmental scanning and analysis, which are listed below:

- i) Mathematical Model: A model may be linear or nonlinear.
- ii) Dynamistic: A model may be dynamic if it deals with a flow of efforts and effects over time.
- iii) Degree of Uncertainty: Depending on whether the variables involved in the model are known with certainty or with probabilistic distribution.

iv) Level of aggregation: Either individual response may be modelled first and then the aggregation may be installed or the aggregate model may be used directly. Level of demand: This model may be developed at brand level or at product level or at the level of product class.

Kotler & Armstrong³⁸(2006), defines a product as anything that can be offered to a market for attention, acquisition, use or consumption that might satisfy a want or need. They further define a consumer product as the product bought by the final consumer for personal consumption. The Marketing Mix is the set of marketing tools a firm utilizes to purchase its marketing objectives in the target market. . When a store marker it's products, it need to create a successful mix of the right product, sold at the right place, in the right place and using the most suitable promotion.

David, Fred R³⁹ (2007), “Strategic Management concepts and cases”, 11th edition, Prentice Hall of India, New Delhi, pp- 5.

David points out that strategic planning as the art and science of formulating, implementing and evaluating cross-functional decisions that enable an organisation to achieve its objectives. It focusses on integrating management, marketing, finance/accounting, production, operations, research and development, and computer information systems to achieve organisational success. More preciously, strategic market planning is the managerial process that entails analysis, formulation, and evaluation of strategy and that enables an organisation to achieve its objectives by developing and maintaining a strategic fit between the organization's capabilities and the threats and opportunities arising from its changing environment.

The concepts of Smith, Borden, Kotler, Green, and Levitt continue⁴⁰ (2007) To inform marketing education and research. Their ideas about market segmentation, the marketing mix, marketing for non businesses, market research, and globalization are embedded in business practice. Along with subsequent conceptual advances in marketing, such as customer relationship management, customer satisfaction, and brand equity, their work has helped establish a rich body of theory and empirical knowledge.

In practice, marketing has proved its value in many different settings, including public and nonprofit arenas. At the same time, it is clear that marketing research so far has uncovered no immutable laws. It remains as much art as science. Within firms, a perennial problem has been the difficulty of measuring the impact of marketing activities on firm profits and shareholder value.

Vincent Nithila,⁴¹ (2006), 'Brand', 'Brand Name', 'Brand Equity', 'Brand Loyalty' are forces or terms that affects a business. Product features can be easily copied; therefore brands are considered a marketer's tool for creating product differentiation. Brands differentiate products and represent a promise of value. Brands incite beliefs, evoke emotions, and prompt behaviour. People buy products, but which products they buy and how they make a buying decision have a lot to do with how they feel about the brand. Products are what the company makes, what the customer buys is a brand. Brands work by facilitating and making more effective the consumer's choice process. Brands have a social and emotional value for the users. Authors conclude that, consumers expect to pay lower prices for unbranded products or for those with low brand equities. On the other hand, they are ready to pay a premium for their favourite or socially valued brands.

Dr. M. Chandrasekar, Dr.K.S. Senthil⁴² (2007).

Sales promotion in India is often related to discounts, coupons, exchange schemes etc. Many a time a company does more than what is possible. In such cases, innovations in the promotional front come into being. One such possibility is Joint promotions. When any sales promotion scheme, either for trade or consumer is announced by more than one company and or more than one brand of the same company, it is referred to as joint sales promotion or horizontal co-operative sales promotion or cross promotion or umbrella sales promotion. Sales promotional arrangements between one or more retailers or manufacturers are known as promotional tie-ins. Authors explains that Tie-ins are used to combine resources of the business to promote products from all businesses involved. Joint promotions are one of the oldest marketing tools that companies employ to push sales.

William C. Kolberg⁴³, (2007), this paper develops a positive analysis of non-price competition in the context of setting price, advertising and product development budgets by firms. In the process, first the relationship between advertising and product development is explored. Then the relationship between these and price is addressed. The analysis is done in the context of a profit-maximizing firm with price, advertising, and product development

budgets as decision variables affecting its own and rival's demands. The analysis is built upon the use of "sales isoquants", and marketing effort budgets used in deriving the firm's "sales expansion path". Finally, a profit maximizing rule for optimal marketing effort expenditures is derived which is shown to be a generalization of the Dorfman-Steiner rule.

Kamalaveni ,Dr.D.K. Rajalakshmi and Kalaiselvi S ⁴⁴(2008).

Marketing starts with the determination of consumers wants and ends with the satisfaction of those wants. Every company must be organized totally around the marketing function, anticipating, stimulating and meeting customer's requirements. Advertising in India has grown in a spectacular manner throughout the last two decades and has scaled new peaks during the last ten years in terms of size, range and quality. Over the years, there has also been a substantial expansion in the media. Everything the purchaser gets in exchange for his money is the product. Product has its personality. Four elements surround the product concept viz., branding, packing and labeling product warranty and service. Branding is an essential part of marketing sub-function of selling. Every manufacturer feels the need of identifying his goods with some definite symbol, mark or slogan, so that his goods catch the attention of the customers. Branding is invariably used to introduce Product differentiation in the market, to single out a product from its rivals.

“Sutrisno Hadi Putnomo and Yi- Hsuan Lee⁴⁵”(Research paper- Journal of development and Agriculture Economics , Research paper – “ Why is understanding Customers attitude towards 4P'S Marketing Mix important? ,Volume- 2(4) , PP – 107-104 , April 2010.

In this article the author describe the marketing strategies, how to evaluate the customers' attitude towards marketing mix among distinct market segment and also to examine the influence of customer attitude towards marketing mix to understand customer's need, value and behavior associated with the product can help the marketers to develop segments around brand loyalty, price sensitive respondents. It provides guidance for management to investigate deeply the customers understanding preferences and perceptions, also for practitioners dealing with operational marketing issues. This research paper also stresses the positive correlation between type and the size of customer.

This research paper gives the suggestion to the managers to investigate the customers understanding preferences and perceptions. Similarly understanding consumer's need, value and behavior associated with the product can help the marketers to develop segments around brand loyalty, price sensitive. To understand customer's attitude of marketing mix was really important. Many literatures indicated that one of the advantages of this was to design the marketing mix strategy. The main purposes of this study were, first, to evaluate the customer's attitude toward marketing mix among distinct market segments of livestock input industry, and second, to examine the influence of demographic variables on customer attitude toward marketing mix.

Bahaman Hajipour⁴⁶(European Journal of Economics ,Finance and Administrative Science), 2010.

In this research paper the relationship between three dimensions of the market launch strategy for new product- order of entry, scale of entry and product positioning and dimensions of performance and firm competitive position, customer satisfaction and profitability. Higher customer satisfaction which, in turn, do increase profitability .The firms with strong marketing abilities do not need to accept risk resulted from their being pioneer in new market and they can have better results when entered market as entrant.

Tanmay Chattopadhyay, Sharaddha Shivani & Mahesh Krishnana⁴⁷,”Approaches to Measurement of Brand Equity” (2010).

This study develops and empirically tests a model for determining the determinants and effects of brand equity for the Indian Market. This article reviews the various approaches to defining and Measuring Brand Equity. It analyses the diverse views regarding the set of attributes relevant for measurement of Brand equity. Existing measures of brand equity have been classified into three categories for the discussion in the paper. One set of measures are those focusing on outcome of Brand Equity at the product market level, the second category is that of measures related to customer mindset while the third set is based on measurement of financial parameters. The paper presents a comprehensive review of the work done by various researchers over the last few decades. It analyses the merits and limitations of the different types of measures. Based on the above analysis and

observations made by experts in related literature the authors suggest the scope for further research in the discipline.

Bernd Elser, Udo Jung, Yves Willers ⁴⁸(2010)“Opportunities in Chemical Distribution”.

This research paper focusing on the role of chemical distribution sector and on the “go-to-market” approaches of chemical producers. The study highlights the opportunities available through closer cooperation and partnerships among chemical producers, third party distributors and customers, as well as the importance of taking a strategic rather than an operational approach to chemical products distributions.

Mr. Suhas Lohakare⁴⁹, (Chem. News), 2010.

This article focuses on the growth of chemical industries, demand for the chemical products and innovation of the chemical products and use of the resource more efficiently. Chemical products and technologies are used in every area of world economy. As the global economy grows, it increases the demand for the chemical industry’s products, this growth drives product innovation and the industry creates new products every year while striving to improve production process and use resources more efficiently. This paper makes an attempt to determine the size of the chemical industry and various segments in which the company operate in like Basic chemicals, Speciality chemicals and Knowledge chemicals in India

Shruti Tripathi,⁵⁰ (2010), Basic Chemical Industry of India, has key linkage with several other industries . The chemical industry is diverse and heterogeneous comprising several sector that are largely unrelated to one other. The key sectors that make up the industries are – Petrochemicals, Inorganic chemicals, Organic chemicals, Fine Chemicals & Agrochemicals.

Lohana Sarika,⁵¹ “ To study of Marketing strategy adopted by Syngenta India Ltd and it’s impact on consumer buying behaviour ” , IJRFM, Volume 1, Issue 6 , 2011

This research paper investigates the relationship between, Marketing strategy and impact on consumer buying behavior. The finding shows that the product and place has an impact on consumer motives. The product and place strategies influence consumer

buying behavior. The finding suggests that consumers look for product characteristics and store location when buying the products.

Dr. P Vikkram,⁵² Journal of Contemporary Research in Management, July - September, 2011 “Impact of Advertising and Price Promotions on Brand Equity in Service Sector”.

The marketing communication tool may provide the means for developing strong customer based brand equity. Among the marketing communication tools advertising and price promotion have always played a pivotal role. Prior research suggests that consumer search behavior is likely to be different across product categories. Hence, this paper examines the effect of perceived advertising spending and price promotion on brand equity across experience goods/services. Bank, Fast Food Restaurants, Mobile Service Provider were chosen as experience products, since their quality is difficult to judge before use. According to the analytic results of this study, it was found that advertising has an impact on brand equity for experience product. Though respondents are aware of the various price promotion tactic followed by brands, it does not impact their judgement on quality.

Dr. Mihaela Moisa,⁵³ “Achieving performances through a specific Marketing Mix in B2B & B2C Arena”

In this research paper adapting the marketing mix to the characteristics of the field has the decisive role to create long term partnership with companies clients and creating the favorable field for sustainable development. Also the strategic decisions taken by marketers on 4p's , decide the commercial fate of the product brand involved, right price through pricing research and by adopting the test market technique , develop a strong bond of channel of distribution between manufacturer and the customer.

Neil H Borden⁵⁴, “The Concept of the Marketing Mix”

In this research paper the combination of marketing procedures and policies has been adopted to bring about desired behavior of trade and customer at costs that will permit a profit. The manager has to take his own decision regarding 4p's as well as packaging,

servicing, physical handling, fact finding and analysis, the concept of Marketing Mix, Borden puts advertising as the central element of the total marketing program in a corporation (Borden 1984). In other words, the advertising which is the fundamental element of marketing program, is really important to the company in order for them to gain a profitable business position. Moreover, since the market is really competitive these days, the way the company market the product or its brand shows what the differences are between the company itself and its competitors. The objective of Borden's article is to specified the marketing mix elements which help the businesses to have a profitable position as well as defined the strategy of marketing have been used by the manager to bring profit into the corporation in any conditions and what is the combination of marketing procedures and policies has been adopted at such cost that will bring profit. Furthermore, Borden also highlighted specifically, how advertising, personal selling, pricing, warehousing, and other elements of marketing program can be mixed together and can bring profit into the company. Borden thinks that every company should consider using promotion and advertising management as their strategy of the total marketing program. This thinking is supported by the case histories which written in his other journal, which described how business should utilise advertising. He also mentioned that there are lots of combinations of marketing strategies and methods to be adopted by the marketing management of a company in order to put the company in the profitable position. For example, while using branding.

2(b) Self-published Research paper:

1. “Application of Marketing Mix strategies in B2B & B2C area for business succession” By Dilip Aher (self-research paper) (IJMIE-Vol-4, Issue-4, April, 2014)

Companies that are doing affairs in business to business field has to adapt marketing mix variables in order to succeed, trying to build a long term relationship with the client, companies acting in this area are using specific characteristics for the 4p’s.

- Product in more a solution defines as a precise response to the client need.
- Price becomes an important variable when brands are technologically equal.
- Promotion differs from a client to another and has the best results when the characteristics of the client are well known.
- Placement in B2B & B2C area, distribution is mostly done or through mediator. In B2B area adopting the marketing mix to the characteristics of the field has the decisive role to create long term partnership with companies’ clients and in fact creating the favorable field foe suitable development.

2. “A Study of Marketing Mix strategies with special reference to Perfumery products in Pune city”: By Dilip Aher(self-research paper) (IJIRP- Vol- 2, No-2, Apr.2014)

For any profit or non-profit organization, marketing acts as a soul. In order to deliver product and values to the prospects, organizations put their immense efforts in marketing function. “Marketing mix” is one of the core concepts of marketing. In today’s scenario, “the marketing mix strategy” determines the fate of any organization or firm. Brands like Adidas, Woodland, Louis Philippe, Ray Ban etc. have overshadowed other competitors because of their marketing mix strategy. Today’s youth is more concern about their appearance. They adopt various trends to highlight their presence in public. Perfumery products are one of tools today’s public use abundantly to show the exceptional appearance. Deodorants, now a days are widely used throughout the world. If

we take India into consideration, these various deodorant brands like Fogg, Wet-set, Yardly, Signature, Park Avenue, KS etc. have remained successful to project & establish themselves. In order to know what had made them so successful and how they have remained successful to penetrate every market in country- right from rural to urban it is very much important to know their marketing mix strategy. For that we have studied various “deodorant brands”, the retailers of these brands and this has unveiled the “marketing mix strategy of perfumery products- deodorants more succinctly in Pune city.

3. “A Study of Marketing Mix Strategies With Reference to Chemical industries in Pune District”: By Dr. Sudhir Rashingkar & Dilip Aher (IJRFM- Vol-6,Issue-1, January,2016)

The study has produced a number of valuable findings, which have far reaching implications for policy decisions of the chemical companies, both Indian and multinational, in the areas of marketing management in general and promotional strategies in particular, but the outcomes of the study will have a significant effect on all the major speciality chemical firms operating in India. This is because the operational systems of chemical industry firms in India are almost the same, especially with regard to the promotional expenditures they are incurring for improving their sales value, profitability and growth. Chemical industry should increasingly focus on marketing and promotion to achieve more shares in national as well as international chemical trade. The industry may endeavor to concentrate more on use of brand building, export promotion and market development.

2 (c) Research book Review:

1. Marketing in the Twenty –First Century – By Smith, Borden, Green

In this book ideas about market segmentation, the marketing mix, and market for non-businesses, market research and globalization are given in business practice.

Along with subsequent conceptual advances in marketing, such as consumer relationship management, customer satisfaction & brand equity.

In actual practice marketing has proved its value in different ways including public and non-profits areas.

2. Marketing Management - Philip Kotlar

In this book marketing mix strategies studies, out of which marketing create a unique identity, promote a message, attract audiences and influence desired behaviour to purchase the product.

In the market segmentation product sale is depends upon the geographic as well as demographic nature. It is the manufacturer's responsibility to select the proper segmentation to sale the product, for the proper market research is very important.

Also the proper study of the 4p's i.e – product, price, place and promotion is very important.

3. Working group on Indian Chemical Industry-

Information collected from this Magazine such as –

- a) State wise share in production of major chemicals.
- b) Indian chemical market segment wise market value-
 - Basic Chemicals,
 - Specialty Chemicals,
 - Fine chemicals etc.
- c) Key concerns of the Industry –
 - Input costs
 - Infrastructure
 - Labour Laws

d) International Conventions – related to protection of Environment, Health and Safety while handling the chemicals. Also for exporter of chemical products will require to register their product with European Chemical Agency by providing Chemical Safety Report (CSR) of products to be exported.

4. Collaboration: A new Mantra for Chemical Industry Growth-

Information collected from this Magazine such as –

As both manufacturers and their customers seek to address volatility and improve value. Most chemical companies have moved to optimize their supplier and interfaces independently of one another. By collaborating across the value chain, chemical companies can realize untapped value quickly and build a growing competitive advantage.

In A.T. Kearney's 2012 Chemical Customer Connectivity Index (C3X) study of recent and future developments in the chemicals market, one major theme stands out: collaboration. Respondents in this year's study make it clear that chemical manufacturers must exploit the benefits of supplier-customer collaboration across the entire value chain.

For the sixth time since 2008, the C3X assesses the chemical industry from the vantage point of executives from both chemical companies and the companies that purchase products from them. This paper discusses the study findings, including the market's evolution over the past year and the effects of volatility on the industry.

Collaboration: A Path to Growth

Collaboration has become a new mantra for growth in the chemical industry, as both manufacturers and their customers seek to address volatility and improve value. So far, most chemical companies have moved to optimize their supplier and customer interfaces independently of one another, but they can do more. By collaborating across the value chain, chemical companies can realize untapped value quickly and build a growing competitive advantage.

5. Basic Chemical Industry of India: An Analysis – By Shruti Tripathi

The Indian chemical industry is an integral component of the Indian Economy. It touches our lives in many different ways. Whether it is thermoplastic furniture we use, or a synthetic garment we wear, or a drug we consume, we are inextricably linked to it. The industry is a vital part of the agricultural and industrial development in India and has key linkages with several other industries such as automotive, consumer durables, engineering, food processing, etc. The chemicals industry is diverse and heterogeneous comprising several sectors that are largely unrelated to one another.

The key sectors that make up the industry are:

- Petrochemicals
- Inorganic chemicals
- Organic chemicals
- Fine and specialties
- Agrochemicals

The above-mentioned key sectors cover around 70,000 commercial products and around 6800 firms. While for some chemical products, industry is knowledge based, for other

Chemical products it requires huge capital and efficient and uninterrupted power for production. The chemical sector accounts for about 17.6% in the output of manufacturing sector, 13-14% in total exports and 8-9% in total imports of the country. It contributes around 3% in the GDP. Its contribution in the total national revenue is about 18-20% of total collection by way of taxes.

6. Indian Chemical Industry: Five year plan – 2012-2017

Information collected from these magazines such as –

- a) Overview of Indian Chemical Industry
- b) Global Scenario of the Chemical Industry.
- c) Segment wise Chemical Industry.
- d) Competitiveness of Indian Chemical industry.
- e) Performance of Chemical industry.
- F) Policy adapted by the government to achieve the ambitious targets set for the chemical industry.

7. Handbook on Indian Chemical Industry (India Chem. 2010)

Information collected from these magazines such as –

- a) Chemical Industry and their Classification.
- b) Basic Organic Chemical Industry report.
- c) Speciality Chemical Industry report.
- d) Merger and Acquisition opportunities in Chemical industry.

Strong end use industry demand is expected to boost growth for the Indian chemical Companies, both domestic & multinational. Increasing local production requires global competitiveness to withstand imports as well as for exports of surplus. Key success factors needed are feedstock cost & availability, value chain access, technology, capital investment, presence of strong local players as well as access to a rapidly growing large domestic market. India is today seen as a growth market for many western companies. Domestic companies have built significant assets and have the opportunity to leverage them and will need to strengthen them further to withstand global competition.

2(d) Chemical Magazines:

1. Indian Chemical Industry: Current status – By S.R Lohokare (M.D National Peroxide Ltd.)

In this magazines information collected –

- a) Segment wise size of chemical industries
- b) The characteristics of the Indian Chemical industry
- c) Product wise production of major chemicals.
- d) Total import & export of the major chemicals.

2. Chemical Industry overview-

In this magazines information collected –

- a) Chemical industry structure
- b) Foreign trade
- c) Global Scenario
- d) Licensing policy
- e) Custom Duty
- f) Excise duty
- g) Group wise export & import of chemicals
- h) Leading chemical units in India

3. Opportunities in Chemical Distribution –

In this magazines information collected –

- a) Challenges for Distribution in the Chemical industry
- b) The chemical producers and how they distribute
- c) The chemical distribution sector –how it is evolving
- d) The customer and what they want
- e) Winning distribution models and how to build them

4. Chemical industry in India : Interesting facts

In this magazines information collected –

- a) Facts of Indian Chemical Industry-
 - Total export
 - Industrial output
 - Growth per annum
 - Global chemical industry
- b) Indian Petrochemical, organic chemical, pharmaceuticals, agro chemicals, Dyes & intermediates, Speciality chemicals.
- c) Foreign Investment in India in recent years.

5. Industrial , Investment and Infrastructure policy of Maharashtra

In this magazines information collected –

- a) Maharashtra: The preferred industrial investment destination.
- b) Maharashtra government policies & objectives
- c) Infrastructure and communication : the growth Engines
- d) Promotion and Financial Incentives
- e) Cluster approach for development.
- f) Sick units: Revival and exit
- g) New Industrial Township.
- h) Special Economical zones.
- i) International Exhibition Centers.
- j) HR Initiatives
- k) Labour Laws and procedures.
- l) Promotion of Foreign Direct Investment.

Chapter No.2.1

Chemical Industry: An overview

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Chapter No.2.1

Chemical Industry: An Overview

2.1.1 Introduction:

Chemical Industry is one in all the oldest industries that has contributed considerably to the commercial and economic process of Asian country. it's calculable that the dimensions of the Indian chemical industry are around US\$ thirty-five billion and third of India's gross domestic product, Volume of production by industry positions Asian country as third largest producer in Asia (next to China and Japan) and twelfth largest within the world. The business, comprising each small scale and huge units (including MNCs), produces many thousands of merchandise and bi-products, starting from plastics, petrochemicals to cosmetics.

(Source: Export-Import Bank of India, Indian Chemical Industry: A sector study)

With Asia's growing contribution to the world industry, India emerges mutually of the main focus destinations for chemical corporations worldwide attributable to high domestic demand, vital data pool and favourable demographic dividend. The Indian chemical industry, calculable to be \$108 billion, is at the brink of accelerated growth. Indian Chemical sector ranks twelfth within the world and third within the Asia. It is additionally one among the biggest industrial sectors within the Indian economy and a crucial employment generator.

(Source: Indian Chemical Industry: Five year plan -2012-2017)

The Indian chemical industry contains small and large-scale unit, and presently, there square measure concerning 40,000 chemical producing units situated within the country out of that concerning eightieth square measure coated within the small scale sector. This sector provides employment to concerning 3.3 million peoples. There are not any quantitative or different restrictions on the import of chemicals apart from few chemicals that square measure coated underneath the obligations as per International Conventions. Indian chemical industry exports dyes, pesticides and specialty chemicals to the industrialized world and to the unindustrialized countries that kind concerning third share within the international market and contributes considerably to the interchange basket of the country. The business enterprise concessions granted to small scale sector in eighties crystal rectifier to the institution of an oversized range of units within the small scale

Industries (SSI) sector. The industry is among the foremost distributed industrial sectors and includes basic chemicals and its merchandise, petrochemicals, fertilisers, paints, dyes, etc. the arena covers over 70,000 business merchandise, and provides the feedstock to several downstream industries like finished medication, dyestuffs, paper, rubber, plastics, polyester, paints, pesticides, fertilisers and detergents. Over the years, the business has been evolving with a shift towards product innovation, complete building and atmosphere friendliness besides client focus gaining significance within the business.

(Source: Chemical News, July, 2010)

2.1.2 Chemical Industry structure & Present status:

The industry will be generally classified into two segments – Organic and Inorganic chemicals. Organic chemicals cover petrochemicals, drugs, cosmetics, agrochemicals, etc. Inorganic chemicals encompass alkalis, dyes and dyestuffs supported an additional purposeful classification, chemicals will be divided into Basic, Specialty and Knowledge chemicals.

The Indian industry is one in every of the oldest industries in India and contributes significantly to the industrial and economical growth of India. it's therefore a vital constituent of Indian economy. Its size is calculable at US \$ thirty-five billion by the department of Chemical and organic compound that may be a part of the ministry of Chemical and Fertilizers.

The Indian chemical industry is hierarchical twelfth largest in terms of volume and third largest in Asia. Since liberation the Indian Chemical industry has evolved from being a basic chemical producer to changing into associate innovative industry. With investment in R&D, the business is registering important growth within the chemical sector comprising of Speciality chemicals, Fine chemicals and prescribed drugs, it's one in every of the foremost wide-ranging of all industrial sectors giving over 70,000 merchandise.

Chemical industry is one in every of the oldest industries in Asian nation. it's calculable that the dimensions of Indian industry are around US\$ thirty five billion. Volume of production in industry positions Asian nation as third largest producer in Asia (next to China and Japan), and twelfth largest within the world. The business, comprising each small scale and large units (including MNCs) produces many

thousands of merchandise and bi-products, starting from plastics and petro-chemicals to cosmetics. The industry accounts for regarding 13% share within the producing output and 4.3% in total exports of the country. The industry contributes around 20% of national revenue by approach of varied taxes and levies. (Source: *Indian Chemical Industry: XIIth five year plan*)

2.1.3 Major Segments of the Indian Chemical Industry:

The Chemical industry has three key segments and many smaller segments, they are:

1. Basic Chemicals: (Commodity chemicals)

1.1 Inorganic Chemicals

1.2 Petrochemicals

1.3 Fertilizers

1.4 Organic chemicals

And other chemical intermediates, plastic resins, synthetic rubber, man-made fibres, and printing inks.

2. Specialty chemicals : (Performance chemicals)

2.1 Paints and varnishes

2.2 Textile Chemicals

2.3 Dyestuffs and Intermediates

2.4 Catalysts

2.5 Plastic Additions

2.6 Adhesive sealants

India's specialty chemicals industry, which is valued at \$25 billion, could well be the next big theme in FY17, The industry brought 13 per cent growth over the past five years led by domestic consumption.

3. Knowledge Chemicals:

3.1 Pharmaceuticals

3.2 Biotechnology

3.3 Agrochemicals

An estimated market size break-up is as under:

Table 2.1(a) Segment wise Market Value:

Segment	Market Value (Billion USD)	% Share
Basic Chemicals	20.00	57
Speciality Chemicals	9.00	26
Knowledge Chemicals	6.00	17
Total	35.00	100.0

(Source –1. KPMG Analysis report & Chemical News – July 2014)

2. Chemical News, July, 2014

3. Department of Chemicals and Petrochemicals.

As indicated by the above table, the basic chemicals segment is wealth intensive and large market value, which consumed more, has the highest share at 57%, and is characterised by high-volume, low-margin products. Specialty chemicals are low-volume and high-margin segments, which can be produced only for the specific products, that constitute 26% of share and the Knowledge chemicals which are having less market share & less profit margin , that constitute 17% of share produced market respectively.

Thus the chemical sector contributes to 5.03 % of India's GDP and 20.87% of the industrial sector by value and current market size is estimated at US\$ 35 bn,

(Source: Indian Chemical Industry: XIIth five year plan)

2.1.4 Production of major chemicals:

Table 2.1(b) Production of major chemicals

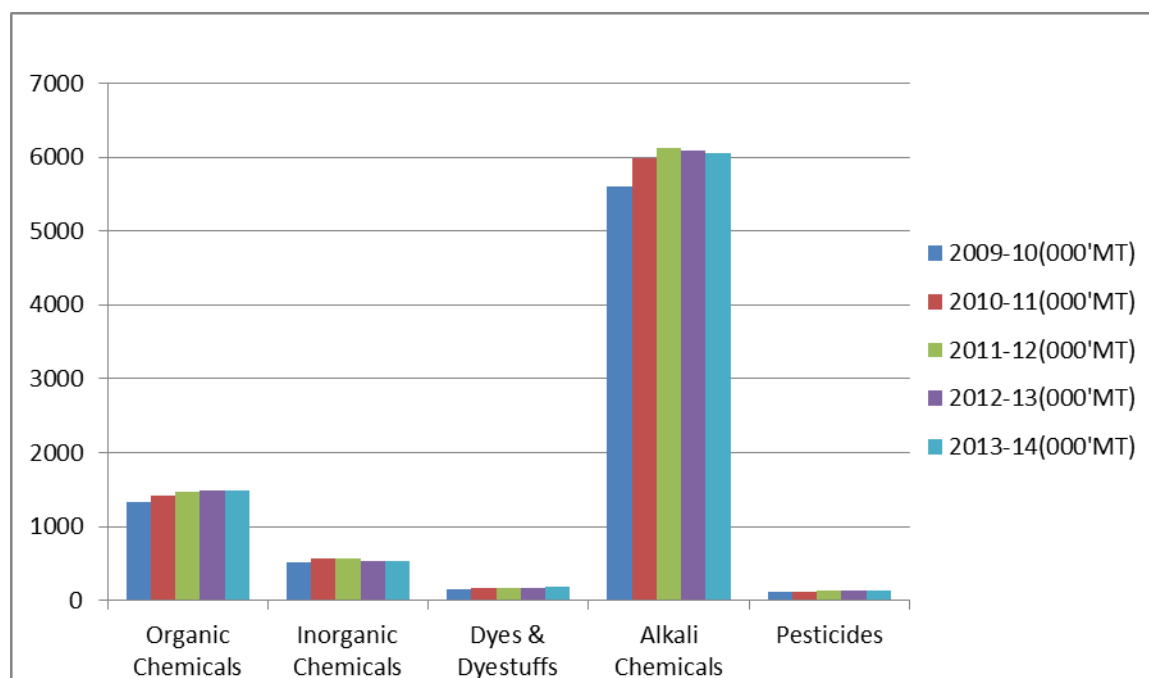
S. No	Major Chemicals	2009-10 (000'MT)	2010-11 (000'MT)	2011-12 (000'MT)	2012-13 (000'MT)	2013-14 (000'MT)
1	Organic chemicals	1325	1412	1464	1484	1490
2	Inorganic chemicals	518	572	574	533	535
3	Dyes & Dyestuffs	149	169	175	171	182
4	Alkali chemicals	5602	5981	6113	6081	6050
5	Pesticides	117	124	134	133	143

Source1: CMIE, Exim Research

Source 2: Chemical & Petrochemical statistics at a glance: 2013

Source 3: Department of Chemical and Petrochemicals, Aranca Research, 2015

Graph 2.1(a): Production of major chemicals



Source: Chemical & Petrochemical statistics at a glance: 2013

The production of Alkali Chemicals such as Caustic Soda, Caustic Lye, Caustic potash, Calcium Carbonate, Calcium hydroxide are higher since from last ten years, while the production of Pesticides are very low, farmers are less consumed the Pesticides, they prefers organic chemicals for farming as compare to Pesticides.

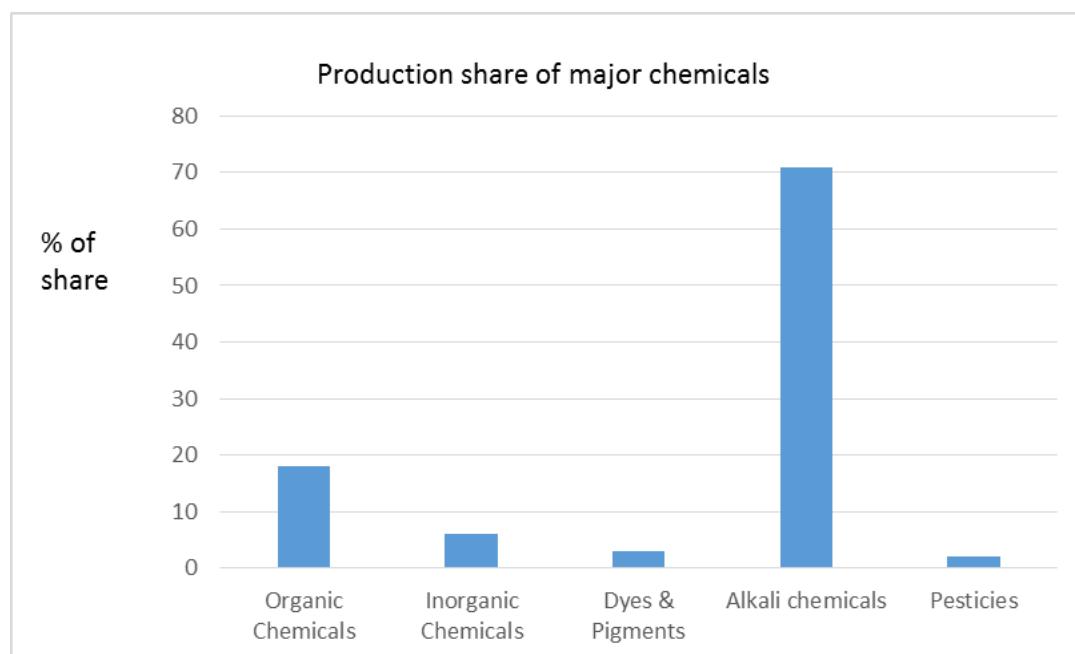
2.1.5 Percentage share of major chemicals:

Table 2.1(c) Percentage share of major chemicals

S. No	Major Chemicals	% of share
1	Organic chemicals	18
2	Inorganic chemicals	6
3	Dyes & Dyestuffs	3
4	Alkali chemicals	71
5	Pesticides	2

Source: Department of Chemical and Petrochemicals, Aranca Research, 2015

Graph 2.1(b) Percentage wise shares of major chemicals



Source: Department of Chemical and Petrochemicals, Aranca Research, 2015

The percentage share of Alkali Chemicals such as Caustic soda, Caustic lye the production are higher up to 71 %, Organic Chemicals such as rubber, plastic are 18%, Inorganic Chemicals are 6% , Dyes and Pigments such as textile industry products , are 3% and Pesticides are 2% , hence it can be see that Alkali Chemicals such as Sodium Hydroxide – Caustic soda, Caustic lye , Potassium Hydroxide – Caustic Potash , Calcium Carbonate, Calcium Hydroxide are produced more as compare to other Chemicals.

2.1.6 State wise production share of major Chemicals:

Table 2.1(d) State wise production share of major chemicals

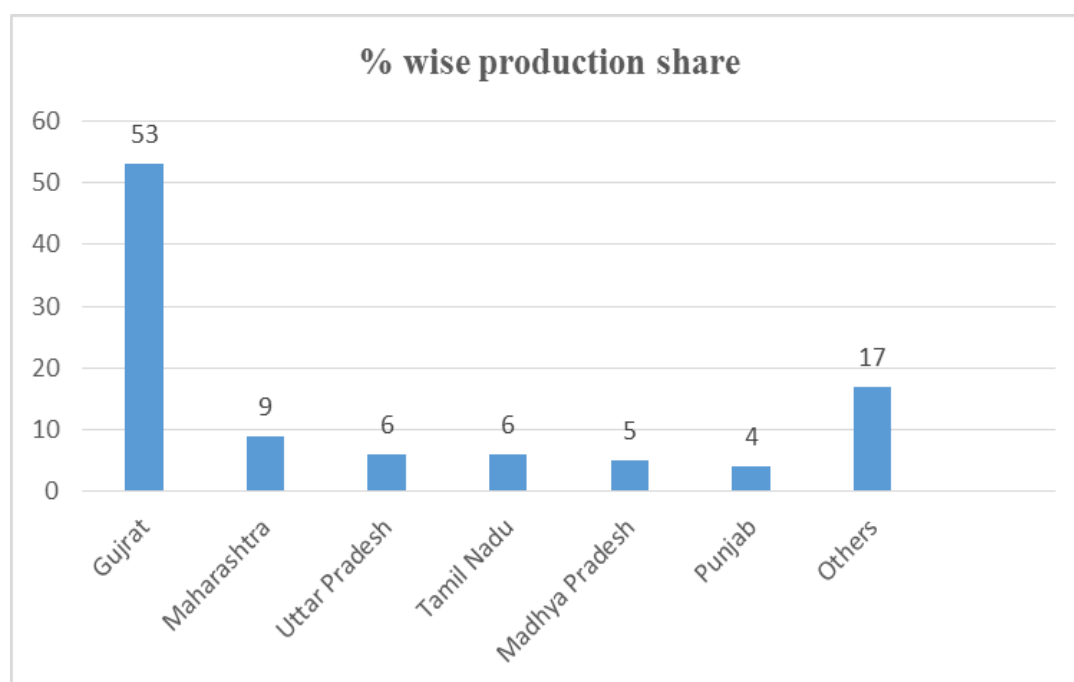
S. No	State wise share in production	% of Share
1	Gujarat	53 %
2	Maharashtra	9 %
3	Uttar Pradesh	6 %
4	Tamil Nadu	6 %
5	Madhya Pradesh	5 %
6	Punjab	4 %
7	Others	17 %

(Source-Chemical News - July, 2014)

Source- India-Chem, Tata Strategic Management Group

Source- Gujrat Manufacturing sector profile

Graph 2.1 (c) Percentage wise production share



Source- India-Chem, Tata Strategic Management Group

Source- Gujrat Manufacturing sector profile

Gujrat is the Chemical hub in India, Gujrat alone leads the production of major chemicals and petrochemicals and produces about 53 % share in all India. The second state leading state in terms of production of both major chemicals and petrochemicals

is Maharashtra which contributes 9.0 % share. The other major chemical and petrochemical producing states include Uttar Pradesh 6%, Tamil Nadu 6%, Punjab 4% and West Bengal 4% and other states are 17% are respectively.

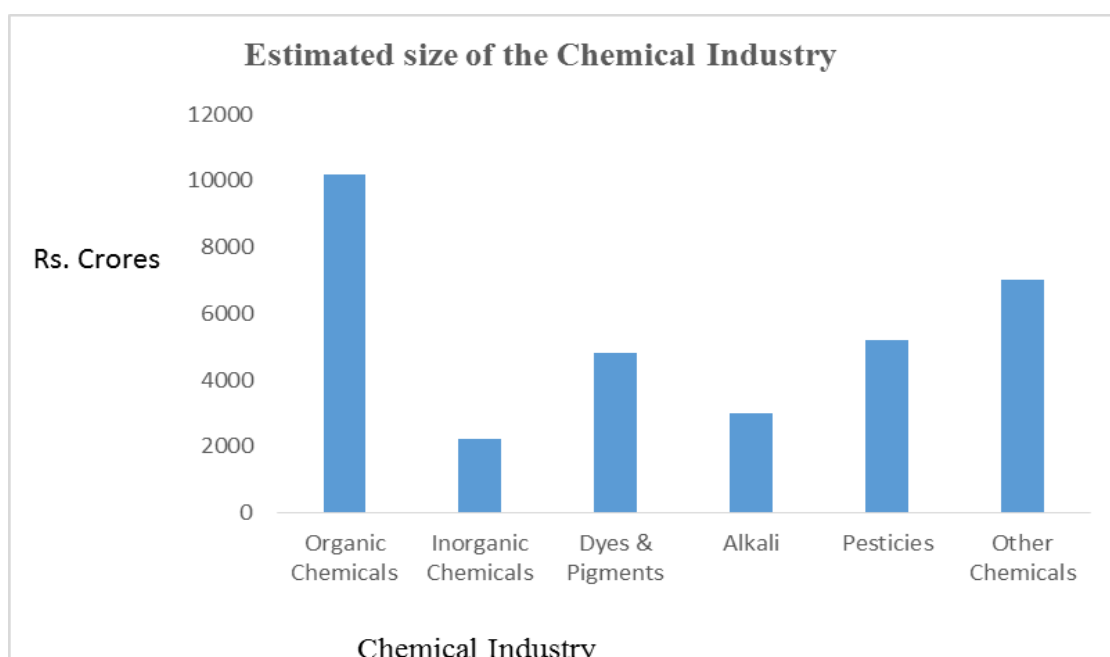
2.1.7 Estimate size of the Chemical Industry -

Table 2.1(e) Estimated size of the Chemical Industry

Item	Estimated Turnover(Rs. Crores)
Organic chemicals	10200
Pesticides	5200
Dyes and Pigments	4800
Alkalis	3000
Inorganic chemicals	2200
Other chemicals	7000
Total (above)	32400

Source: CMIE, Exim Research

Graph 2.1(d) Estimated size of the Chemical Industry



Source: CMIE, Exim Research

Above table it was observed that Estimated turnover of Organic Chemicals is higher than the other chemicals. The Organic Chemicals are produced in large quantity due to the high domestic demand, so profit are very high, while Inorganic Chemicals are having less estimated turnover.

2.1.8 Major Players in Indian Chemical Industry:

Table 2.1(f) Major Players in Indian Chemical Industry

S. No	Major Players in Indian Chemical Industry
1	Tata Chemicals, Mumbai
2	United Phosphorous Ltd, Mumbai
3	BASF India ltd, Mumbai
4	Galaxy Organic Ltd, Mumbai
5	Sudarshan Chemical Industries, Pune
6	Hindustan Organic Chemicals Ltd. Mumbai
7	Deepak Nitrite Ltd, Baroda & Pune
8	National Organics Chemicals Ltd, Mumbai
9	Rayalseema Chemcials, Hyderabad
10	Saurashtra Chemicals, Ahmedabad
11	Jubilant Organosys Ltd, New Delhi
12	Gujarat Heavy Chemicals Ltd, Ahmedabad
13	Colour Chemltd, Mumbai
14	DCM Sri Ram Consolidation ltd, New Delhi
15	Travancore Alkali & Chemicals Ltd,
16	Gujarat Alkalies and Chemicals, Ahmedabad
17	Colourtex, Ahmedabad
18	Monsantu chem. Ltd, Mumbai
19	Atul Ltd, Bhoisar
20	India Glycol Ltd, New Delhi
21	Galaxy orgnics ltd, Mumbai
22	ICI, Calcutta

Source: Company Annual Report, Aranca Research

2.1.9 International Players in Indian Chemical Industry:

Table 2.1(g) International Players in Indian Chemical Industry

International company	Sales (USD billion)	Products
BASF, Germany	101	Chemicals, plastics, nutrition products
The Dow chemicals, USA	58.1	Specialty chemicals, agrochemicals and plastics
Bayer	55.8	Agrochemicals, Pharmaceuticals, polymers
Akzo Nobel, Netherland	19.4	Coating, decorative paints and specialty chemicals
Evonik Industries	17.4	Specialty chemicals and fine chemicals
Lanxess	11.1	Plastics, rubber, specialty chemicals and intermediate
Wacker Mettoark, Germany	6.4	Silicon, polymer, specialty and fine chemicals
Mitsubishi Chemical Corporation, Japan	6.1	Specialty chemicals and fine chemicals
Dystar, Germany	5.6	Dyes, Dyestuffs and intermediate.
Rhodla, Belgium	3.9	Specialty chemicals and fine chemicals

Source: Company Annual Report, Aranca Research

2.1.10 India's Chemical export :

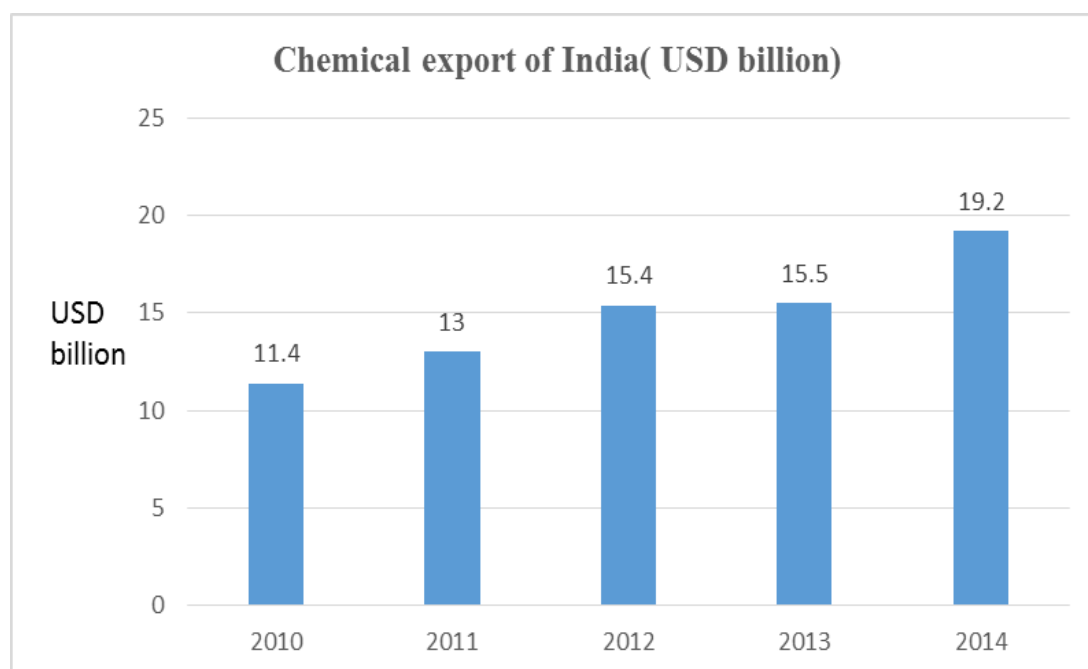
Total export of chemicals grew from USD 11.4 billion in FY 2010 to 19.2 billion in FY 2014, a Compound Annual Growth Rate (CAGR) of 16.9 per cent.

Table 2.1(h) India's Chemical export

S. No	Year	Export(USD billion)
1	2010	11.4
2	2011	13.0
3	2012	15.4
4	2013	15.5
5	2014	19.2

Source: Ministry of Commerce, Aranca Research

Graph 2.1(e) Chemical export of India



Source: Ministry of Commerce, Aranca Research

The export of Chemicals are continuously increasing from last five years, from 11.4 % in 2010 to 19.2 % up to 2014 , hence the compound annual growth rate (CAGR¹) is 16.9 % , and export up to US\$19.2 billion in 2014, but the export are very less as compare to import.

¹ CAGR- Compound Annual Growth Rate - means annual growth rate of an investment over a specified period of time longer than one year.

2.1.11 India's Chemical import (USD billion):

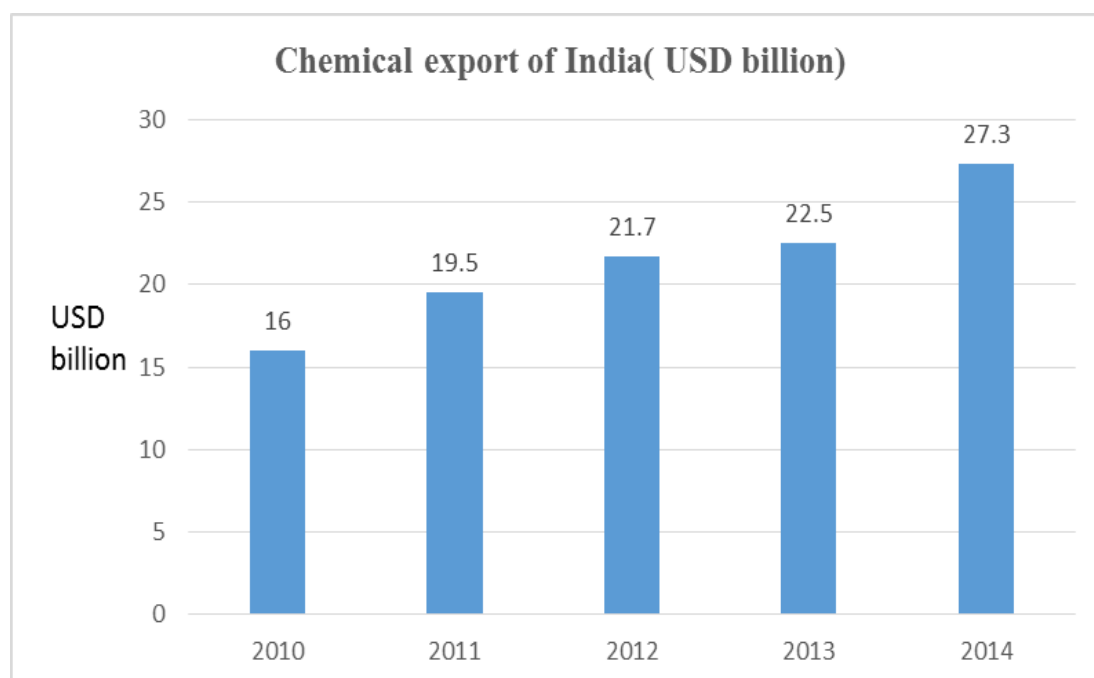
Total imports of chemicals grew from USD 16 billion in FY 2010 to 27.3 billion in FY 2014, a Compound Annual Growth Rate (CAGR) OF 19.8 per cent.

Table 2.1(i) India's chemical import

S. No	Year	Import(USD billion)
1	2010	16.0
2	2011	19.5
3	2012	21.7
4	2013	22.5
5	2014	27.3

Source: Ministry of Commerce, Aranca Research, 2015

Graph 2.1(f) Chemical imports of India



Source: Ministry of Commerce, Aranca Research, 2015

The imports of Chemicals are continuously increasing from last five years, from 16 % in 2010 to 27.3 % up to 2014, due to insufficient production capacity, low capital formation, which can feed only in house consumption, hence less focus on export and more dependent on import.

2.1.12 Shares in export of chemicals:

During FY 2014, Organic chemicals constituted 64 per cent of India's Total chemical export, followed by other chemicals at 16 per cent.

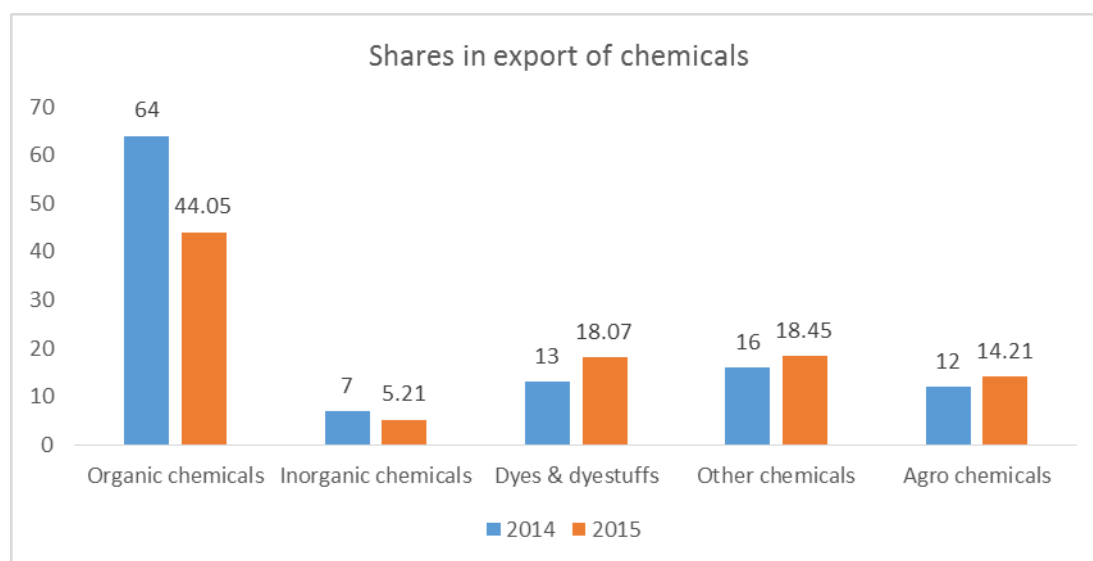
Table 2.1(j) Percentage wise of shares in export

S. No	Segments of Chemicals	% shares in Exports - 2014	% shares in Exports - 2015
1	Organic chemicals	64	44.05
2	Dyes & dyestuffs	13	18.07
3	Other chemicals	16	18.45
4	Inorganic chemicals	7	5.21
5	Agro Chemicals	12%	14.21

Source –1. Department of Chemicals and Petrochemicals, 2015

2. IBEF(Indian Brand Equity Foundation)

Graph 2.1(g) Percentage wise shares in export



Source – Department of Chemicals and Petrochemicals, 2015

In India major percentage wise share in export of Organic Chemicals Alcohol, Amides, Nitrites, Phenols, Ethers, Sulfur compounds is 64% in 2014, but in 2015 it was reduced up to 44.05% due to domestic demand and the in-house consumption of chemicals are higher, while Inorganic chemicals percentage wise share in export are only 7% in 2014, it was also decreases up to 5.21% in 2015 because of the above reasons, While Dyestuffs , Agro Chemicals export of 2015 is higher than 2014 , due to high production and less domestic demand and per capita consumption is less.

2.1.13 Shares in import of chemicals:

Organic chemicals dominate imports, with a share of 62 percent, followed by Inorganic chemicals at 18 per cent.

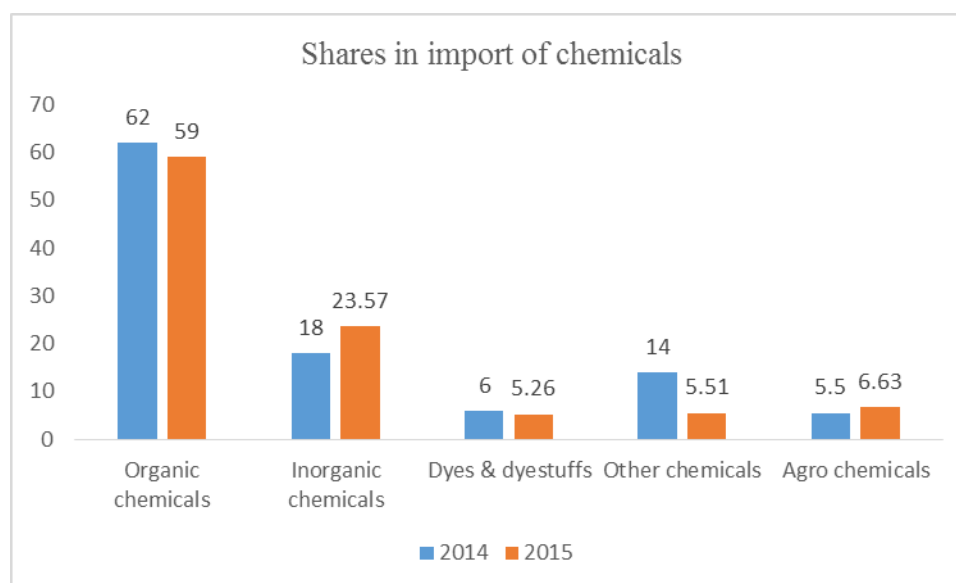
Table 2.1(k) Percentage wise shares in import

S. No	Segments of Chemicals	% shares in Imports-2014	% shares in Imports-2015
1	Organic chemicals	62	59.00
2	Dyes & dyestuffs	6	5.26
3	Other chemicals	14	5.51
4	Inorganic chemicals	18	23.57
5	Agro Chemicals	5.5	6.63

Source –1. Department of Chemicals and Petrochemicals, 2015

2. Ministry of Commerce, TechSci Research

Graph 2.1(h) Percentage wise shares in import



Source – Department of Chemicals and Petrochemicals, 2015

In India major percentage wise share in imports are Organic Chemicals, which is 62% which is higher than other chemicals, while Dyes and dyestuffs chemicals percentage wise share in import are only 6%, while Inorganic chemicals imports in 2014 was 18% and increases up to 23.57% it indicates the production capacity was low, in house consumption was more, hence fully depend up on imports.

2.1.14 Major Merger & Acquisition in the Indian chemical industry:

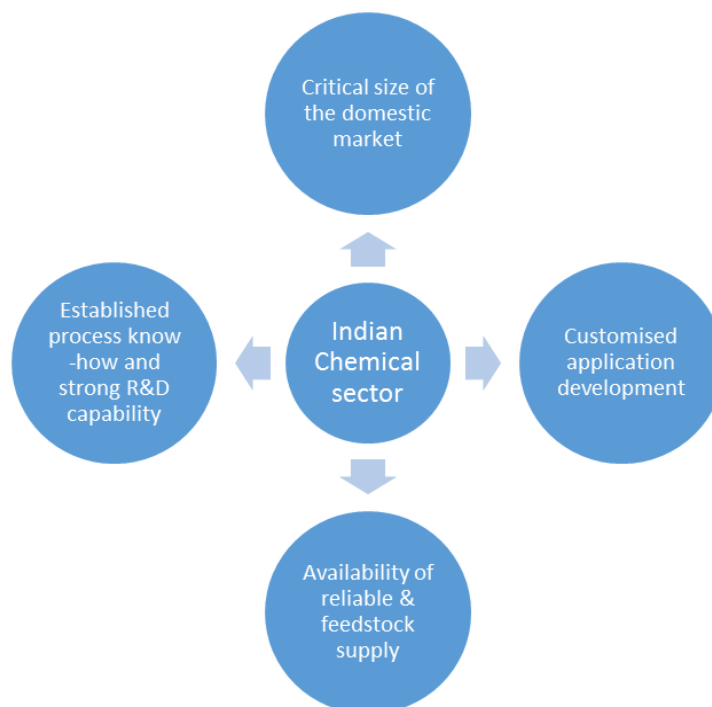
Table 2.1(I) Major Merger & Acquisition in the Indian chemical industry

Date	Acquire	Target Partner	JV	Valuation	Synergies/drivers
April, 14	Axiall LLC	Shriram Polytech Pvt. Ltd.	Vinyl	USD 6 million	Polymer compound
Sept, 2014	Brenntag	Pioma Chemicals Ltd,		NA	Specialty chemicals
April, 2014	Asian paints Ltd.	Kadisco Chemical Industry		NA	Coating & adhesives
October, 2013	Participaciones	Mahindra Composites		USD 2.03 million	Polymer composites
July, 2013	Kingfa Sci & Tech Co. Ltd.	Hydro S & S Industries		USD 1.92 million	Polypropylene compound
April, 2013	Exochem Ltd.	Anupam Rasayan India Ltd		NA	Specialty chemicals
June, 2011	BASF India	Cognis chemicals		USD 2.9 million	Specialty chemicals
April, 2011	Aditya Birla Group	Kaniria chemicals		USD 172 million	Caustic soda
April, 2011	Tata Chemicals	Gabon		USD 290 million	Potash reserves
April, 2011	Shanghai Baijin Chem.Group China	Indofil Industries Ltd		INR 5,000 crore	Specialty chemicals

Source: Department of Chemicals and Petro Chemicals, Aranca Research

2.1.15 Growth value proposition of the Indian Chemical Industry:

Diagram 2.1(a) Growth value proposition of the Indian Chemical Industry



Source: KPMG International, Aranca Research

The Growth value of Indian Chemical sector is depends up on:

1. Critical size of the domestic market:

Critical size of the company needs to reach in order to efficiently and competitively participate in the market, also a company must attain the growth effectively and focus on export.

2. Availability of reliable & feedstock supply:

Companies are more focus on the reliable and feedstock such as coal and natural gas, whole the production are depend up on the feedstock, if the feedstock is less then production is less and the feedstock is more, then the production is more, also price fluctuation is also affect on the cost of the product.

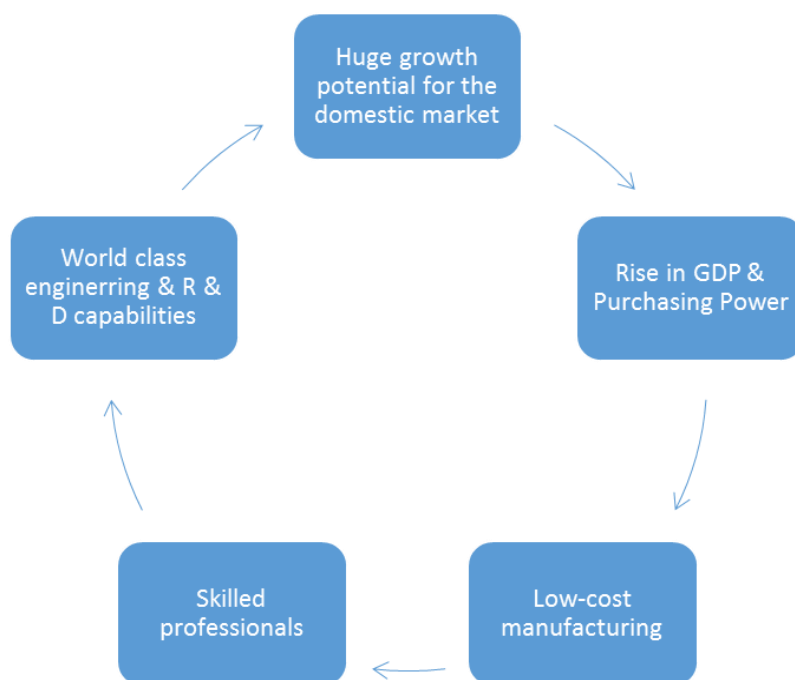
3. Established process know & strong R& D :

Research and development (R&D) consists of investigative activities and discovery that can either lead to the development of new products or procedures, or to improvement of existing products or procedures. Research and development is one of the means by which business can experience future growth by developing new

products or processes to improve and expand their operations and sustain in the market. Strong R& D and discovering new knowledge about product, processes, that fill the market need.

2.1.16 Growth drivers of the Indian Chemical Industry:

2.1(b) Growth drivers of the Indian Chemical Industry:



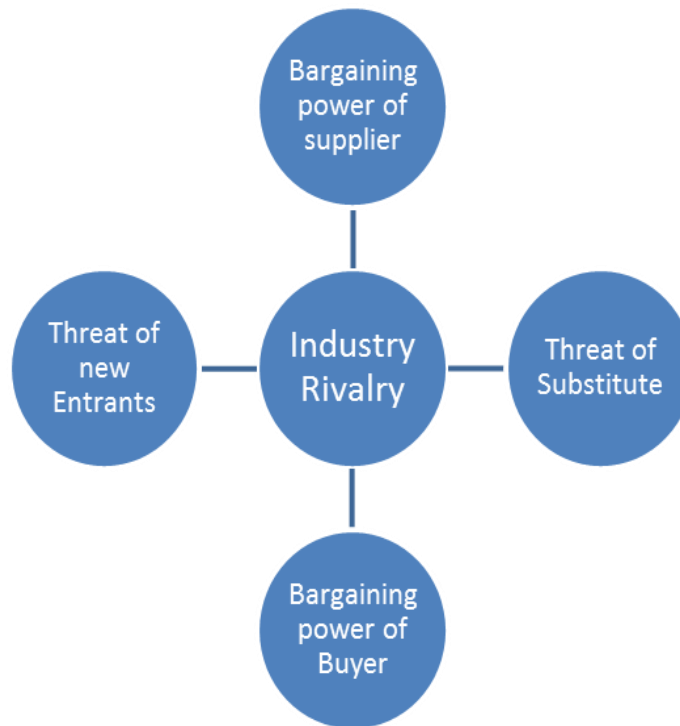
Source: Aranca Research, 2015

Growth drivers are :

1. A large population.
2. Huge domestic market dependence.
3. Strong market demand
4. Per capita consumption of Chemicals in India is lower as compared to Western countries, so immense scope for new investment.
5. Rise in GDP and purchasing power generates huge growth potential for the domestic market.
6. A focus on new segments such as Specialty Chemicals.
7. Low cost manufacturing.
8. Skilled science professionals.
9. World- class engineering and strong R& D

2.1.17. Porters five forces analysis:

Diagram 2.1(c) Porters five forces analysis



Source: Strategic Management & Business policy,2011

Porter's Five Forces is a model of analysis that helps to explain why different industries are able to sustain different levels of profitability. This model was originally published in Porter's book, "Competitive Strategy: Techniques for Analyzing Industries and Competitors" in 1980. The model is widely used, worldwide, to analyze the industry structure of a company as well as its corporate strategy. Porter identified five undeniable forces that play a part in shaping every market and industry in the world. The forces are frequently used to measure competition intensity, attractiveness and profitability of an industry or market.

1. Competition in the Industry:

The importance of this force is the number of competitors and their ability to threaten a company. Suppliers and buyers seek out a company's competition if they are unable to receive a suitable deal.

- Chemical Industry is highly fragmented with intense rivalry amongst companies.
- Since 100 per cent FDI is allowed domestic companies face stiff competition from foreign as well.
- International companies may also dump chemicals at low price.

2. Threat of New Entrants into an Industry:

A company's power is also affected by the force of new entrants into its market. The less money and time it costs for a competitor to enter in to the market and becomes an effective competitor, the new entrants enter into the market and initially offer a low price for the product to sustain in the market, and then the old company's position may become significantly weakened.

3. Power of Suppliers:

This force addresses how easily suppliers can initiative the price of goods and services. It is affected by the number of suppliers of key aspects of a good or service. The fewer number of suppliers delay in the delivery and takes more time to get the product to the customer , so company is more depends upon a supplier, the more power a supplier holds.

4. Power of Customers:

This specifically deals with the ability of customers have to drive prices down. It is affected by how many buyers, or customers, a company has, how significant each customer is and how much it would cost a customer to switch from one company to another. The smaller and more powerful a client base, the more power it holds, hence the customers have power to purchase the product and have multiple sources of supply.

5. Threat of Substitutes:

Competitor substitutions that can be used in place of a company's products or services pose a threat , this substitution is fairly easy and of low cost, a company's power can be weakened.

(Source: India-Chem, Tata strategic management group)

Chapter No.2.2

Marketing Mix Frame work:

Tools & Strategies with reference to chemical industries

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Chapter No.2.2.

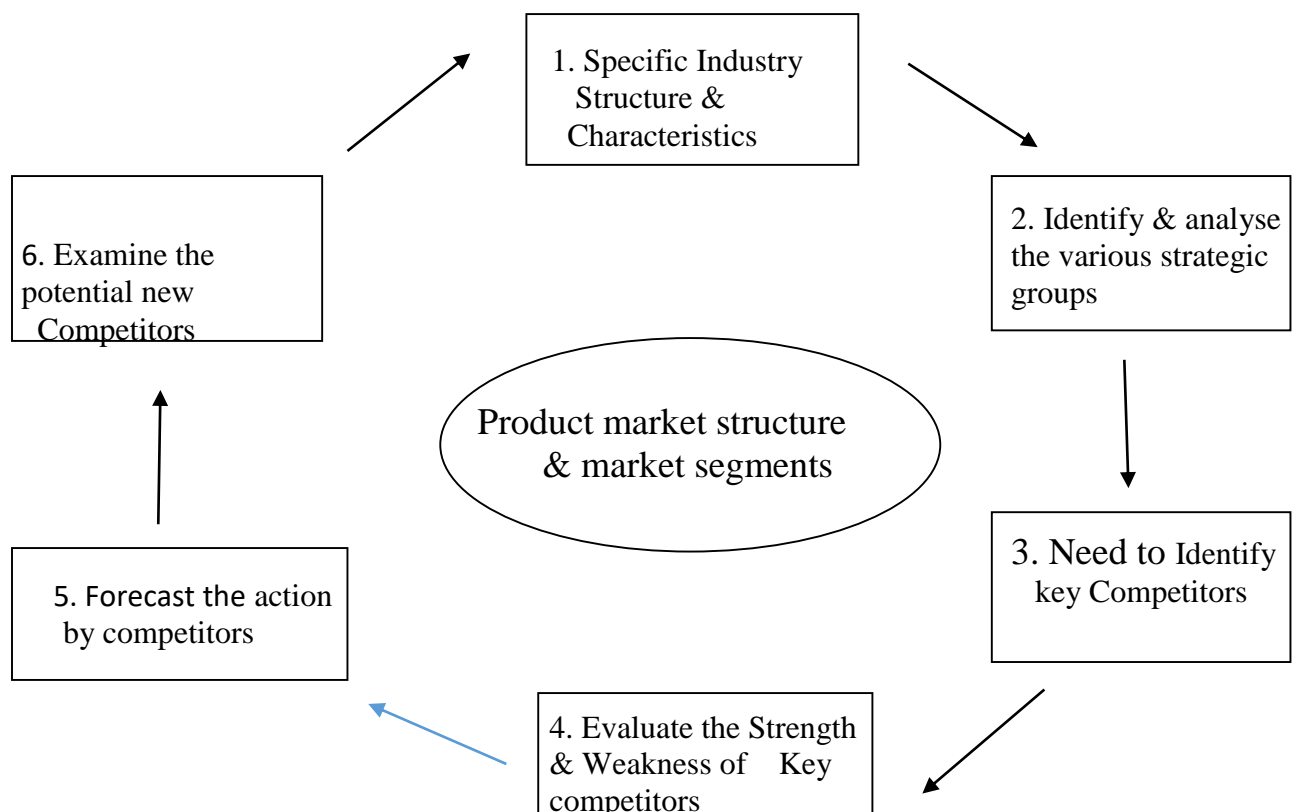
Marketing Mix Frame work:

Tools & Strategies with reference to chemical industries

2.2.1 Industry Analysis:

An association's aggressive surroundings is enormously influenced by the business in which it contends. A basic stride in system advancement is reckoning and examination of the major auxiliary components of the business. Such auxiliary components of an industry are distinguished as industry size, development, focused structure, cost structure, channels, patterns and so forth. An Industry is a gathering of associations creating comparable merchandise and administrations. Businesses and markets are distinctive elements. Though markets can be looked upon as gatherings of clients with comparable purchasing needs, commercial enterprises are accumulation of associations with regular items and advancements. Industry is alluded as an arrangement of those advertising association that are in rivalry with each other for the same client portion, whom some arrangement of suppliers give essential crude materials and related administrations and the items being sold are seen by the clients to be substitutable.

Diagram 2.2(a): A Model for Industry Analysis



This model demonstrates that there are six stages in industry investigation.

1. The initial step includes characterizing the specific industry structure for which the investigation is being arranged and distinguishing its predominant attributes, like Chemical industry and their characteristics like high domestic potential, cost of capital, import duties, taxes, Fragmented industries are taken into consideration.
2. In the second step, the analysis of the various strategies like product strategy, price strategy, place / distribution strategy and promotion strategy for the development of the business.
3. In the third stage, there is need to identify the key competitors, identify the competitors product, product feature, price, their promotional strategy, and their channel of distribution, then it get benefited to frame the strategy of our product.
4. In the fourth stage, with the help of market research the competitors SWOT analysis is carried out, with the help of SWOT analysis it get benefited to make necessary changes in our product and capture the market.
5. In the fifth stage, with the help of market research the competitors future action plan , their future product , their future planning of promotion and distribution are studied , according to which necessary changes are carried out in the existing company.
6. In the last phase of the business investigation, the investigator will try to distinguish the new contenders and analyze their potential capacities to grab the piece of the overall industry from the current contenders. In this association, it is additionally imperative to investigate the quality of both existing and new contenders to amplify the current business sector through an assortment of advertising procedures. Porter's (five forces model) has made an immense contribution to the development of the ideas of industry and competitor analysis, and their relevance to the formulation of business strategies. The state of competition in an industry depends on five basic competitive forces, the collective strength of these forces determining the ultimate profit potential of the industry and the ability of firm's in an industry to earn rates of return on investment in excess of the cost of capital. The five competitive forces are-
 - (i) Threat of new entrants,
 - (ii) Rivalry among competitors,
 - (iii) Bargaining power of suppliers,
 - (iv) Bargaining powers of buyers and

- (v) Threat of substitute products.

The five powers model recommends that opposition reaches out past the organizations inside the business to incorporate new passages, suppliers, purchasers and substitutes. The more grounded the power is, the more noteworthy the limitations on organizations to raise costs and procure more prominent benefits. As such, a solid power is viewed as a danger since it is liable to decrease benefits, while a feeble power is seen as an open door since it permits the organization to gain higher benefits

The following factors, which are related to the dynamics of an industry it is

- (i) Scope of competitors' business,
- (ii) New entrants in the industry,
- (iii) Other current and potential offering that satisfy the same need,
- (iv) Industries current practices like price setting warranties distribution structures, after sales service etc.
- (v) Trends in volume, costs, prices and return on investment compared with other industries,
- (vi) Easy of entry into the industry, including capital investment,
- (vii) Relationship between current and future demand and manufacturing capacity and probable effects on price and profits,

An association's methodology can be recognized by utilizing a few measurements that separate it from the systems of different firms in the business, such vital measurements incorporate those vital variables that can recognize the business techniques and aggressive situating of the organizations inside an industry. The variables are -

- (i) The number of suppliers and their relative size distribution, indicating the extent of seller concentration in the market
- (ii) The number of buyers and their relative size distribution, indicating the extent of buyer concentration in the market,
- (iii) The nature of the product, whether it is a standardised good or service or differentiated in a variety of ways,
- (iv) The degree of vertical integration i.e. the extent to which suppliers produce their own input requirements, or own distribution outlets for their products,
- (iv) The condition of exit, i.e. the extent and severity of barriers to exit,

- (v) The extent to which firms are diversified and operate in several different markets.

Competitor Analysis:

In a free market economy, each company tries to outperform its competitors. A competitor is a rival of any business. A company must know, how it stands up against each competitor with regard to skill in manoeuvring opportunities, preparedness in reacting to threats and so on. The competitions in the industry focuses on factors like entry mobility and exit barriers, powers of suppliers and buyers and elements of rivalry. The competition in the industry focuses on products that seek to serve same similar customer need or customer group. The nature of competition and the factors, which influence it, are explored along with how firms identify competitors and how they use product positioning to obtain a competitive advantage. Success in the market place depends not only on an ability to identify customer wants and needs but also upon an ability to be able to satisfy those needs and wants better than competitors. This implies that organisations need to look for ways to achieving a differentiating advantage in the eyes of the customer. The differential advantage is often achieved through the product or service itself but sometimes it may be achieved through other elements of the marketing mix.

Competition analysis is a set of activities, which examines the comparative position of competing enterprises within a given strategic sector, the set of activities that organisations are undertaking when analysing competition analysis, are -

- (i) Assessing competitors' current and future objectives,
- (ii) Assessing the competitors' current strategies,
- (iii) Assessing competitors' resources,
- (iv) Predict competitors' future strategies. It helps to
 - a) Provide an understanding of competitive advantage/ disadvantage relative to competitors' positions,
 - b) Generating insights into competitor's strategies - past, present and future and
 - c) Provide an informed basis for developing future strategies to sustain over the competitors.

The way to distinguishing contenders is to connect the business point of view of rivalry and business sector viewpoint of rivalry by mapping out item/showcase fragments. Such a guide is the focused field in which an organization can recognize genuine and potential contenders. In recognizing the organization's rivals, an organization ought not confine to the present contenders, but rather ought to likewise check potential contenders.

The beginning stage for comprehension contenders' systems is distinguishing every contender's presumptions. Knowing a contender's suppositions will control a firm to distinguish the premise of the contender's methodology. These suspicions impact how the contender acts, the way it responds to occasions, and how it plans its own particular aggressive advertising methodology. After the distinguishing proof the contenders' suspicions, the firm is in a position to create proclamations of the present procedure of every contender. This system is most helpfully considered as a key working approach in every key region of business. The firm needs to know every contender's item includes, quality, client administrations, evaluating arrangement, dispersion scope, deals power approach, publicizing and other advancement programs. The firm needs to gauge contenders' future techniques.

The appraisal of a contender's assets includes taking a gander at their qualities and shortcomings. As an initial step, organizations can accumulate optional information on every contender's objectives, systems, and execution throughout the most recent couple of years. They can lead power research with clients, suppliers, and merchants keeping in mind the end goal to see more about contender's qualities and shortcomings. Contender asset profiles can be implicit similarly as a firm leads its very own examination resources and abilities. There are four key useful regions of firm to evaluate its qualities and shortcomings, advertising, innovation, administration, and fabricating and their individual measures of accomplishment deals, research and advancement, degree of profitability, and limit use. Contenders' qualities and shortcomings are based upon the presence or nonappearance of benefits of aptitudes, in this way to break down. Contender's aptitudes and shortcomings, it is important to recognize the advantages and capacities that are pertinent to the business recognizes an association's benefits and abilities.

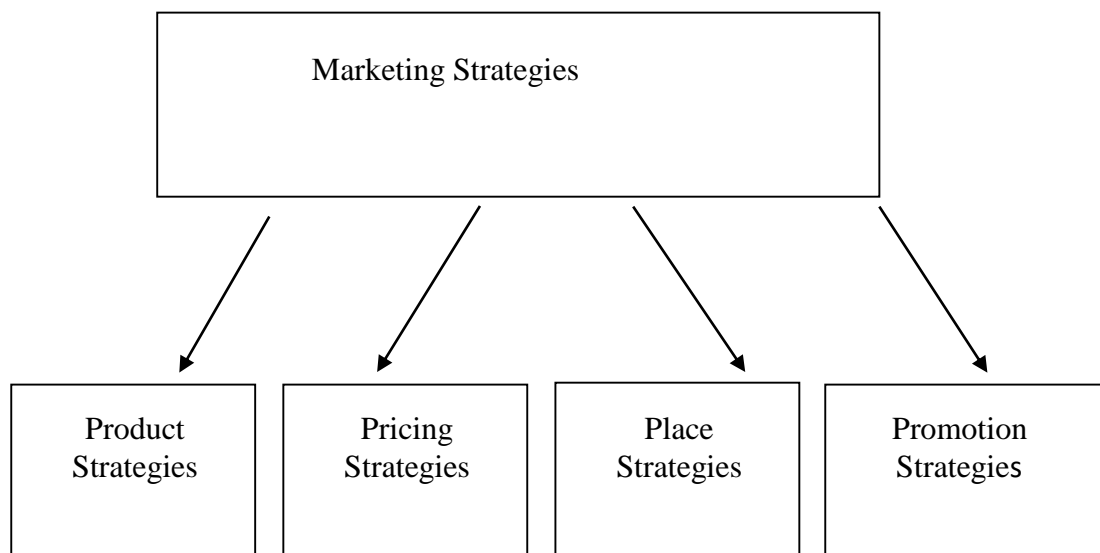
2.2.2 Marketing Mix Strategies:

Showcasing Strategies involve an essential spot in promoting administration. Without methodologies, no promoting administration can ever be fruitful. Techniques are figured in various ranges of showcasing for higher productivity and powerful business operations.

In practice, firms developed and follow a number of realistic strategies relating to the 4 Ps' of marketing i.e. Product, Price, Promotion and Place. Therefore, there are four groups of strategies, which most companies follow.

- i) Product strategies,
- ii) Pricing strategies,
- iii) Place or distribution strategies.
- iv) Promotion

Diagram 2.2(b): Types of Marketing Strategies:



Marketing is the art and science of selling. Ingredients for a good marketing are the 4P's: Product, Price, Promotion and Place (distribution). An effective marketing program combines harmoniously all elements of the marketing mix. Marketing mix is the main instrument of the company for obtaining strong positioning on the concerned markets.

i) Product policy. Product policy as a decision adopted by manufacturing or commercial companies regarding the size, structure and the range of goods and services. Product policy is often compared with “the heart of marketing”. It has a direct connection with the other elements of the marketing mix.

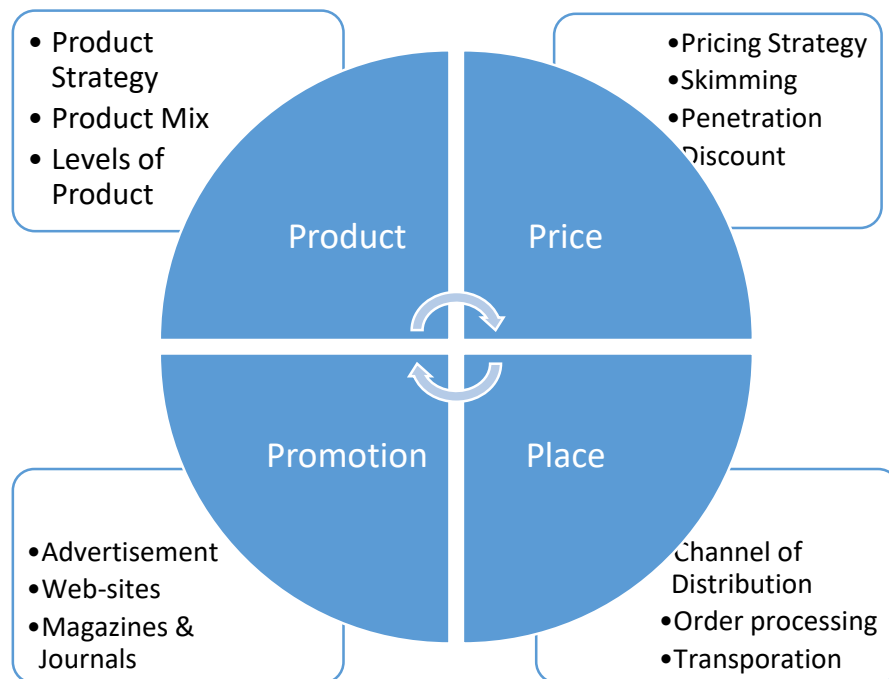
ii) Price policy. Price is a market instrument and an index of the economic and social reality. Price is the only marketing mix variable which leads to profits, the others are generating only expenses and investments. Price is a very flexible element of the mix and it can be changed rapidly, unlike the product characteristics and the placement activity.

iii) Place Policy. Role of place (distribution) is to assure the necessary balance in the market primarily between demand and supply and between producers and consumers. Another role of the distribution is to streamline the buying – selling processes.

iv) Promotion policy. limited time blend. Individual advancement is a type of correspondence. This is characterized as being: "0 level of correspondence starting with one individual then onto the next, in which the merchant influences the potential purchaser to purchase the items and administrations of the organization."

4.2.1 Marketing mix model:

Diagram 2.2 (c) Marketing Mix Model



Source: Principles of Marketing: Philip Kotler

2.2.3 Product Strategy:

The Product is the most unmistakable and imperative single segment of the promoting administration. Product strategy are divided into following category:

- (i) Product Positioning strategy,
- (ii) Product Repositioning strategy,
- (iii) Product Design Strategy,
- (iv) Product Elimination Strategy,
- (v) New Product Strategy.

Each strategy is examined from the point of view of a business unit or profit centre.

(i) The term product positioning refers to designing the company's offerings and image to occupy a distinctive place in the target market's mind. As the market is heterogeneous, one product cannot make an impact on the entire market. Positioning is achieved by using marketing mix variables, especially design and communication. Although differentiation through positioning is more visible in consumer goods, it is equally true in industrial goods. The desired position for a product is determined using the following procedure:

- a) Analyse product attributes that are salient to customers.
- b) Examine the distribution of these attributes among different market segments.
- c) Determine the optimal position for the product in regard to each attribute.
- d) Choose an overall position for the product.
 - (ii) Sometimes a product may also require repositioning, this can happen if
 - a) a competitive entry is positioned next to the brand, creating an adverse effect on its share of the market,
 - b) consumer preferences change,
 - c) a mistake is made in the original positioning.

(iii) Product-design strategy deals with the degree of standardisation of a product, providing choice among the following strategic options standard product, customised product and standard product with modifications. To develop standard product the firm should aim to increase economies of scale and at the same time it must draw the strategy for customised products to compete against mass producers of standard products through product design flexibility. The implementation of this strategy would benefit the company to increase in growth, market share and profits.

(iv) On the contrary, the product elimination strategy aims at shaping the best possible mix of products balancing the total business. This strategy would help to eliminate undesirable products because their contribution cost and profit is too low and they do not fit in the overall business strategy.

(v)The new product strategy is required to meet new needs and to sustain competitive pressures on existing products. The competence is required through continuous tracking of customer needs and shapes those needs into the product development. The effective implementation of product strategies results in increase in sales growth and profitability among existing customers and enlargement of the overall market among the new users.

Table- 2.2(a) Product Strategies: an Overview

Level	Strategy
Product Mix	Width extension- New Product lines
	Length extension- New product items
	Depth extension- – New product variants
Product Line	Stretching– Upward, downward, both ways line pruning - line modernization
Product item	Quality, Features, Design, Brand and Package Augmentation

4.3.1 Product Mix:

Product mix is a set of all product lines and items offered by the company. Product line is a group of closely related products priced within a range and distributed the some channels to the same customer groups. It has two dimensions Length and Depth.

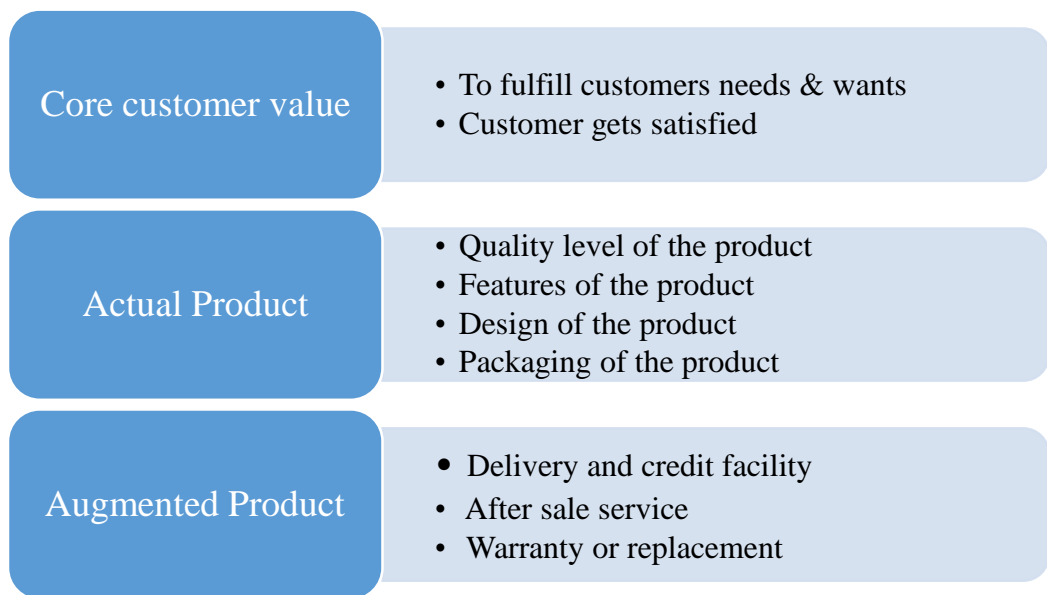
Length -Total number of items in line.

Depth - Ttal number of variants to product line.

Product or service is an offer made by marketer that has the ability to satisfy the needs and wants of customer. Products are physical and tangible. The key consideration in individual product/service offer is developing of the product at three levels.

- a) Core product development
- b) Actual product development
- c) Augmented product development

Diagram 2.2(d). Levels of Product



Source: Principles of Marketing : Philip Kotlar

a) Core Product development:

Core product refers to the benefits, which are specified by consumer needs. What is the consumer really buying? Core product developer has to focus on the needs of consumer. Product is to be seen not from manufacturing point of view but from marketing point of view business is to be viewed as a customer satisfying process, not a goods-producing process, products are transient, but basic needs of customer groups remain, a product that provides the important form utility and ensures performance of the basic function is the core product. The testing question therefore is the product capable of fulfilling the needs of customers?

b) Actual Product development:

When psychological needs are specified in physical terms, product concept becomes visible and operational. Any product or service has five characteristics i.e. Quality, Features, Style/design, Packaging and Branding.

c) Augmented Product:

Marketers should have vision to look at the specific needs (core products) of consumers, and also their related requirements. He needs a broader view to have the whole picture of the consumption of the consumer to him with the right offer. It also helps differentiate his offer with that of the competitors. The holistic approach helps to systematically differentiate the offer. Augmentation requires fortifying the product strategy with additional force drawn from other Products as a result the product offers make buying and using a pleasant and exciting experience. i.e. - Delivery, Credit facility & Warranty.

4.3.2 Changing Product Strategies:

In industrial product development, a marketing strategy that is flexible and adaptive to changing market circumstances stands a greater chance of being effective in the long-term. Products and consumer perceptions are variable, so changes in strategy may be required to better address customer needs, technological developments, new laws and regulations, and the overall product life-cycle. By monitoring external conditions and shifting product development accordingly, a company can better target its consumers and learn to react to their needs. The major factors that can necessitate a change in product strategy include:

a) Customer Preferences: Fluctuations in the cost of materials, new application requirements, and changing brand awareness are just a few of things that can cause consumer needs to change. Keeping close track of customer response to a product and taking their demands into consideration are important for maintaining market share.

b) Technological Advances: A new technological development can engender a change in a product line, causing products to need modification in order to remain competitive or rendering some products obsolete.

c) Laws and Regulations: The implementation of new governmental regulations can cause certain products or manufacturing methods to be restricted, limiting their consumer appeal. Conversely, new laws can also lend an advantage to certain

business and deregulation can sometimes benefit production standards. Product development strategies must shift according to the legal landscape.

d) Product Life-Cycles: To preserve the rate of growth in profit and sales, many industrial companies decide to alter, discontinue, or replace older products with newer models or more recent upgrades. These changes are usually made periodically, allowing existing products that reach maturity or decline to be phased out or modified, thus retaining their appeal.

Source: Industrial Marketing: The McGraw-Hill Companies, New Delhi

2.2.4 Pricing Strategy:

Price setting is an important area in marketing mix decisions of a company. It is the element that generates revenue for the company, and all others involve only costs. It is the only marketing mix element that can be changed quickly to respond to changes in demand or competitive moves. Pricing should never be seen as an isolated component of a company's marketing decision making. Companies spend large amount of money on product development, promotion, and distribution and face risks. Sometimes, price is the only marketing mix that can be changed quickly to respond to changes in demand or competitive moves. Developing new products or modification of existing products, any changes in promotional programme, or distribution system involves much time and efforts.

A pricing strategy is a course of action framed to affect and guide price determination decisions. These strategies help realising pricing objectives and answer different aspect to how price will be used as a variable in the marketing mix, such as new product introduction, competitive situations, and government pricing regulations, economic conditions or implementation of pricing objectives. More than one pricing strategy may be selected to address the needs of different markets or to take advantage of opportunities in certain markets.

Low prices can be used as a weapon to build market share. Prices that undercut competitors attract new customers and allow for greater utilization of facilities. But low prices squeeze margins and often reduce net profits. Thus an ideal pricing strategy should be the one that balances the need for sales growth against market demand for profits. The eight steps which are essentials for setting strategies for product or service pricing are:

- (i) To assess the customers' expectations on a product or service,
- (ii) To identify the variations in the product category,
- (iii) To assess customer's price sensitivity,
- (iv) To identify an optional pricing structure,
- (v) To consider competitors reactions,
- (vi) To monitor the prices realized at the transaction level,
- (vii) To assess customers' emotional response and
- (viii) To analyse whether the returns are worth the cost to serve.

The basic determinants for the pricing of products and services are production costs, competitive factors, and break-even analysis and demand considerations. Domestic price is affected by the considerations on pricing objectives, cost, competition, customer, and state regulations. In addition to the conventional considerations on pricing, multiple currencies, trade barriers, and longer distribution channels make the pricing decisions more difficult.

The pricing objectives should be closely aligned to marketing objectives, which in turn need to be derived from overall corporate objectives.

In determining the prices the nature of competition plays a key role. The competition in an industry is analysed with reference to such factors as the number of firms in the industry, product differentiation and ease of entry. The competitive analysis reveals the position of global and domestic competitors in the particular market in reference to the price they charge for their products. It is essential for a company to conduct breakeven analysis of the current or proposed business. A breakeven analysis examines the interaction among fixed costs, variable costs, prices and unit volume to determine that combination of elements in which revenue and total costs are equal. In determining the pricing strategy, the customer demand for a product is a key factor. The considerations, which are necessary for price setting, are the ability of customers to buy, their willingness to buy, propensity to consumer, the place of the product in the customer's lifestyle, prices of the substitute products, the potential market for the product and the consumer behaviour in general.

The pricing methods that become part of pricing strategies are :

- (i) Cost-based pricing,
- (ii) Demand oriented pricing,
- (iii) Penetration versus skimming pricing strategies
- (iv) Competition oriented pricing,

- (i) In cost-based pricing, a company determines price by adding a monetary value or percentage to the cost of the product.

The cost based approach includes two pricing methods: cost-plus and mark-up pricing. In mark-up pricing a certain predetermined percentage of product's cost, called mark-up, is added to the cost of the product to determine the price. Companies use target return pricing methods and find out the price that would ensure a certain fair rate of return on investment.

- (ii) A demand oriented pricing approach takes account of the strength of demand. Firms' charge high prices when or where demand is strong and a low price when or where demand is weak.
- (iii) Price skimming refers to charging the highest possible price whereas penetration strategy sets an initial price to generate volume. The skimming strategy helps in building substantial buyers segments with reasonable high demand for the product and high-price also helps the firm to build the quality image of the product.
- (iv) In the competition oriented pricing, a firm sets the same prices as charged by its competitors. This kind of pricing is used often in homogenous product markets where the market structure ranges from pure competition to pure oligopoly and firms can charges the same price as competitors.

Price Mix decisions have strategic importance in any enterprise. Pricing governs the very feasibility of any marketing programme because it is the only element in a marketing mix accounting for demand and sales revenue. Other elements are cost factors. Price is the only variable factor determining the revenues or income. A variety of economic and social objectives came into prominence in many pricing decisions. We now come to the most absorbing question of pricing.

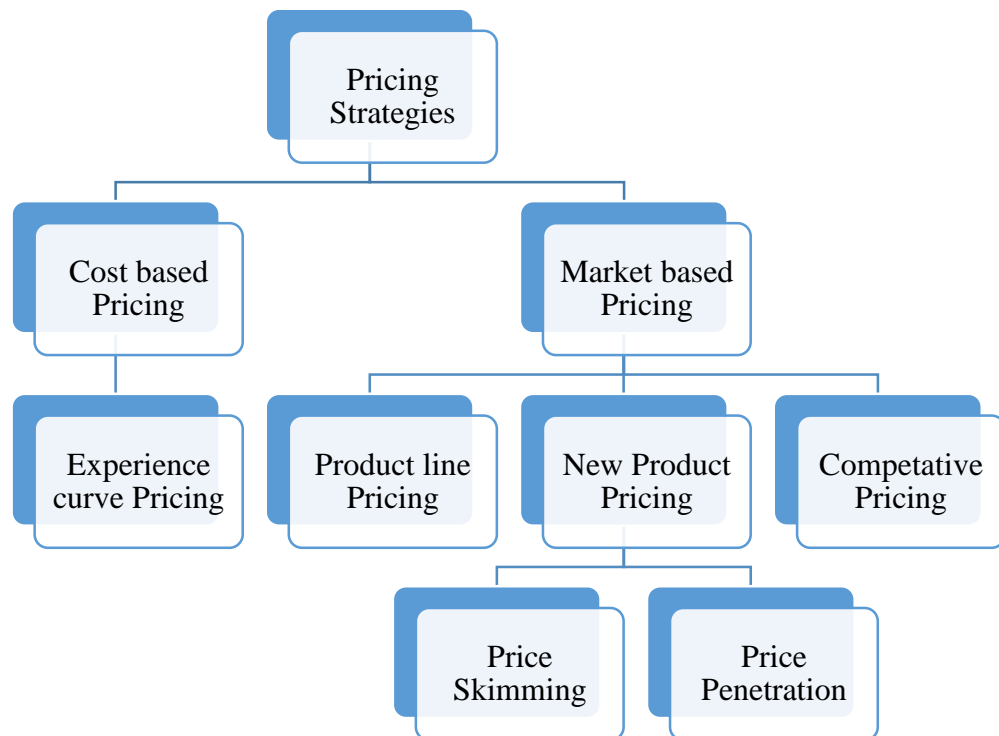
Price is the exchange value of a product or service always expressed in money. To the consumer the price is an agreement between seller and buyer concerning what each is to receive. Price is the mechanism or device for translating into quantitative terms, the perceived value of the product to the customer at a point of time. Price is the amount charged for the product or service including any delivery, discounts, services or other items that are part of the conditions of sale and are not paid for separately to the buyer price is a package of expectations and satisfactions, thus price must be equal to the total amount of benefits to the seller it is a product feature most

welcome. Pricing is equivalent to the total product offering. This offering includes a brand name, a package, product benefits, and service after sale, delivery, credit and so on. From the marketer's point of view, the price also covers the total market offering, i.e., the consumer is also purchasing the information through advertising, sales promotion and personal selling and distribution method that has been adopted. The consumer gets these values and also covers their costs.

In a competitive market economy, price is determined by free play of demand and supply. The price will move forward or backward with changing supply and demand conditions. The going market price acts as basis for fixing the sale price. Rarely an individual seller can dishonour the current market price. Price regulates business profits, allocates the economic resources for optimum production and distribution. Thus, price is the prime regulator of production, distribution and consumption of goods. Economics revolves around pricing of resources. Price influences consumer purchase decisions. It reflects purchasing power of currency. It can determine the general living standards. In essence, by and large, every facet of our economic life is directly or indirectly governed by pricing. This is literally true in our money and credit economy. Pricing decisions interconnect marketing actions with the financial objectives of the enterprise. Pricing strategy determines the firm's position in the market vis-a-vis its rivals. Marketing effectiveness of pricing policy and strategy should not suffer merely on account of cost and financial criteria.

Price is a powerful marketing instrument as a marketing weapon, pricing is the big-gun. However, it must be used with great caution. Therefore, all marketing planners must make accurate and planned pricing decision.

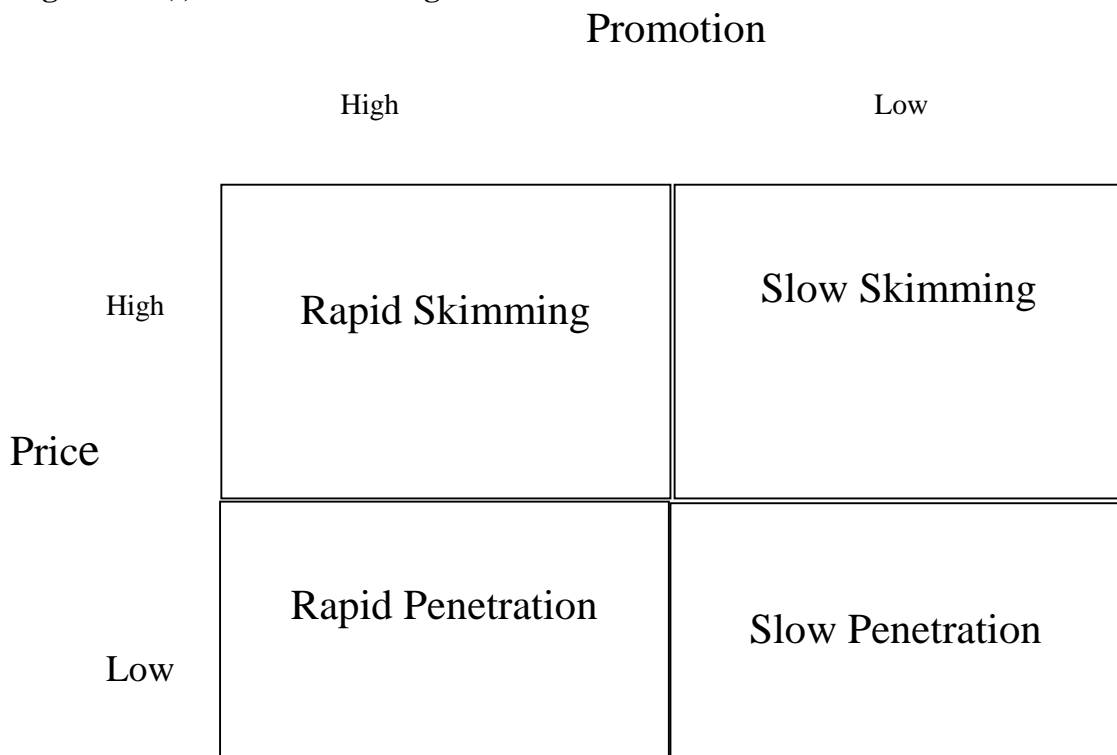
Diagram 2.2 (e). Price in the Marketing Strategy



Source: Principles of Marketing :Philip Kotler.

4.4.1 Model of Pricing Forces:

Diagram 2.2(f). Model of Pricing Forces



Source: Principles of Marketing :Philip Kotler

Pricing Strategy:

A business can use a variety of **pricing strategies** when selling a product or service. The Price can be set to maximize profitability for each unit sold or from the market overall. It can be used to defend an existing market from new entrants, to increase market share within a market or to enter a new market. Businesses may benefit from lowering or raising prices, depending on the needs and behaviours of customers and clients in the particular market. Finding the right pricing strategy is an important element in running a successful business.

1. Price skimming:

It is a pricing strategy in which a marketer sets a relatively high price for a product or service at first, and then lowers the price over time. It is a temporal version of price discrimination/yield management. It allows the firm to recover its sunk quickly before competition steps in and lowers the market price. Price skimming is sometimes referred to as riding down the demand curve. The objective of a price skimming strategy is to capture the consumer surplus early in the product life cycle in order to exploit a monopolistic position or the low price sensitivity of innovators. Price skimming is a product pricing strategy by which a firm charges the highest initial price that customers will pay. As the demand of the first customers is satisfied, the firm lowers the price to attract another, more price-sensitive segment. Therefore, the skimming strategy gets its name from skimming successive layers of "cream," or customer segments, as prices are lowered over time.

Firms often use this technique to recover the cost of development.

Skimming is a useful strategy when:

- There are enough prospective customers willing to buy the product at the high price.
- The high price does not attract competitors.
- Lowering the price would have only a minor effect on increasing sales volume and reducing unit costs.
- The high price is interpreted as a sign of high quality.

b. Market Penetration

Some companies fix the prices of commodities as low as possible with the objective of maximising sales volume and market share of its products. The

assumption is that the market is price sensitive and that the low prices will increase sales. Other assumptions are: a) Highest volume will reduce the production and distribution costs, leading to higher long-term profits. b) Low prices will discourage entry of potential competitors.

Source: Principles of Marketing: Philip Kotler, 2010, Prentic Hall , New Delhi

2.2.5 Place (Distribution) strategy:

A key decision among the 4P's of marketing managers is distribution. Distribution decides the manner in which product and services are made available to the target customers. It involves the bridging of place utility gaps between manufacturer and customers. The design of physical distribution, referred to logistics and supply chain management and trade channels of distribution are the major components in distribution.

The link between manufacturers and customers is the channel of distribution. It consists of producer, consumer, and any intermediary organizations that are aligned to provide a means of transferring ownership or possession of a product from producer to consumer. Channels represent a set of interdependent relationships among intermediaries and producer. The channel facilitates forward flows (physical goods, title of goods, and promotion offers) and back ward flows (ordering and payment). Some of these flows are forward flows (physical transportation, title, and promotion) others are backward flows (ordering and payment); and still others move in both directions (information, finance, and risk taking).

2.2.5 (a) Channel Structures:

Channel structures are evolved based on the type of company products, target market segments and competition.

a) Direct Marketing Channel:

This type of channel has no intermediaries. In this distribution system, the goods go from the producer direct to the consumer,

Producer- \longrightarrow Consumer

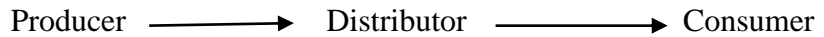
(Applicable for Chemical Industrial product)

b) Indirect marketing Channel:

This may further be classified in the following categories

1. One-Level Channel

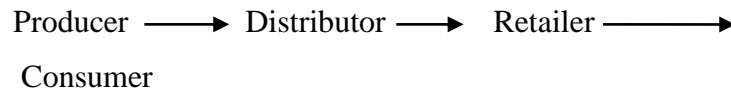
In this type of channel there is only one intermediary between producer and consumer. This intermediary may be a distributor.



(Applicable to Chemical Industrial product)

2. Two-Level Channel

The type of channel has two intermediaries, namely wholesaler/distributor and retailer.



(Does not applicable to Chemical Industrial product)

2.2.5(b) Use of Intermediaries by Industrial Marketers:

a) Buying:

The distributors or dealer purchases products from the manufacturer for resale to industrial end user.

b) Promotion and selling:

The middlemen contact potential or existing customers, promote the product, negotiate and secure orders.

c) Financing:

The distributors purchase products and invest in the inventory. They extend to customers while reselling the products, thus they help manufacturers to finance the marketing process.

d) Warehousing:

The distributors must store the products properly at their warehouses to assure product availability in good condition to the industrial users.

e) Transportation:

Some middlemen manage the physical movement of the product from their warehouses to customer's locations. Many industrial customers consider prompt delivery as an important benefit.

f) Information:

The middleman have responsibilities to provide information both to their customers and suppliers. Customers need information about product features, prices, deliveries, while suppliers need information about competitors, customer requirements, product performance and both.

2.2.5 (c) Industrial Customers prefers Distributors:

Industrial marketers can market their products through distributors only if the industrial customers find it desirable to buy through distributors.

a) Dependable Delivery:

The important reason is fast and economical delivery. Dependable delivery enables the industrial buyer to reduce the inventory level and the inventory carrying cost. The distributors deliver the goods without charging freight. These are some of the saving in costs that are important for small scale manufacturers.

b) Information:

Useful information about the products of many manufacturers like price, availability and quality can be obtained from the local distributor. Sometimes, detailed technical information may not be available from the distributor's salesman but the same can be obtained from the manufacturer.

c) Variety:

There are an availability of variety products at the distributor's place, which meets most of the requirements of small-scale manufacturers, through this customer gets choice to select the specific product.

d) Liberal Credit:

This is offered by the local distributors who is familiar with the financial needs of the local manufacturers, the liberal credit to the regular customer as well as corporate clients in the form of credit limit of the payment up to 30 days , 60 days in some cases 90 days also.

2.2.6 Promotion strategy:

Promotion is a communication with an additional element of persuasion to accept ideas, products, and services and hence persuasive communication becomes the heart of promotion, the fourth element of marketing mix. In essence, promotion is the spark plug of marketing mix and an important marketing strategy. People must know that the right product at the right price is available at the right place. It is said that in a competitive market without promotion nothing can be sold. In marketing, effective communication is absolutely necessary even though you have a superb product, best package and also you offer a fair price people will not buy your product, if they have never heard of it and they are simply unaware of its existence. Essentially promotion is persuasive communication to inform potential customers of the existence of products, to persuade and convince them that those products have want satisfying capabilities.

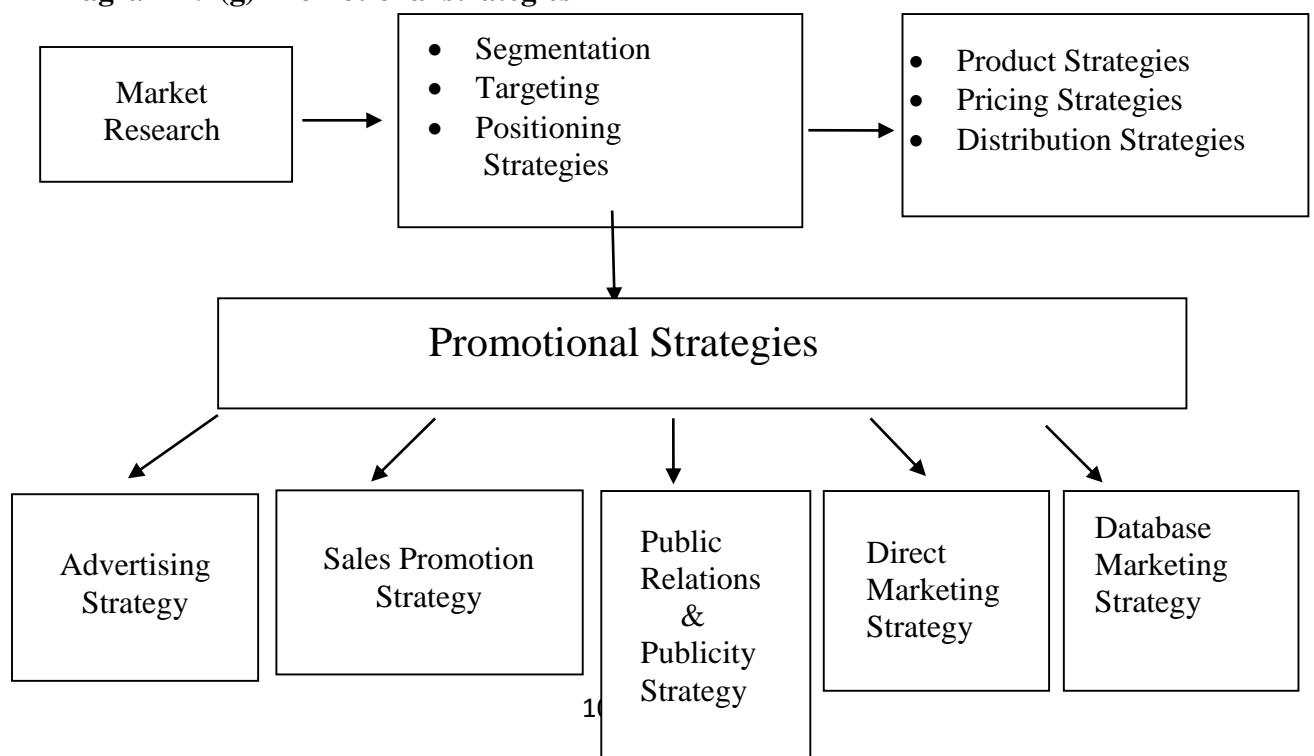
2.2.6(a) Elements of Promotional tools of Industrial Marketing:

The promotion mix includes four ingredients, viz.

1. Advertisement,
2. Sales Promotion,
3. Personal Selling
5. Direct Marketing
6. Public Relations & Publicity.

Marketing Strategies as Promotional Strategies:

Diagram 2.2(g) Promotional strategies



1. Advertisement:

It means any paid form of non-personal presentation and promotion of ideas, goods and services by an identified sponsor. It is impersonal salesmanship for mass selling, a means of mass communication.

2. Sales Promotion:

It covers those marketing activities other than advertising, publicity and personal selling that stimulate consumer purchasing and dealer effectiveness. Such activities are displays, shows, exhibitions, demonstrations, and many other non-routine selling efforts at the point of purchase. Sales promotion tries to complement the other means of promotion given above. All kinds of promotion play the role of communication channels between the marketer and the consumer. Publicity is more effective in the awareness stage. Advertising gradually becomes less and less effective over a time span. Hence, reminder advertisement is necessary. Personal selling becomes more and more effective as interpersonal interaction assumes increasing importance. Closing of sales needs not only personal selling but also sales promotion tools at the point of purchase in order to provide additional incentives for buyer's action..

3. Public Relations & Publicity:

It is non-personal stimulation of demand for a product, service or a business unit by placing commercially significant news about it in a publication or obtaining favourable presentation of it upon radio, television, or stage that is not paid for by the sponsor.

4. Direct Marketing:

Direct marketing is a method that cuts out the middleman to reach out to the customer directly. As a result of advancement of telecommunications and computer technology, companies are now using telephone, fax, e-mail or Internet to communicate with its prospective customers in one-to-one basis.

2.2.6(b) Elements and Importance of Promotional Strategies:

Promotion is one of the main activities in the marketing programme. It performs the marketing task by informing, persuading and reminding the target customers (existing and probable), counters the competition, and builds a favourable company/ brand/ product image. Though every element of the marketing-mix and its related strategies are very important in the marketing but promotional strategies need

to be defined separately to understand clearly and consistently about its strategic part by which the product and services offered by the marketers to customers.

The promotional strategy depends on the channel or route through which products of the firm flow to consumer. There are pull and push strategies in promotion. Pull strategies depend upon mass communication. Products are literally pulled by buyers through the channels on the basis of mass promotional efforts. In a pull strategy the product is pulled through the channel by creating end-user demand. Customers force retail shops to stock those mass-promoted products. The major reason for the growing importance of promotional activities in marketing is the ongoing revolution in global business practice after the globalisation that has changed the rules of marketing and the role of the traditional advertising activities. The major factors underlying the strategic shift in marketing activities are as follows:

- i) More budget allocation for sales promotion due to intensifying competition,
- ii) At present advertising has become more expensive and less cost effective,
- iii) Escalating price competition is resulting in more price promotions than advertising,
- iv) Companies are using computer to build databases containing customer names, geographic, demographic and psychographic profiles, purchase patterns, media preferences and other relevant characteristics
- v) Companies are increasingly relying on direct marketing methods, rather than relying on mass medias.

The below Figure depicts the different types of marketing and promotional strategies and their strategic tools, which are used quite often in the company's overall marketing and business policy depending upon the company's product, market, market condition and also competitors' movement in capturing the market.

2.2.6(c) Sales Promotional tools & Developing Sales Promotion Strategies of Chemical Industries:

Sales promotions are announced both by manufacturers and retailers. Manufacturer announced promotions are directed towards consumers, resellers or both. Consumer promotion tools include samples, coupons; cash refund offers, price packs, premiums, prizes, patronage rewards, free trials, product warranties and point-

of-purchase displays and demonstrations. Trade promotion tools include trade allowances/incentives buy-back allowances, free goods, contests and special incentives, organising sales meetings, speciality-advertising items and conducting trade fairs or trade shows. Sales Promotion strategies calls for establishing the sales promotion objectives, selecting the tools, developing, pretesting, and implementing the sales promotion programs and evaluating the results of speciality chemicals products, which are used in textile, leather, paper, paint and other industries for producing the ultimate finished goods that will be consumed by business enterprises. As the company is producing industrial products, so to increase the sales in a short period, it follows trade promotional activities in its marketing and business operations.

The prime objective of trade promotion is to push the product through marketing intermediaries and also to get them to market the product aggressively. Trade sales promotions are "push" strategy of the manufacturers. The tools of trade promotional activities, which are follows as below:

(I) Trade Allowances/ Display allowance:

The purpose of trade allowances is to offer financial incentives to resellers in order to motivate them to make a purchase. The types of allowances, which are offered to retailers, are buying allowances and promotional or display allowances. Buying allowances are financial discounts given to resellers in the form of price reduction on merchandise ordered during a fixed period. Theses discounts are in the form of Off-invoice allowance, which means a certain per case amount or percentage is deducted form the invoice. Promotional or display allowance can be given to retailers for performing certain promotional or merchandising activities in support of their brands. Companies gives trade allowances in the form of trade commission.

(II) Buy-Back Allowances / Incentive for additional stock:

In this kind of sales promotion, the channel members are offered a monetary incentive for each additional unit purchased after the initial deal. This method aims at stimulating the channel members to purchase additional quantities of stock that is over and above the normal stock, as the monetary incentive they receive is proportional to the amount of additional stock they purchase.

(III) Contests and Special Incentives:

Companies organise trade contests and provide special incentives to stimulate greater support and selling efforts from dealers and sales people to achieve sales targets, and other objectives. The dealer or retailer incentives are as follows:

i) Cash bonuses: It is in the form of one extra case for every number ordered. It will encourage volume sales, period stock building, display or in support of a cut-price to consumers.

ii) Credit terms: It is provided to support promotions aimed at bulk retail buyers.

iii) Staff incentives: It is the payments or prizes provided by manufacturers for the attainment of particular promotional targets.

(IV) Sales Training Programme: - Company imparts sales training programs to the members of the sales staff at a retailer location or to wholesalers. Impart of training and investment in a skilled workforce has helped the company to enhance its services in a better way than it provides. The company has been organising training programmes aimed at developing managerial competencies of its marketing executives. A series of workshops are being conducted in every year to enhance the salespeople's technical and human relations skills with the focus being on bringing effectiveness in Management systems.

(V) Sales Force Incentives and Sales Meetings: Companies have taken sales force incentives policies to motivate its salesperson to put in more efforts to increase sales, increase distribution, promote new or seasonal products, sell more deals to resellers and develop prospects list. According to them, they are:

- (i) to increase sales volume,
- (ii) to increase sales of specific products,
- (iii) to reduce high inventory,
- (iv) to introduce new products,
- (v) to balance seasonal sales variations,
- (vi) to gain new accounts,
- (vii) to reactivate old' customers and
- (viii) to decrease credit exposure.

Company's sales meetings are generally held periodically. These meetings bring together its sales people from different territories, which are considered a popular way of educating sales people. Training manuals and programmed learning books are

provided to sales people, which are very much useful education and learning. The sales manuals contain product details, applications, manufacturing processes, prices, sales techniques and others.

Sales people also receive this company's in-house journals and magazines, which provides the information about company programmes and policies, new products arrival, research activities, etc.

(VI) Trade Shows and Trade Fair: A trade fair, show, or exhibition is a temporary exhibit, generally held at some interval in a major city. Company organises and actively participates in trade shows to offer the opportunity to discover potential customers and to sell new products. The relationships with current customers can be strengthened at a trade show. From the retailer's perspective; a trade show allows the prospective buyers to compare products and to make contacts with several prospective manufacturers in a short period of time. Therefore, it is an ideal place for buyers and sellers to meet in an informal, low-pressure setting to discuss how to work together effectively.

In designing the sales promotion strategies, it starts with situation analysis. This includes product or brand performance analysis, competitive situation including the promotional activities taken by major competitors, distribution situation and consumer behaviour with respect to sales promotion. Political, legal aspects concerning sales promotion are also considered. Based on marketing objectives and strategies, the promotional objectives will be developed. The next step is the allocation of budget to sales promotion, out of the combined total budget for advertising and sales promotion. Considering the objectives and the budget allocation, each promotional tool, which will be implemented at Companies marketing operations, must be carefully selected. Each promotion tools has its own advantages and disadvantages and these may change when different tools are combined. A clear understanding of various tools and techniques is essential for the marketing managers of Chemical industry to make the winning choice from among alternatives.

Chapter No.2.3
Profile of Pune District

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Chapter No.2.3

Profile of Pune District

2.3.1 India profile:

Diagram 2.3(a) India map



Source: www.mapsofindia.com

India is a country set in southern Asia. With over 1.2 billion individuals, Republic of India is that the most thickly settled democracy within the world. it's a federal constitutional republic ruled beneath a parliamentary system consisting of twenty-nine states and seven union territories. All states, further because the union territories of Puducherry and the national capital Territory of Delhi, have elective legislatures and governments. The remaining five union territories are directly governed by the centre

through appointed administrators such as Governor of respective states as well as Union Territory.

The chemical industry of Republic of India accounts for concerning 13% share within the producing outputs and around 4.3% in total exports of the country. The industry contributes around 20% of national revenue by means of assorted taxes and levies.

In India various states are manufactured the Chemicals, out of which Gujrat which is the chemical hub, produces higher than other states and 53 % of production share, Maharashtra – 9 % production share, Uttar Pradesh- 6 % of production share, Tamil Nadu – 6% of production share, Madhya Pradesh – 5% of production share, Punjab – 4% of production share and other states 17 % of production share.

Source: 1.India- Chem , TATA Strategic Management Group

2. Gujrat Manufacturing sector profile.

2.3.2 Maharashtra state:

Diagram 2.3(b) Maharashtra state map



Source: www.mapsofindia.com

Maharashtra state set on the western coast of India. Maharashtra is situated in Western a part of India. Maharashtra is India's third largest state by space and second largest by population. Maharashtra is lined by the Arabian Sea to the west, Gujarat and therefore the Union territory of Dadra and Nagar Haveli to the northwest, Madhya Pradesh to the northeast, Chhattisgarh to the east, Andhra Pradesh to the southeast, and state to the southwest. The state covers a vicinity of 307,731 km² (118,816 sq mi) or 9.84% of the whole region of India. Mumbai, the capital town of the state, is India's largest town and therefore it is money capital of the state and the financial capital of the India. Marathi is that the official and most generally auditory communication.

Maharashtra: An Economic Powerhouse of India

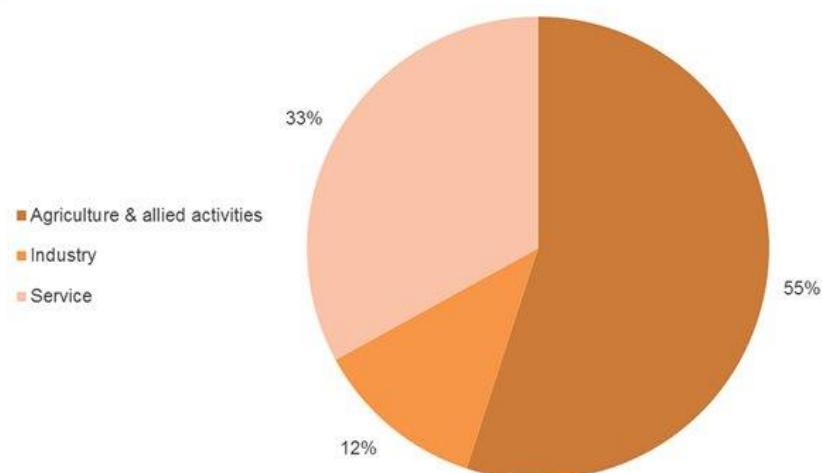
Maharashtra is set in western and central India, dominating the Arabian Sea with a outline of nearly 720 kilometres. The city Mumbai is currently the country's money capital and industrial hub. Mumbai's role as a producing centre has modified over time, with some low-value-added factories bit by bit spreading from town to alternative components of geographical region, most of the companies approaching / preferred Pune and Thane as manufacturing center, due to rising cost of land and labour prices. Maharashtra houses the largest container port in India, the Jawaharlal Nehru Port Trust (JNPT), located east of Mumbai. With its cargo surrounding covering Maharashtra, Gujarat, Madhya Pradesh and Rajasthan, the port handles about 60% of the country's Twenty-foot equivalent unit (TEU). JNPT is also the terminal of the Dedicated Freight Corridor (DFC) of the Delhi Mumbai Industrial Corridor, an ambitious infrastructure and urbanisation project of India's central and state governments, which will likely be completed by 2040.

Maharashtra is the Biggest Economy among Indian States

Maharashtra is the top Indian state in terms of Gross State Domestic Product (GSDP) at constant prices, official for about 14% of India's Gross Domestic Product (GDP). The state's annual GDP growth rate also the top nationally at 11.1% on average between financial years 2004-05 and 2014-15, while Maharashtra's economy is mostly oriented around services, which contributes about 55% of the state's GDP, the manufacturing sector contributing about 33% of GSDP. *Source: Economic survey of Maharashtra 2015-16*

Diagram 2.3 (c) Composition of Maharashtra GDSP

Composition of Maharashtra's GDSP 2014-2015



Source: Economic Survey of Maharashtra 2015-16

Source: Economic survey of Maharashtra 2015-16

Apart from being the largest economy among Indian states, Maharashtra is also the top exporting state, contributing about 23.9% of India's total exports. Major exports are chemicals, textiles, metal products, engineering items, Automobile, plastic items, pharmaceutical products and software.

Maharashtra's Industry Development and Outlook

Maharashtra is a main modern state in India, its key commercial ventures including gadgets, data innovation, vehicle assembling and materials. These commercial enterprises are all around situated to pull in FDI. Maharashtra's economy has incredible potential for further development given the proceeding with cooperative energy expected between its major modern urban communities and Mumbai, the state capital which has for some time been India's middle for monetary and business exercises. In the interim, Pune, Thane, Nagpur and Solapur are Maharashtra's significant business and modern focuses, with Pune and Solapur chose to be the pilots under the "Smart Cities Mission" to enhance the state's foundation and business sector feasibility. In the event that viably executed, the activity will assist improve Maharashtra's modern ability and capacity.

The real commercial enterprises in Maharashtra, with mechanical zones scattered over the state and exceedingly amassed in Mumbai, Navi Mumbai, Pune and Nagpur. The Supa Industrial Zone in Pune, which has accommodate 27 Japanese companies, shows Maharashtra's success in attracting FDI. The Shendra Bidkin Mega Industrial Parks and Dighi Ports Industrial Area are the two centered advancement territories under the Delhi Mumbai Industrial Corridor (DMIC) program. Moreover, Maharashtra is a moderately well off state with per capita state pay more than half higher than the national normal. Maharashtra itself speaks to a quickly developing business sector with solid nearby demand.

Development of Chemical Industry in Maharashtra

The Indian chemical industry is imbedded in Maharashtra. A mid FY07, the generation of real chemicals in the state was 565,481 MT. Around the same time, synthetic generation limit of 17,928 MT was included that took and the aggregate introduced limit expanded to 1.02 MMTPA. Under the National Industrial Classification, the substance business incorporates essential chemicals and its items like petrochemicals, composts, paints, varnishes, gasses, cleansers, fragrances, toiletries and pharmaceuticals. With the end goal of the group and industry examine, the compound business is characterized into five noteworthy fragments and these are as per the following: soluble base, inorganic chemicals, natural chemicals, pesticides, and colors and dyestuff. As needs be, any reference made to the Indian concoction industry hereon will incorporate the data on these five noteworthy fragments only.

2.3.3 Pune District:

It is situated in Maharashtra condition of India. Pune city is the locale central command. In the latest statistics on 2011, the aggregate populace of the area was 9,426,959, making it the fourth most crowded region in India. Urban populace contains 58.08% of the aggregate populace. The present populace of Pune urban agglomerate is more than 5 million.

Pune District is in the western area in Maharashtra in India. It is limited by Thane District toward the northwest, Raigad District toward the west, Satara District toward the south, Solapur District toward the southeast, and Ahmednagar District toward the north and northeast. Pune area lies in the Western Ghats of Sahyadri Mountain. Pune remains on the protected side of the Western Ghats. Pune is at an elevation of

559m.(1863 ft.). Pune region is situated between 17.5° to 19.2° North and 73.2° to 75.1° east. In Pune region, there are two metropolitan enterprises, in particular Pune Municipal Corporation (PMC) and Pimpri-Chinchwad Municipal Corporation (PCMC).Pimpri Chinchwad is situated at the West of Pune city, touching the Pune-Mumbai National interstate. . The said range is produced by MIDC as a industrial zone.

Diagram 2.3(d) Pune district map



Source: www.mapsofindia.com

Location:

Pune region goes under the basic zone (provisional belt) and arranged at a height of 55717 meter over the mean ocean level. The Sahyadri keeps running in the north-south heading of the locale over a separation of above 115 km³. Pune locale flanked by Ahmednagar region in the north, Solapur and Satara regions in the south, Ahmednagar and Solapur regions of the east, Raigad and Thane area of the west.

Area:

Pune district occupies an area of about 15642 sq. km, which is 5 percent of the total area of Maharashtra state, out of which 15021 sq. km. comes under rural area and 621 sq. km comes under urban area. The district has 1844 villages, 1234 grampanchayats, 13 panchayat samitees, 11 councils, 2 Municipal corporations, 3 cantonment boards and 13 tehsils namely Ambegaon, Baramati, Bhore, Daund, Haveli, Indapur, Junnar, Khed, Maval, Mulshi, Purandar, Shirur and Velha. Among the 35 districts of the state Pune ranks 2nd in terms of space, 3rd in terms of populations and 4th in terms density.

Population of Pune district:**Table 2.3(a) Population of Pune district**

S. No	Population	
1	Male	4924105
	Female	4505303
	Total	9429408
2	Literacy rate	86.15%
	Male	90.84
	Female	81.05

Source: Census of Pune district, 2011

2.3.4 Education, Industry and Employment:

Pune is a developed district by industry as well business. The automobile and communication offices accessible here have added to the advancement of businesses. Pimpri-Chinchwad, Chakan, Baramati, Jejuri, Daund, Ranjangaon, Shirur have modern territory, while Hinjawadi and Talawade have IT park. Pimpri-Chinchwad belt is a standout amongst the most industrialized zones in the country. Vehicle parts makers, building merchandise and material assembling units are the significant businesses in Pune. Additionally, there are around seven sugar manufacturing units. The region additionally has co-agent and extensive scale businesses. Pune place has turned into a centre point of IT administrations with IT mammoths building up their workplaces in the area. These businesses, alongside the horticulture and government segment, give impressive measure of occupation to the populace in the area and also in the connecting areas.

2.3.5 Industrial Developments in Pune District:

According to DIC (District Industrial Corporation, Pune) the total industries such as MSME (Micro, Small, Medium Enterprises) their investment & production capacity up to January, 2014.

Table 2.3(b). Industrial Developments in Pune District

Division as per NIC , 2004	Industry Group Description	No. of Enterprises	Employment	Investment Capacity Rs. In Lakh
17	Manufacture of Textile	104	1187	2076
21	Manufacture of paper & paper products	427	3601	10272
24	Manufacture of Chemical & Chemical products	1060	6868	19443
25	Manufacture of Rubber & Plastic	1574	10198	29624

	products			
26	Manufacture of other Non- Metallic Mineral Products	943	7208	20641

(Source - District Industrial Center , Pune , Format – V)

Pune District: www.Maharashtra.gov.in

2.3.6 Major Chemical industries in Pune District:

Table 2.3 (c). Major Chemical Industries in Pune District

S.No	Name of the Chemical Industry	Area
1	Sudarshan Chemical Ltd.	Pune
2	Deepak Nitrite Ltd.	Pune
3	Thermax Chemicals Ltd.	Bhosari, Pune
4	Dai-ichi Karkaria Ltd	Kasarwadi, Pune
5	Hindustan Polyamide and Fibre Ltd	Kurkumbh, Pune
6	Alky Amine Ltd.	Kurkumbh, Pune
7	Ajay Metachem Ltd.	Mundhva, Pune
8	Champion Organics Ltd.	Kurkumbh, Pune
9	Associated allied Chemicals (I) Ltd.	Kurkumbh, Pune
10	Subhash Chemicals India (p) ltd	Bhosari, Pune
11	Demech Chemical product(p) ltd	Bhosari, Pune
12	Mass Dyechem pvt. Ltd	Bhosari, Pune
13	Deccan Dyes and Chemical Industries	Majari , Pune
14	Aquapharm Chemicals pvt. ltd	Pirangut, Pune

15	NALCO	Pirangut, Pune
16	Accordd Organics Pct. ltd	Bhosari ,Pune
17	DBS Chemicals Pvt. Ltd.	Bhor, Pune
18	Praj Matrix	Urawade, Pune
19	Dimple Chemicals Pvt. Ltd	Urawade, Pune
20	Gauri fine chemicals	Bhosari, Pune
21	Elkay Chemicals Pvt. Ltd	Bhosar, Pune
22	Canpex Chemicals Pvt. Ltd	Sanswadi, Pune
23	Rehau Polymers pvt. Ltd	Khed, pune
24	Rama Krishi Rasayan pvt. Ltd	Loni-Kalbhor, Pune
25	Sujalam Chemicals Pvt. Ltd	Kurkumbh, Pune
26	Bhushilpa Pvt. Ltd	Kurkumbh, Pune
27	Suyash Organics Pvt. Ltd	Kurkumbh, Pune
28	Mahatme Dye chem. Pvt. Ltd	Kurkumbh, Pune
29	Explicit chemicals Pvt. Ltd	Kurkumbh, Pune
30	Vinamax organic Pvt. Ltd	Kurkumbh, Pune
31	Greenyug Chemicals	Bhosari, Pune
32	Shivam Enterprises	Bhosari, Pune
33	Kumbha Chemicals Pvt. Ltd	Kurkumbh, Pune
34	Monarch Chemicals Pvt. Ltd	Kurkumbh, Pune
35	Kulkarni Organics Pvt. Ltd	Kurkumbh, Pune
36	Halidas Chemicals Pvt. Ltd	Kurkumbh, Pune

37	Datta Hydro Chem Pvt.Ltd	Kurkumbh, Pune
38	Shiv Shakti Oxalate Pvt. Ltd	Kurkumbh, Pune
39	Melzer Chemicals Pvt. Ltd	Kurkumbh, Pune
40	Champion Organics Ltd	Kurkumbh, Pune
41	Aarushi Specialty Chem (p) Ltd.	Bhor, Pune

Chapter No.2.4

Problems & Prospects of Chemical industries in Pune district

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Chapter No.2.4

Problems & Prospects of Chemical industries in Pune district:

2.4.1. Problems of Chemical Industry:

Indian Chemical area has grown a small scale segment to multi-dimensional division, which is going up against the difficulties of globalization. Presently, compound industry holds a perceived position in the worldwide guide, notwithstanding, there are few elements, which obstructs the development of the business, these include:

1. The Chemical industry is showing the declining marginal stage, Profit after tax (PAT) is decline also decline in profitability which is due to non-availability of finance for capital reinvestment.

S. No	Year	PAT (%)
1	1995	9
2	1998	2.8
3	2001	0.4
4	2010	0.08
5	2014	0.02

Source: CMIE Economics Intelligence series

2. Globally companies spend averagely 18.5 % of Net sales on Research and Development (R&D), but Indian companies spend only 2% of Net sales on Research and Development, this indicates the less focus on R & D.

Source: KPMG research

3. Cost and profit build up is unattractive, higher in Indian context as compare to the International competitors, below given data shows:

S, No	Particulars	India	Int. Competitors
1	Raw material	65%	45%
2	Energy cost	8%	3%
3	Total fixed cost	10%	8%
4	Profit margin	8%	40%

Source: Task force of Chemicals, Ministry of Chemicals and Fertilizers, Government of India.

4. Cost disadvantages:

Cost such as financial rate of interest, local taxes such as VAT, Sales tax, Excise duty also the import duties are much higher than the other county.

S, No	Particulars	India	China	Thailand	Indonesia
1	Rate of Interest	12%	6%	4%	10%
2	Local taxes	18%	16%	8%	9%
3	Import duties	36%	10%	10%	5%

Source: Task force of Chemicals, Ministry of Chemicals and Fertilisers, Government of India

5. Insufficient production capacity due to low capital formation, which can feed only in house consumption, hence less focus on export.

6. Per capita consumption of chemical products in India is much below consumption levels as compared to developed countries, this abysmal performance is unexpected, when Indian Economy is one of the fastest growing in the world.

S, No	Particulars	India	World
1	Plastics	3.0%	17%
2	Synthetic rubber	0.2%	2.1%
3	Synthetic fiber	1.6%	4.0%
4	Polymers	1.8%	17%

Source: Scope report on the Indian Petrochemical Industry

7. Poor framework, absence of sufficient offices at ports and railroad terminals and pipeline network makes it hard to transport feedstock and in addition completed merchandise, consequently cost of item expands, local makers are

confronting trouble in obtaining crude materials at a cost aggressive with the worldwide companions, coming about into higher assembling costs.

8. All this is culminating into following situation that Export of chemicals is 6.69% against Imports 13.68% CAGR, resulting in to trade deficits in Indian account.

Source: 1. Chemicals and Petrochemicals statistics at a glance: 2015

2. Ministry of Chemicals & Fertilizers.

2.4.2 Various Measures to be taken by Manufacturer:

i) Utilization of bio-based crude materials as an approach to decrease reliance on raw petroleum based items. The bio-based crude materials could be bio-ethanol from agro squanders and molasses for substance feedstock and Glycerine.

ii) National level exploration research facilities, for example, NCL (National Chemical Laboratory) and IICT (Indian Institute of Chemical Technology) ought to take activities towards process improvement for business items, for example, Propylene glycol to frame bio-ethanol from agro-waste, a key asset for the future and of specific importance to India.

2.4.2(a) Chemical clusters:

Chemicals units are spread all through the India because of different impetuses plans are offered by the particular State Governments. There is a need to shape groups with procurement of basic framework offices to address the requirements of normal emanating treatment, transport linkages, including streets, and so forth to give backing to mechanical development. There is a critical need to assemble better foundation and give sufficient power and water supply. The concoction business faces different difficulties identified with safe transportation of items. Framework is deficient as for legitimate storerooms which are valuable for persistent fares.

2.4.2(b) Taxes/ duties and energy cost issues:

Chemical industry has been watching the Customs Duty decrease administration amid the most recent decade, yet the rate of assessments, viz. Focal Excise and VAT keeps on being moderately higher when contrasted with numerous Asian Countries.

2.4.2 (c). Electricity Duty and Power Cess on Power:

Electricity duty and power cess, collected by states on hostage power created and in addition power supplied, it differs from NIL in a few states to as high as 10 to 40 paisa for each unit in different states like Himachal Pradesh, Uttarakhand and Gujrat, adding spirally to cost of generation as these are not VATable. These assessments and tolls, forced by the State Government could be made VATable.

2.4.2(d) Research and Development:

Research and Development (R&D) is basic for the development and improvement of any area. Research and development helps the business to stay aggressive in the worldwide ground. To meet the advancing buyer prerequisites and to contend all inclusive, the industry would need to expand R and D spending considerably from existing 2% to no less than 5-6 % on net sales. Along these lines industry needs to adapt to confront the difficulties of item patent association.

2.4.2(e) Human Resource development:

Human resources are considered more vital than physical resources. India has around 170 institutes, including IITs, NITs and Universities, which have Chemical Engineering Departments, offering programmes in this discipline. These institutes produce approximately 11,000 chemical engineers every year. However, according to IChE (Indian Institute of Chemical Engineers), there is still a shortage of qualified faculty to provide chemical education in India. It is required to take some urgent steps to strengthen technical education in the country and to establish newer institutes with good facilities.

Towards this end, the following steps would be taken to put in place an HRD ecosystem:

- a) Assess the manpower requirement at different skill and expertise levels by partnering with “National Skill Development Council” and industry to identify the relevant needs of the sector and prepare a roadmap,
- b) Create an enabling framework in partnership with Ministry of Human Resource Development (MHRD) to periodically upgrade academic curriculum of courses, which are aligned with the technological advancements in the sector for meeting the human resource requirement,
- c) To form a high level Apex body (supported by advisory groups comprising representatives from industry, academia,) to oversee and to act as guiding and enabling source for all aspects relating to skill development in chemical field.

For promoting quality training and capacity building for bridging the talent gap for development of the sector, the strategy would be as follows:

- i) To promote and supplement training institutes in urban and rural areas to provide skill and training needs of the sector. Govt. would set up ITIs, vocational training institutes, etc. to develop skill base in chemical field.
- ii) Collaboration between Government and industries is to be promoted to upgrade the current chemical departments in universities to the status of the state-of-the-art departments (in terms of infrastructure, faculty qualifications, industry interaction, and administration), and to set up specialized universities, which will, inter-alia, run courses such as B.Sc. / B. Tech in specialized chemicals fields like dyes & pigments technology, etc. To encourage collaboration with premier educational institutes like IITs and chemical institutes of excellence for bridging the gap between research/ academics and field problems.

2.4.2(f). Promotional Issues:

Industrial Trade Fairs and Exhibitions

The Industrial Trade Fairs and Exhibition would effectively encourage and bolster the showcasing and association of significant presentations and occasions keeping in mind the end goal to give a stage to the Indian synthetic makes to show case their qualities.

2.4.3 Expectation of Chemical manufacturer from Government:

1) Additional concessions required to boost R&D in chemical sector:

For Indian Chemical industry to wind up all-inclusive focused there must be more noteworthy accentuation on advancement and R&D. Foundation of R&D offices is exceptionally capital serious. Despite the fact that India has procured high position in Specialty Chemicals, Fine Chemicals and Agrochemicals. But industry's consumption on R&D is scarcely 2% of its net turnover. This is low contrasted with other nations where it ranges from 16% to 18% contingent upon particular segments. To be all around focused, Indian chemical industry needs to put resources into R&D and ceaselessly grow new items and new advancements. This will require impressive venture. Indian chemical industry consequently needs money related motivations to seek after the course of development as:

- Soft advances at lessened loan costs with longer reimbursement periods
- Zero Import Duty on capital merchandise imports for R&D exercises to support R&D, Government ought to expand wage charge exclusion of 200% of consumption in R&D.
- Companies spending on R&D get tax reduction. However, no advantages are accessible after dispatching of the item, to offer support to R&D spent, it is vital that benefits on new items propelled are given some tax advantages, in any event at first for a long time.

ii) A Fund for Small & Medium sized Enterprises (SEMs) in Chemical Industry:

Indian Chemical industry contains numerous small and medium sized organizations. Commitment of SMEs to the nation's chemical industry as far as generation is assessed at around 40%. Nonetheless, given the constrained channels for getting to reserves at focused rates, SMEs have been thinking that it's hard to overhaul their innovation. Actually, SMEs face specialized imperatives as well as labor confinement with accessibility of value labor being a noteworthy issue. With a noteworthy business sector potential abroad, these SMEs needs to rise the worth connection in order to tap the open doors in foreign markets. For this, they would need to comply with the different tenets, controls and great practices common abroad. An appropriate fund could be considered by the Government on the lines of the innovation up-degree reserve. The asset could likewise be used to get to outlines, licenses, procedures and innovation, such an activity will go far in making the business, especially SMEs, focused and confident.

iii) Brand Development:

Indian Chemical makers, aside from a couple of expansive makers, by and large offer their items as fundamental items without brand advancement. There is likewise low level of enthusiasm among small scale makers for brand improvement, product advancement as business sector advancement. To expand their brilliance, compound firms could embrace brand building activity, to deal the product more and to support in the business sector, wherever they have the chance to penetrate the business sector.

2.4.4 Future Prospect of Chemical Industry:

The Indian Chemical industry is formed for development, and an obviously characterized vision has been produced to empower it vision for Indian Chemical Industry is to just the development and improvement of the Chemical Industry in a natural amicable way with spotlight on advancement to address neighbourhood issues, supportability, and green advances and procedures, to empower it to end up a comprehensively aggressive real player.

Two unmistakable situations for the fate of the Indian compound industry would develop.

a) The traditionalist situation, with a general GDP development rate of 5 p.a., the Indian chemical industry could develop at 8 % p.a. to achieve the turnover of \$224 billion by 2017. Be that as it may, the Indian chemical industry could seek to develop a great deal more, and its development potential is constrained just by its targets and creative abilities.

b) The hopeful situation of high end–use request, taking into account expanding per capita utilization, enhanced fare aggressiveness and resultant development sway for every sub-area of the chemical business could prompt a general development rate of 15% p.a. to achieve turnover of \$290 billion by 2017. This would require the business to successfully take care of its local demand as well as accomplish the immense fare market potential.

The advancement of the substance business all inclusive gives significant pointers to see how nations/areas have guaranteed development.

For instance –

The Japanese invention industry became essentially in light of government activities, for example, low loan costs, approaches to energize imports of crude material and innovation as opposed to completed items and put resources into setting up of vast petrochemical edifices. This was supplemented by R&D centre specifically from the late 80s till today, essentially "developing" out of the less good position around then.

Indian chemical industry could draw motivation from these cases and give the important push to improvement of claim to fame chemicals industry to sidestep feedstock accessibility challenges.

Indian chemical industry is required to enlist a development of 8-9% in the following decade and is relied upon to twofold its offer in worldwide compound industry to 5-6% by 2021. Indian Chemical industry can possibly become altogether given a portion of the key development goals are dealt with securing Feedstock, Right Product Mix, Merger and Acquisition open doors are as of now the key essentials for compound industry in India. Few venture open doors can be highlighted as:

- Chemical organizations in India can either investigate substitute feedstock or put resources into setting up plants in asset rich countries to secure feedstock.
- Indian organizations can investigate conceivable Merger, Joint Venture open doors for innovation, capital or access to universal business sector by exploiting expanding extension with different organizations in India.
- Companies can put resources into up and coming Petroleum Chemical and Petro chemicals Investment Region (PCPIR) in India and defeat challenges identified with base, power and water accessibility.

2.4.5 Facts of Indian Chemical Industry

a) Inorganic Chemicals:

- Market size – US\$260 million
- Growth rate – 9%
- 4.5% of global market
- Mainly used in detergent, glass, soap, fertilizer and alkalis.

b) Agro Chemicals and Fertilisers:

- Domestic market size – US\$88 million
- Domestic market growth rate – 10% annually
- 2.5% of the global market.
- In India, insecticide commands major share 76%.
- Globally, herbicides commands major share 48% & insecticide only 29%.
- India is largest manufacture of basic pesticide chemicals among South Asia & Africa, next only to Japan.

C) Speciality & Fine Chemicals:

- Market size – US\$860 million
- Major used in textile, leather, paper, detergent, rubber,

- Paints, polyester, oil & gas.
- Growth rate – 10-12%.

d) Dyes & Paints:

- Market size – US\$110 million.
- Growth rate – 12%
- Indian market is 6% of the global market
- Major used in Paints, inks, textiles, polymers.
- Highly fragmented market.
- 25 large & medium players holding 50% of the market.
- Remaining 50% is with another small 2000 un-organized players.

e) Foreign Investments in India:

- Mitsubishi Chemical Corporation, Japan
- BASF, Germany
- Akzo Nobel , Netherland
- ADEKA, Japan
- Dupont, USA
- Dow Chemicals, USA
- Syngenta, Switzerland
- Croda, UK
- Rohm and Haas, UK
- Dystar, Germany
- Henkel, Germany
- Rhodla, Belgium
- Wacker Mettoart, Germany

Chapter No.3

Research Methodology

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Chapter No. 3

Research Methodology

3.1 Introduction:

Research is a "Systematic, controlled exact and basic examination of thought suggestions about the assumed relations among common wonders. "Research is the procedure of a detailed precise and top to bottom study of a specific point, subject or area of examination, sponsored by the accumulation, arrangement, presentation and clarification of significant delicate elements .

The Advanced Learner's Dictionary of momentum English sets out the research as 'a cautious examination or request exceptionally through search for new actualities in any branch of information'.

Lundberg (1942) expressed 'Experimental techniques comprise of orderly perception, arrangement and understanding of information. Fred Kerlinger (1986) approved the idea and expressed that 'Logical research is an efficient, controlled and basic examination of suggestions about different wonders.' Grinnell (1993) has streamlined the level regulated discussion and expressed "The word research is made out of two syllables, re and hunt.

Research philosophy is imperative piece of research. As indicated by C.R Kothari 'Research strategy is the route in which research subjects are understood efficiently'. It is an investigation of focus, how research is led deductively under it, the researcher familiarizes himself with the different steps for the maximum part received to consider a research issue, alongside the hidden logic behind them. Subsequently, it is just critical for the researcher to know the research procedures or strategies and additionally the logical system.

Research Methodology is an approach to efficiently take care of the research issue. It might be realized as an art of concentrate, how research is done deductively in it different steps are embraced in considering research issue alongside rationale behind them. It is important for the researcher to know the research strategies, systems as well

as the approach. Researcher not just need to know how to build up certain records or tests , how to ascertain mean, the mode, the middle or the standard deviation, how to apply specific research system, however they likewise need to know which of these strategies or method are pertinent and which are not and what might they mean and demonstrate (C.R Kothari,2011)

As indicated by Deepak Chawla (2011), Research technique is a pivotal part of any research program. Research Methodology comprises of each one of those strategies, devices and systems, which are utilized for completing the research work. It is by and large embraced by the researcher to clarify the research issues, the rationale behind the determination of strategies and systems for accumulation, examination and understanding of information in order to think of an acceptable answer for the issue imagined. A very much arranged technique can make profitable commitment to the nature of the research work allowing complex examination and understanding yielding important data. In our perspective, a logical research includes an examination concerning an issue or a miracle for development or change of information for a ultimate advantage of the humankind. Inventor watch that a logical examination, to be precise, ought to be founded on a sound hypothetical structure and an all-around outlined approach for an orderly investigation of the issue, gathering and accumulation of information, their investigation and translation lastly a collection of discoveries, perceptions and solid conclusion.

The research will be founded on a careful information accumulation with the assistance of survey technique, information investigation, information understanding and report composing of related subject topic "A study of marketing mix strategies with reference to chemical industries in Pune district".

3.2 Objectives of Study:

The following are the objectives for the purpose of study

1. To study the marketing mix strategy of Chemical Industries in Pune district.
2. To find out the problems of Chemical industries with relevance to the marketing mix strategy.
3. To identify the important methods of promoting sales for effective marketing in the present competitive environment.
4. To offer suggestions for designing better promotional strategies with a view to improving the overall performance of the company.
5. To gather the major suggestions from the manufacturer & end user.

3.3 Formulation of the Research Hypothesis:

Issue recognizable proof and detailing procedure is the phase of theories definition. Any supposition that the researcher makes on the probable bearing of the outcomes that may be acquired on finish of the research procedure is named as a speculation. Not at all like the research issue that goes up against an inquiry frame, the speculations is dependably in a decisive form.(Chawla, 2011).

As per Kerlinger (1986) speculation is as 'an approximate explanation of the relationship between two or more variables'. As per Grinell (1993), 'A theory is composed in a manner that it can demonstrated or disproven by substantial and dependable information it is keeping in mind the end goal to get these information that play out the study.

Speculation is a conditional guess clarifying a perception, exploratory issue that can be tried by further perception, examination and experimentation. It suggest the procedure of determination and utilizing an example insights to draw a derivation around a populace parameter in view of a subset of it, the specimen drawn from the area. Speculation emerges as an aftereffect of from the earlier considering the subject, examination of accessible information and material including related studies and the guidance of specialists and invested individuals. Speculation is more valuable when expressed in exact and unmistakably characterized terms.

Once the researcher comprehends what his subject problem then he can make a hypothetical assumptions. The guesses he makes are the model which either take care of the subject problem or guide him in further consideration.

The study proposed to test the following hypothesis –

- 1) There is no significant relationship between price consideration and impact on sales.
- 2) There is no significant relationship between the variation in the price and profit.
- 3) There is no significant relationship between product discount & consumers buying behaviour.
- 4) There is no significant relationship between number of distributors and increase in sales.
- 5) There is no significant relationship between promotion type & percentage increase in sales.
- 6) There is no significant relationship between year of establishment of company and with customer's choice to purchase product.

3.4 Sample size selection:

The extent of an example relies on the populace, the sort of data required from the study and the cost included. The span of the specimen ought not be too much enormous nor too minute, it ought to be ideal. On the off chance that the specimen size is substantial, then the careless mistake in settling on choices will be little. Be that as it may, it is an immoderate activity to do testing for substantial numbers, which is more than the essential number and could prompt a misuse of assets.

In inspecting, the right size of test, additionally minimizes the mistake in deciding. Henceforth, before inspecting, the general practice is to decide the specimen size for desirable exactness in light of the populace change.

As per data available from District Industries Centre (DIC), Pune

In Pune district total 1060 industries are manufacture of Chemicals and Chemical

products (**in the year 2014**) such as Dyes, Intermediate products as well as Specialty chemicals at Kurkumbh & Pirangut, Pimpri – Chinchwad, Bhor and Khed area, out of these researcher has selected 80 **industries** representing large, medium, small scale sector, by using the formula i.e – $n = t^2 \times (1 - p) / m^2$

Where n = sample size

t= confidence level at (95% = 1.96)

P= population

m= margin of error at (11% = 0.011)

Table 3.1 Sample selection

S. No	Particulars	Year 2014
1	Margin of error	11
2	Confidence level	95
3	Population	1060
4	Response distribution	50
	Total	80

3.5 Research Design:

The most essential stride in the wake of characterizing the research issue is setting up the outline of the research venture, which is the 'research plan'. Thyer (1993) states that " A customary research framework is a blue print or point by point arrangement for how a research study is to be finished operationalizing variables so they can be measured , selecting a specimen important to study, gathering information to be utilized as a premise for testing theories and analysis in minute detail comes out".

Claire Sellitz et al (1962) state that 'A research configuration is the course of action of conditions for gathering and investigation of information in a way that plans to consolidate significance to the research with economy in strategy'.

A research framework depends on a structure and gives a course to the examination being directed in the most proficient way. Research framework is the casing work that has been made to look for answers to research questions.

A research proposal settles on issues like what, when, where, how much, by what implies and so forth, with respect to an enquiry or a research study. A research

framework is the course of action of conditions for accumulation and examination of information in a way that intends to join significance to the research reason with economy in technique. Indeed, research configuration is the calculated structure inside which research is led, it constitutes the plan for the accumulation, estimation and investigation of information, in this manner, research framework gives a blueprint of what the researcher is going to do regarding surrounding the theory, its operational ramifications and the last information examination.

Without a research plan, research work gets to be unfocussed and careless, the researcher would think that its troublesome, hard and tedious to make satisfactory segregations in the mind boggling exchange of components before him, he will most likely be unable to choose, what is important and what is not, and may lose all sense of direction in a welter of extraneous matters. The utilization of a research outline keeps, this sort of a visually impaired hunt and aimlessness information assembling and goes about as a supporter for continuing in the right bearing and in knowing precisely what must be done and when it needs to be done at each stage.

A research arrangement supports the limits of research exercises and empowers the researcher to divert his energies in the right work. With clear research targets in perspective, a researcher can continue efficiently towards his objective. The configuration additionally empowers the researcher to envision potential issues of information gathering and assessments.

As indicated by F. Erlanger. Research design is the arrangement, structure and strategy of examination considered as to get answers to research question. The arrangement is the general system of research, the structure of research is, the diagram the plan, and worldview of the operations of the information. Any sort of research is a precise advancement. It requires a significant arranging in cutting edge. The arrangement ought to incorporate the precise succession of the research exercises, information gathering strategies, and so forth it is critical to figure a methodology of information accumulation. Research configuration will incorporate the precise arrangement of the research exercises, information gathering procedures, and so on it is imperative to detail a methodology of information accumulation. Consequently, research outlines have a basic and order part to play in the research design.

3.5.1 Descriptive Research Design

Descriptive research studies are those studies which are concerned with describing the characteristics of a individual or of a group, whereas diagnostic research studies determine the frequency with which something occurs or its association with something else. Descriptive designs provide a comprehensive and detailed explanation of the phenomena under study. It can be further divided into:

1. Observational: Viewing & recording the participant.
2. Case study: In depth problem solving study of group of individual.
3. Survey: Interview, discussions, expectation and opinion of an individual about a specific topic.

3.5.2 Exploratory Research Design

The principle reason for such studies is that of detailing an issue for more exact examination or of building up the working speculations from an operational purpose of view. The fundamental target of the study is to investigate and acquire clarity about the issue circumstance. It is adaptable in its methodology and generally includes a subjective examination. It is the least complex and most approximately organized.

Research conducted for a problem that has not been clearly defined. It helps to regulate the best research design, data collection and selection of subject.

3.5.3 Data Collection Method

The task of data collection begins after a research problem has been defined and research design checked out. While deciding about the method of data collection to be used for the study, the investigator should keep in mind two types of data i.e. primary data and secondary data.

Sources of Data: To get information for study, it has been collected from the various sources that are -

a) Primary Data Sources:

Primary sources are unique sources from which the researcher specifically gathered information that has not been beforehand gathered. Primary sources empower the researcher to get as close as could reasonably be expected to what really happened and is hands on. A primary sources mirrors the individual perspective of a member or eyewitness. The primary information are those which are gathered a new and interestingly, and in this way happen to be unique in character for the particular

destinations and requirements spelt out by the researcher. The realness and relevance is sensibly high. Real wellsprings of primary information through the survey. There are different techniques for gathering primary information especially for this study perception strategy, meeting, telephonic meeting, mail and poll strategy is chosen.

i) Observation method:

This strategy for information accumulation is a standout amongst the most proper techniques to use, if there should be an occurrence of spellbinding research. The occasion being watched may include a live perception and reporting or includes review and recording people, gatherings, associations in an investigative way with a specific end goal to gather important information identified with the point under study.

The method of perception institutionalized and organized organization, the nature of elements are to be recorded and the configuration and the expansive territories of recording are foreordained. Along these lines, the eyewitness' inclination is diminished and the genuineness and unwavering quality of the development gathered is higher.

The perception technique is the most generally utilized strategy particularly as a part of studies identified with behavioural sciences. Perceptions turns into a logical instrument and technique for information gathering for the researcher, when it fills a figured research needs, is efficiently arranged and recorded and is subjected to checks and controls on legitimacy and dependability. Under the perception strategy, the data is looked for by method for examiners own immediate perception without asking from the respondent.

ii) Questionnaire method:

With a specific end goal to make the survey compelling and to assured quality to answers got, researcher had paid consideration on the inquiry succession in get ready poll. The inquiry arrangement must be basic, clear and smooth moving significance in this manner that the connection of one inquiry to another ought to be promptly evident to the respondent, with inquiries that are less demanding to answer being placed at the outset. In this strategy a survey is sent to the people concerned with a solicitation to answer the inquiries and return the poll. The polls were separated into one and only segment, the survey was not pertinent to client on the grounds that the last result of one

organization is the crude material of other organization. The layout of the polls can be clarified as under

a. Questionnaire for Manufacturer - It is divided into following sections as

I. Various products manufactured.

II. Behaviour of the customer to purchase the product.

III. Geographic wise sales.

IV. Impact of price on sales and profit.

V. Effect of media for product promotion.

VII. Distribution strategy

Structured questionnaires are simple to administer and relatively inexpensive to analyse. The provision of alternative replies, at times, helped to understand meaning of question clearly. Questionnaires consist of printed questions in a definite order on a form or set of forms. Questionnaires has a number of one-off questions (with 'yes' or 'no' answers) are known as closed ended questions and are acceptable to include in questionnaire as long as they balance with the number of closed ended questions those that offer a short or multiple choice answer.

There are several types of questionnaire and each is designed to explore different aspects or elicit different responses. Some of the more common include-

a) Multiple choice and Likert scale.

b) Open ended and close ended.

These can be used in any combination as long as the questionnaire is short and it is focused. The questionnaire prepared by researcher with the help of the following data

Multiple choices: This is a question offering four or more answers, and allows a greater breadth of response. In this type of question the respondent is asked to rate the importance of a question to them.

Likert scale: This question examines how strongly the respondent agrees with a statement and can help assess the feelings of customers towards issues.

b) Secondary Data Sources:

The secondary sources comprises of promptly compilations and as of now ordered measurable proclamation and reports whose information might be utilized by researcher for their studies.

Secondary information is information that is neither gathered straightforwardly by the client nor particularly for the client, it might be accessible from inward sources, or may have been gathered and distributed by another association, it is lesser expensive and more speedily accessible than primary information, yet needs handling before it is helpful. Since the information has been gathered for another reason by another person, it may not be completely helpful, the setting could have changed or information could have been treated.

Secondary information are what have as of now been gathered and investigated by another person and which has been gone through the measurable procedure.

The secondary distributed information are:

- a) Various publication of the central, state and local governments,
- b) Various publications of foreign governments or international bodies.
- c) Technical and trade journals,
- d) Books, magazines, newspaper,
- e) Financial reports and publication of various associations connected with business and industry, banks, stock exchange etc.
- f) Reports prepared by research scholars, universities, economists etc.
- g) Internet, which was helpful for initial planning of the sample.
- h) Public records and statistics, historical documents, and other sources of published information.

3.6 Sampling Design:

Sampling outline suggest to the way toward selecting samples from populace. A sample configuration is a clear arrangement for acquiring a sample from a given populace is the "sample outline". It is a system of selecting things for the sample, when all is said in done, alludes to the strategy or method the researcher embraces in selecting the sampling units from the edge or populace. , it sets out the quantity of things to be incorporated into the sample. Sampling plan alludes to the system or the method the researcher would embrace in selecting the sample. It is only a clear arrangement for getting a sample from a given populace. It is resolved before information are gathered, there are numerous sample plans from which a researcher can pick. Sampling outline, when all is said in done alludes to the strategy or system the researcher receive in selecting the sampling units from the casing or populace.

As indicated by Neena Sondhi and Deepak Chawla (2011), the research outline are of two sorts – Probability sampling and non-probability sampling plan. Non probability sampling outline are utilized as a part of convincing research. In a likelihood sampling plan, every single component of the populace has a known possibility of being chosen in the sample. If there should be an occurrence of non-likelihood sampling plan, the components of the populace don't have any known round of being chosen in the sample. These sampling plans are utilized as a part of exploratory research.

Basic probability sampling is utilized for information accumulation. This is the easiest and most well-known system of sampling. Basic probability sampling is an extraordinary instance of likelihood sampling outline where each component of the populace has both known and equivalent round of being chosen in the sample. Through straightforward arbitrary sampling predisposition is by and large wiped out and the sampling blunder can be evaluated.

Method of analysis and Statistical Tools used:

Every single finished poll were investigated deliberately the rundown of required tables and yield was readied. After intensive discourse with computer specialists, program for computerization was readied lastly all information were modernized with extraordinary safety measure to maintain a strategic distance from mistakes in computerization. In the wake of getting information automated they were

introduced in various tables with the assistance of SPSS programming. Proportions are figured. The factual apparatuses like classification, normal, rate are utilized for breaking down the information.

Limitations of study:

i) For the purpose of study Pune has been selected at primary level. It was observed that in Pune district most of the chemical companies are located at Kurkumbh (Tal-Daund), Pirangut (Tal-Maval) and Pimpri-Chinchwad (Tal – Haveli) and very few of the companies are in Khed,Bhor and Jejuri area, and remaining Tehsil there is no chemical industry.

ii) It was not possible to gain access to the confidential decisions and policies of the Chemical Company for their Marketing team and Management operations. The interpretations of the data and observations about findings are based on whatever information we could gather from conversations with the officials of the company.

iii) This study was also hamstrung by the fact that there was no previous study done exactly on the same theme. Thus, we had no innovator to develop our hypothesis and test our results against previous benchmarks. We had to develop our own methodology and analytical framework that also, in a way, acted as a constraint.

3.7. Authentication of Questionnaire:

1. Q. 1 to Q. 3 is based on the segments of the company. The researcher has referred the below three books. “The Challenge of Business” by Davis K. According to this book understanding of an organisation is an essential and initial part in developing a marketing strategy, understanding can be derived from an examination of organisation capabilities, number of years company engaged in the business and the segments which company operate in.

Michael E. through his book “Competitive strategy: Technique for Analysing industry and competition”, gives information about a market segment and its strategy for focusing more than the competitors. According to Wilson RMS “Marketing and the Management Accounting”, target market segments are the essential requirement of marketing to capture the market.

Also the Article of Mr. Suhas Lohakare, Chem. News, 2010, focuses on the growth of chemical industries, demand and innovation for the chemical products, as the economy grows, it increases the demand for chemical products, this growth drives market segment and product innovation.

2. Q 4. is based on the geographic domain, The researcher has referred the book “Strategy and policy formation” by Shirley , R.C Peter and EI- Ansary. According to this book, geographic confines of the market indicates the operational limit, which helps for formation of marketing strategy.

3. Q 7. is based on the customer expectation from the manufacturer. The researcher has referred the Journal of Marketing Management by Doyle P, according to this paper, the success of business depends on identifying customer needs, wants, expectations and preferences of the customers, then product design are carried out.

4. Q. 8 and Q. 9 is based on the major external factors and the Strategic marketing of the company. The researcher has referred the book “How Competitive forces shape strategy”, by Porter, according to this book, the competitive forces are – threat of new entrants, bargaining power buyer and seller, Industry rivalry and threat of substitute.

According to Shirley , R.C Peter and EI- Ansary’s book “ Strategy and policy formation : A multifunctional orientation”, the strategy is a long term approach designed to adapt the operations of a firm , for business mix, customer mix and product mix , the marketing strategy is very much essential.

According to Abell. D. F and Hammond J. S, in their book “Strategic Market Planning: Problems and Analytical Approach”, the primary responsibility of strategic market planning is to look outward and keep the business in step with its expected environment.

Also according to Philip Kotler in his book” Marketing Management” , to shape and reshape the business , the strategic market planning is essential, with selection of right products, so that productivity as well and profitability increases

5. Q. 11 to Q. 14 is based on the price and the market share, and also the impact on sales due to price reduction. The researcher has referred the book “The concept of Marketing Mix journal of Macro Marketing “by George Terry. According to this book

marketing management can mix the elements in proportion that will produce the most profitable marketing results, proportions of the mix will change as a market conditions change or the company's position in market change. The change in the market share depends upon the fluctuation in the price, the fluctuation in the price, which affect on the profitability of the company.

6. Q. 17 is based on the pricing structure of the product. The researcher has referred the Journal of Academy of Marketing Science the paper entitled "An Examination of selected Marketing mix elements and brand equity" by Boonghee Yoo and Sungho Lee. According to this paper the pricing structure of the products are decided by the quality, discount offered, and competitors pricing policy, hence the consumer buying behaviour depends upon the discount offered by the manufacturer.

7. Q. 18 is based on the customer's purchase decision. The researcher has referred the book "Principles of Marketing" by Philip Kotler, the major differences between consumer and industrial buying decisions are the "buying motives". In consumer marketing the purchase are made by the consumers for personal consumption of utility, generally the consumer preferred the good quality and branded product, but in industrial marketing purchasing is done for producing goods.

According to Pamela Alreck and Robert's paper "Strategies for building consumer brand preference", the marketer's task is to build a relationship with buyers, rather than to make a single sale, the essence of the relationship consists of a strong bond between the buyer and the brand.

8. Q. 19 is based on appointing the distributors. The researcher has referred the research paper "To study the Marketing strategy adopted by Syngenta India Ltd. and its impact on consumer buying behaviour", by Lohana Sarika. According to this research paper, the consumer look for product characteristics, store location and easily availability of product while buying the products.

Also according to Bernd Elser, Udo Jung, paper entitled "Opportunities in Chemical distribution". The research paper focuses on the role of chemical distributor. The paper also highlights the criteria used while appointing the distributors like the products easily availability for customer, storing capacity and after sales service to increase the sales.

9. Q. 23 is based on the improvement in sales due to use of advertisement or direct sales. The researcher has referred the book “A review of multidimensional scaling in Marketing Research”, by Lee G. Cooper. According to this book, the product advertisement plays an important role for product promotion, through advertisement the customer gets the idea about the products and gets attracted towards the products.

According to Sudharshan , R.G Sridhan and K. Arun Jyothi's, paper entitled “ Socio, Cultural and Psychographic Dimensions of Advertising: A conceptual Framework” , the purpose of advertising is to bring the advertised and its features and uses to the notice for the consumer. The aim of the advertisement is creation of image and goodwill of the firm, also explaining the various uses of the goods and services to the customer and enabling the producer to face competition and it is useful for improvement of sales.

10. Q. 24 is based on the success of the business with the help of promotion. The researcher has referred “Strategies for building consumer brand preference”, by Pamela Alreck. According to this paper the promotional strategies will provide motives and stimulate consumer for brand preferences.

Also according to Dr. P. Vikkram in his research paper entitled” Impact of Advertising and price, promotion on brand equity in service sector”. According to this papaer, it was found advertisement has an impact on brand equity for experience product. Also according to Neil H. Borden in his book” The concept of the Marketing mix”, every company should consider using promotion and advertising management as their strategy of the total marketing program, it indicated that the any business is successful with the help of various promotion types used for increase the sales.

11. Q. 25 and Q. 26 is based on the “media use” for product promotion and the sale increase with the help of effective promotion. The researcher has referred, the “journal of marketing research “Impact of Sales promotion on When, What and How much to buy” by Sunil Gupta. According to this paper, the sales increase due to brand switching, purchase time acceleration, the sales increases due to various medias use for the promotion. Generally personal selling and the web –sites are the effective media for product promotion..

3.8 Chapterisation of Thesis:

The thesis in hand is organized in the following chapters

1. Chapter One – Chemical Industry: Introduction

This introductory chapter gives idea about the aspect of the study, selection of the topic, Problem statement, also discusses the need and justification to select the study and contribution of research to the society.

2. Chapter Two- Review of Literature

This chapter clears that with the help of various literature review like articles, research papers the research would be carried out. It includes research papers, self-published research papers, research articles, books and research magazines

2.1 Chemical Industry: An overview

This chapter explains the scientific research procedures followed to obtain the required information, in which Chemical Industry structure and its present status, Major segment of the Chemical Industry, State wise production share, Major players in Indian Chemical Industry, International players in Indian Chemical Industry, Chemical import and export of India, Shares of import and export of Chemicals in India, Major Merger and Acquisition in the Indian Chemical Industry.

2.2 Marketing Mix Frame work: Tools & strategies for Chemical Industry:

This chapter contains Industry analysis, Marketing mix strategy in which Product strategy, Price strategy, Place strategy and Promotional strategy.

2.3. Profile of Pune district:

This chapter focus on specific target area i.e.- focus on Pune district. The location, demography, culture and socio-economic factors of Nation, Development of Chemical Industry in Maharashtra , Education, Industry and employment and major Chemical Industry in Pune district.

2.4. Problems & prospect of chemical industries in Pune district.

This chapter develops the idea about different theoretical concepts used in the study like problems of Chemical industries so need for implement Marketing strategies, views of distributors and Government regarding Chemical industry and future prospects of Chemical Industry.

3. Chapter Three -Research Methodology

This chapter contains Objectives and Hypothesis of the study, Research design, Sample design and Sampling method.

4. Chapter Four -Data Analysis and Interpretation

All the data should be analysed in the tabular form with proper graph and interpretation.

4.1 Hypothesis Testing

Hypothesis testing helps the researcher to clarify the logics and concept with help of statistical methods SPSS, also data interpretation and analysis of questionnaire survey of chemical industry in Pune District.

5. Chapter Five-Findings, Suggestions and Conclusions -

5.1 Findings from research

5.2 Suggestions to the manufacturer

5.3 Conclusion

After completion of research, the fact findings has to be mentioned and accordingly a suggestion has to be given to the manufacturer and conclusion given based on research.

6. Chapter Six – Bibliography

Various books, magazines, journal, web-sites, references has to be used while research.

7. Chapter Seven –Annexure

7.1 Sample questionnaire used for manufacturer.

7.2 list of chemical companies from District Industrial Centre (DIC), Pune industrial report.

Chapter No 4

Data Analysis

S. No	Title	Page No
4.0	Data Analysis	149

Chapter No 4

Data Analysis

The data ,after collection has to be processed and analysed in accordance with the outline laid down for the purpose at the time of developing the research plan, this is essential for a scientific study and for ensuring that one has all relevant data for making contemplated comparisons and analysis. Data are the facts and figures collected, analyzed and summarized for presentation and interpretation. Data collected in a particular study are referred to as the data for the study. Broadly, data is raw information and this can be qualitative as well as quantitative. Technically it is processing, implies editing, coding, and tabulation of collected data so that they are amenable to analysis.

The term analysis refers to the computation of certain measures along with searching for patterns of relationship that exist among data-group, thus, in the process of analysis relationship or differences supporting or conflicting with original or new hypothesis should be subjected to statistical tests of significance to determine with what validity data can be said to indicate any conclusions.

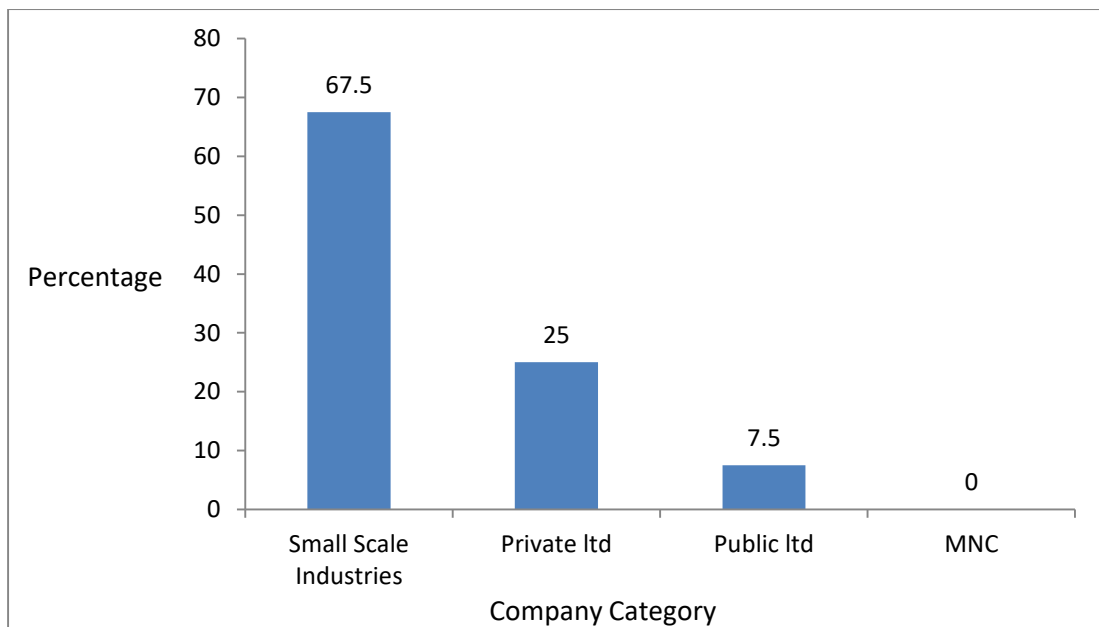
Data processing and analysis is essential in recording information, analysing and information and communicating analysis. The first stage in data analysis is the preparation of an appropriate form in which the relevant data can be collected and coded in a format suitable for entry into a computer, this stage is referred to as data processing.

After the collection of the data has been done, it has to be then processed and then finally analysed. The processing of the data involves editing, coding, classifying, tabulation, and after all this analysis of the data takes place. Analysis and interpretation of data are the most crucial aspects of research. It is considered to be a highly skilled and technical job, which should be carried out only by the researcher, or under his close supervision. The analysis of data requires on the part of the researcher, a thorough knowledge about the data, judgment, skill, ability of generalization and familiarity with the background, objects and hypothesis of the study.

Q.1-Table 4(a). Company belong to a category

S. No	Company category	No. of Respondent	Percentage (%)
1	MNC	-	0
2	Small Scale industries	54	67.5
3	Private ltd	20	25
4	Public ltd	6	7.5

Graph 4(a) Company Category



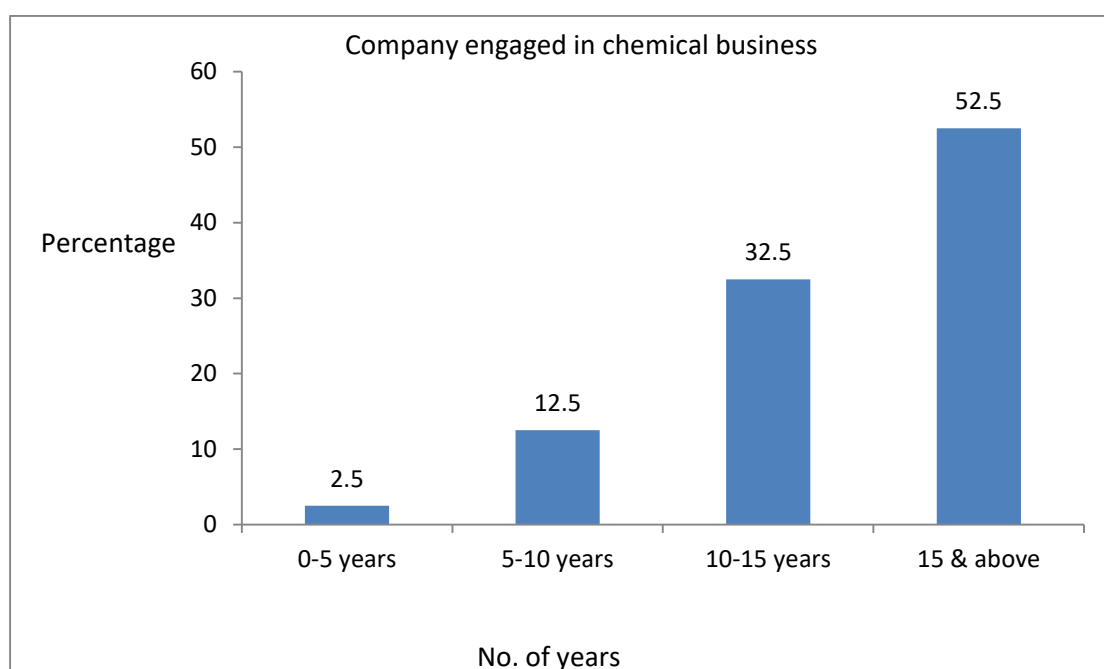
Interpretation –

The above table shows that 67.5 % of the companies are the Small Scale ,25% companies are Private Ltd. companies, 7.5 % companies are of Public Ltd. and no MNC company in Pune district.

Q. 2 -Table 4(b) Company engaged in Chemical business

S. No	Company engaged in Chemical business	No. of Respondent	Percentage (%)
1	0-5 years	2	2.5
2	5-10 years	10	12.5
3	10-15 years	26	32.5
4	15 & above	42	52.5

Graph 4(b) Company engaged in chemical business



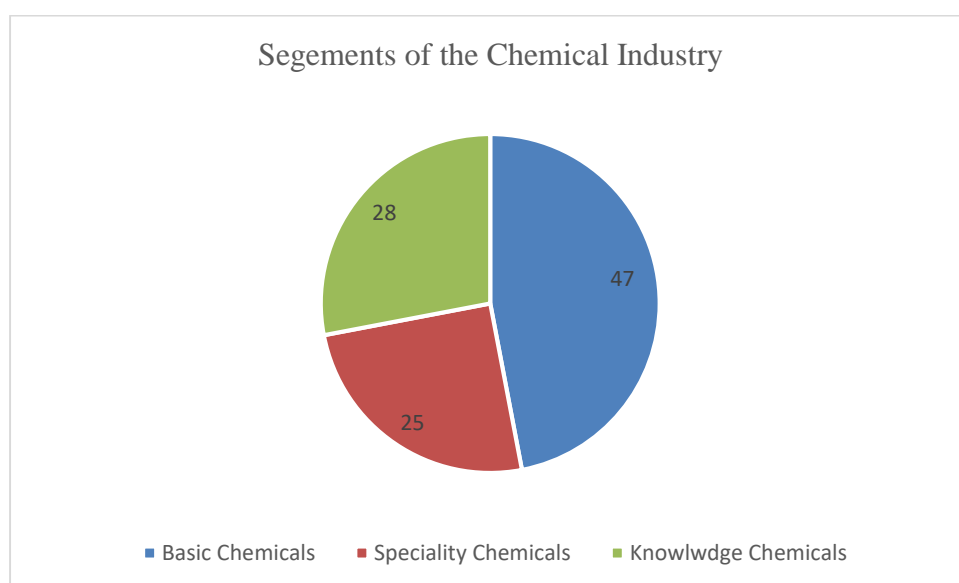
Interpretation –

The above table shows that 2.5 % companies are newly established companies, they engaged in the chemical business below 5 years. 12.5 % companies are engaged in the chemical business between 5 to 10 years. 32.5 % companies are engaged in the chemical business between 10 to 15 years and 52.5 % companies are engaged in the chemical business more than 15 years.

Q. 3 -Table 4 (c) Segments of company operation

S. No	Category wise company operation	No. of Respondent	Percentage (%)
1	Basic Chemicals	38	47
2	Speciality Chemicals	20	25
3	Knowledge Chemicals	22	28

Graph 4(c) Segments of company operations



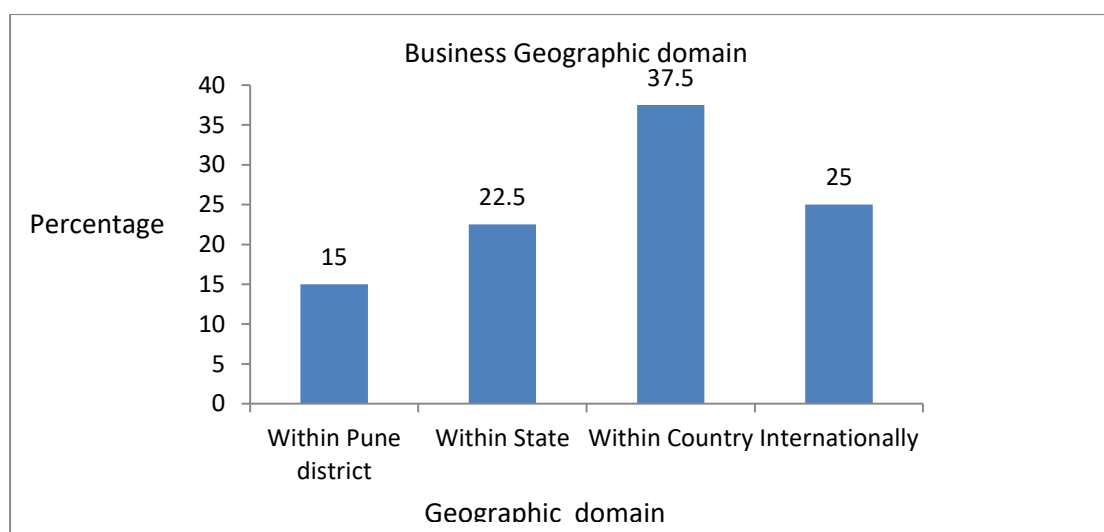
Interpretation-

The above table shows that 47% segments of the Chemical industry is of Basic Chemicals, 28% segments of the Chemical industry is of Knowledge Chemicals and 25% segments of the Chemical industry is of Speciality Chemicals.

Q.4 -Table 4(d) Business Geographic domain

S. No	Business Geographic domain	No. of Respondent	Percentage (%)
1	Within Pune district	12	15
2	Within State	18	22.5
3	Within Country	30	37.5
4	Internationally	20	25

Graph 4(d) Business Geographic domains



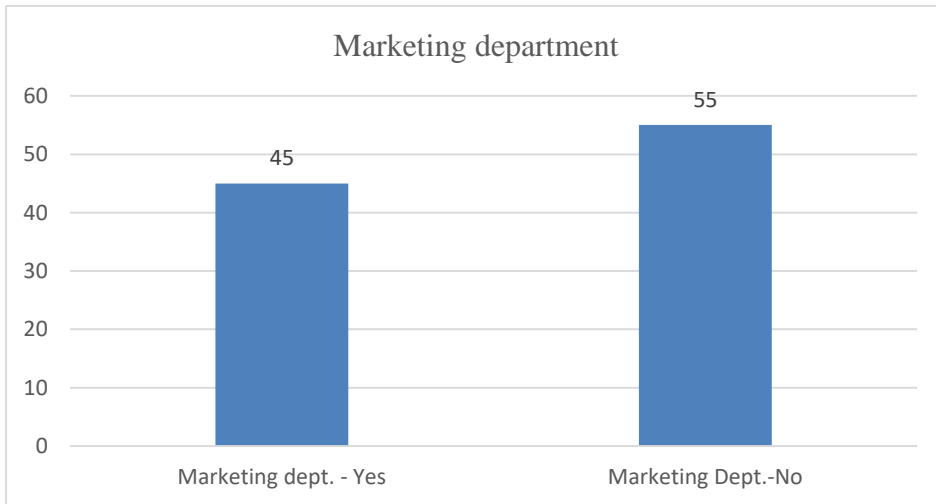
Interpretation-

The above table shows that 15 % companies businesses are within city. 22.5 % companies business are with in Maharashtra state.37.5% companies business are within India and 25 % companies business are internationally.

Q. 5-Table 4(e) Separate Marketing Department

S. No	Marketing department	No. of Respondent	Percentage (%)
1	Marketing dept. – Yes	36	45
2	Marketing dept. - No	44	55

Graph 4 (e) Separate Marketing Department



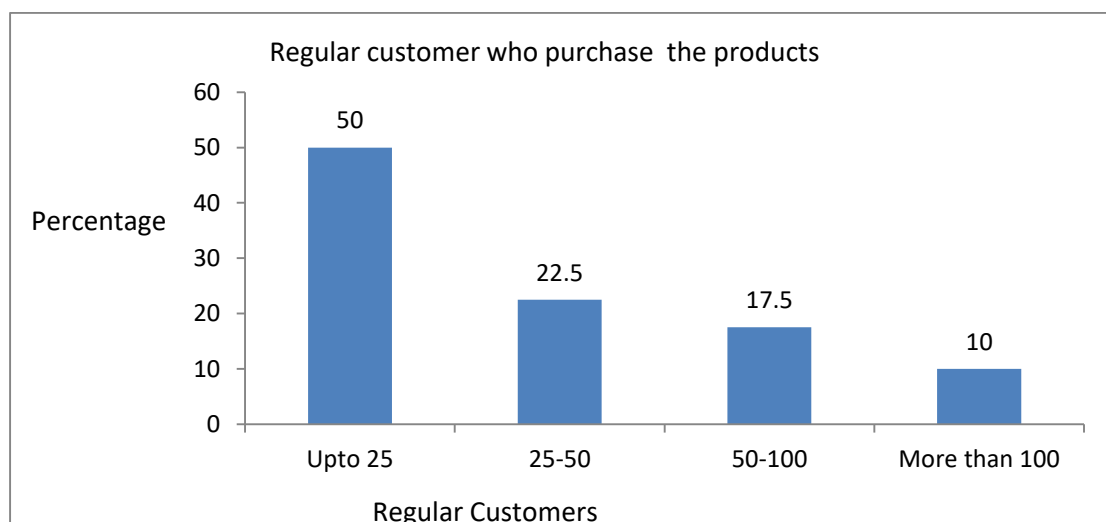
Interpretation:

The above table shows that 55% companies does not have separate Marketing department and 45% companies have their own Marketing department.

Q. 6-Table 4(f) Regular customers who purchase products

S. No	Regular customer	No. of Respondent	Percentage (%)
1	Upto 25	40	50
2	25-50	18	22.5
3	50-100	14	17.5
4	More than 100	8	10

Graph 4(f) Regular customer who purchase the products



Interpretation-

The above table shows that 50 % company's regular customer are up to 25 who purchase the products, 22.5 % companies' regular customers is between 25 to 50 who purchase the products. 17.5 % companies regular customers is between 50 to 100 and 10 % companies regular customers is more than 100.

Q. 7-Table 4(g) Customers expectation from manufacturer

S. No	Customers Expectation	No. of Respondent	Percentage (%)
1	Good Quality	40	50
2	Timely delivery	22	27.5
3	Reasonable price	28	35
4	Easily availability	10	12.5

Graph 4(g) Customers expectation from manufacturer



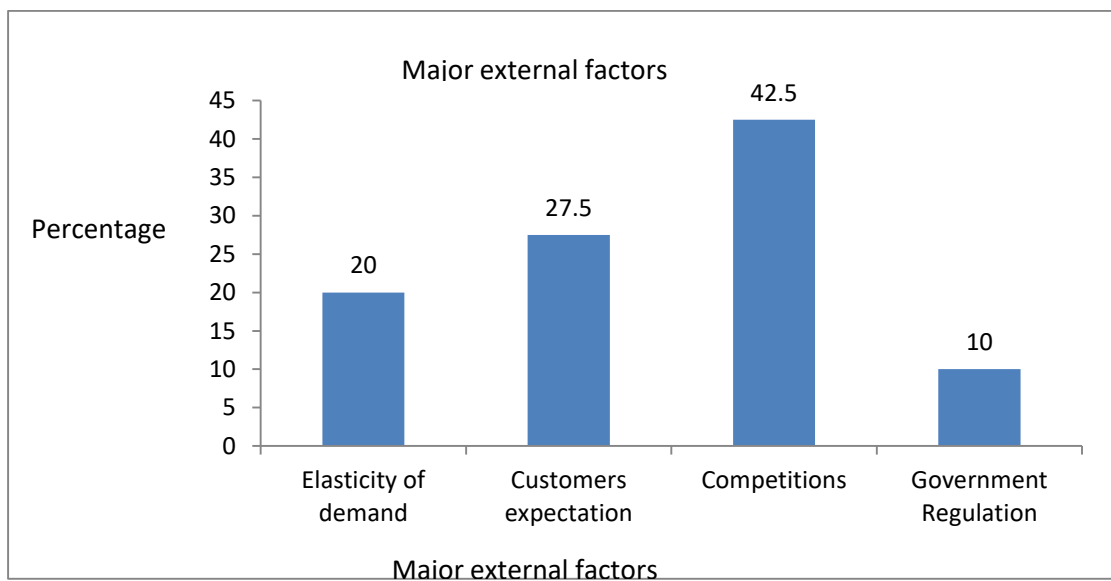
Interpretation-

The above table shows that 50 % customers are preferred for good quality product. 27.5 % customers are preferred for timely delivery. 35 % customers are preferred reasonable price and 12.5 % customers are preferred for easily availability of the product.

Q. 8-Table 4(h). External factors affect on product

S. No	Major External Factors	No. of Respondent	Percentage (%)
1	Elasticity of Demand	16	20
2	Customers Expectation	22	27.5
3	Competitions	34	42.5
4	Govt. Regulation	8	10

Graph 4(h) Major external factors



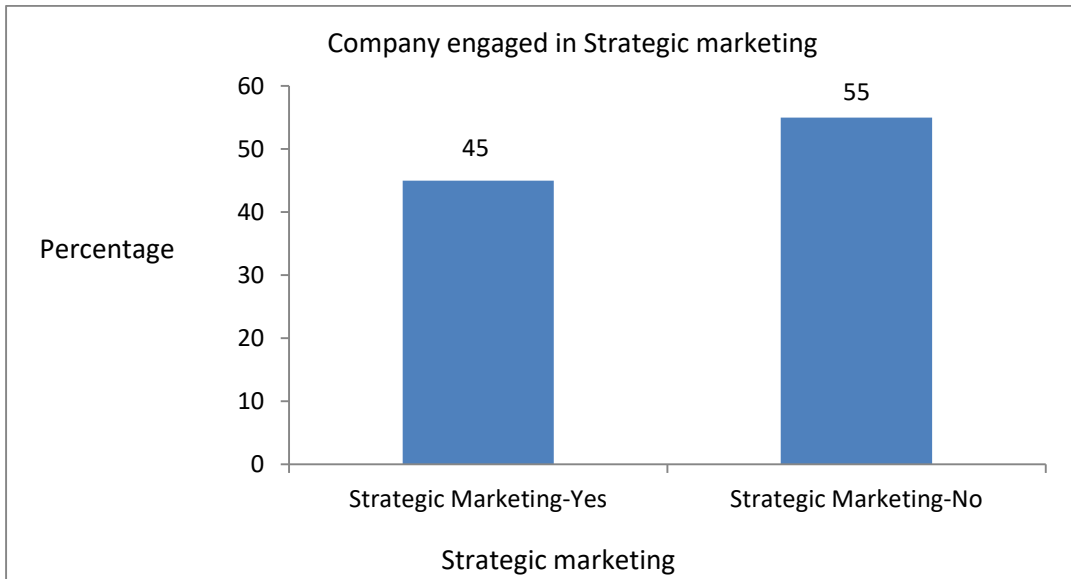
Interpretation –

The above table shows that 20 % major external factor which affect on product is Elasticity of Demand, 27.5% major external factor which affect on product is Customers Expectation, 42.5% external factor which affect on product is from Competitions and 10% major external factor which affect on product is Govt. Regulation.

Q. 9-Table 4(i) Organisation engage in Strategic Marketing

S. No	Strategic Marketing	No. of Respondent	Percentage (%)
1	Strategic Marketing – Yes	36	45
2	Strategic Marketing - No	44	55

Graph 4(i) Company engaged in Strategic marketing



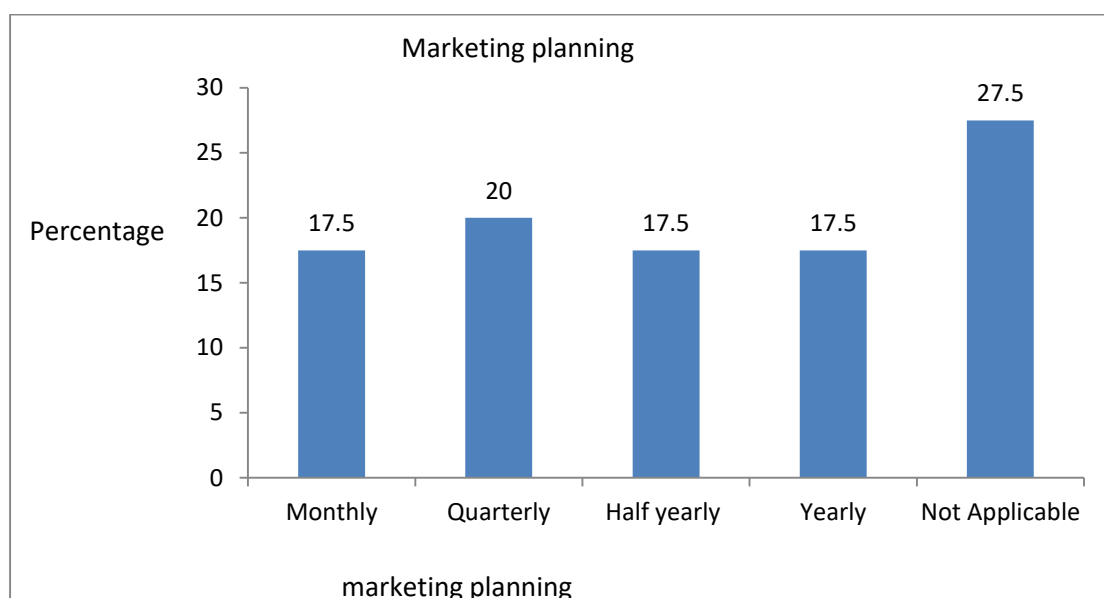
Interpretation-

The above table shows that 45 % companies are engaged in Strategic Marketing. And a 55 % company does not engaged in Strategic Marketing.

Q. 10-Table 4(j). Marketing planning

S. No	Marketing planning	No. of Respondent	Percentage (%)
1	Monthly	14	17.5
2	Quarterly	16	20
3	Half Yearly	08	17.5
4	Yearly	14	17.5
5	Not Applicable	28	27.5

Graph 4(j) Marketing planning



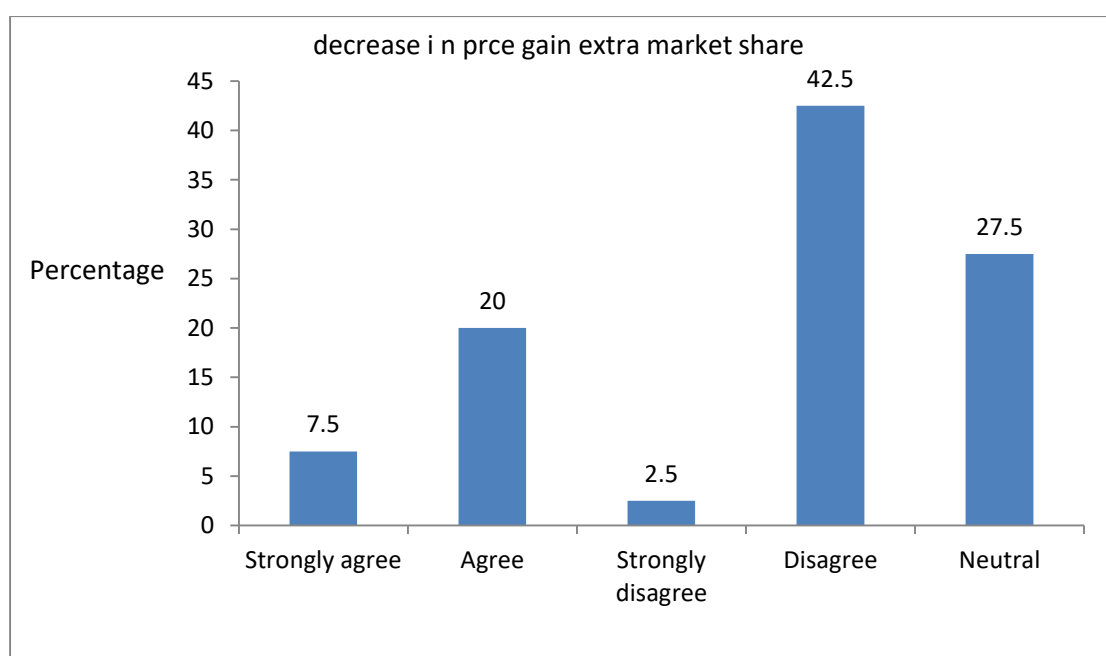
Interpretation-

The above table shows that 17.5% companies are engaged in Monthly Strategic marketing planning, 20% companies are engaged in Quarterly Strategic Marketing planning, 17.5% companies are engaged in Half Yearly Strategic Marketing planning, 17.5% companies are engaged in Yearly Strategic Marketing Planning and 27.5% companies do not engage in Strategic Marketing planning.

Q. 11-Table 4(k) Small decrease in price gain extra market share-

S. No	Small decrease in price gain extra market share	No. of Respondent	Percentage (%)
1	Strongly Agree	6	7.5
2	Agree	16	20
3	Strongly disagree	2	2.5
4	Disagree	34	42.5
5	Neutral	22	27.5

Graph 4(k) decrease in price gain extra market share



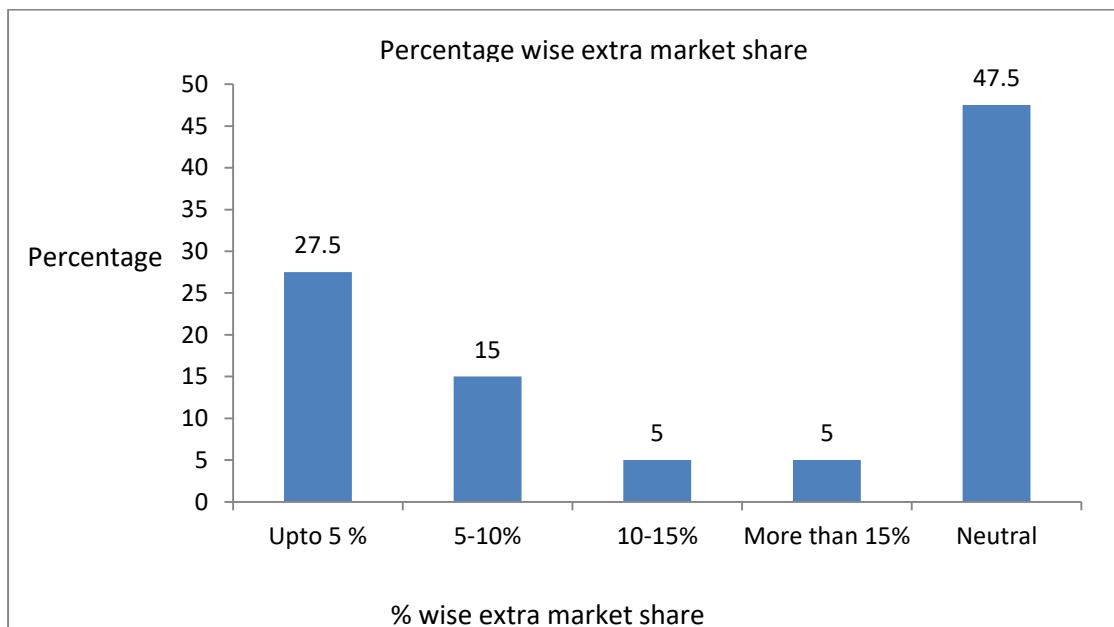
Interpretations –

The above table shows that 7.5 % respondents are “Strongly Agree” with Small decrease in price will gain extra market share, 20 % respondents are “Agree” with small decrease in price will gain extra market share, 2.5% respondents are “Strongly disagree” with small decrease in will gain extra market share, 42.5% respondents are “Disagree” with small decrease will gain extra market share and 27.5 % respondents are not given their opinion (Neutral)

Q. 12-Table 4(I) Percentage wise extra market share due to small decrease in price

S. No	% wise extra market share	No. of Respondent	Percentage (%)
1	Up to 5 %	22	27.5
2	5-10 %	12	15
3	10-15 %	4	5
4	More than 15 %	4	5
5	Neutral	38	47.5

Graph 4(I) Percentage wise extra market share



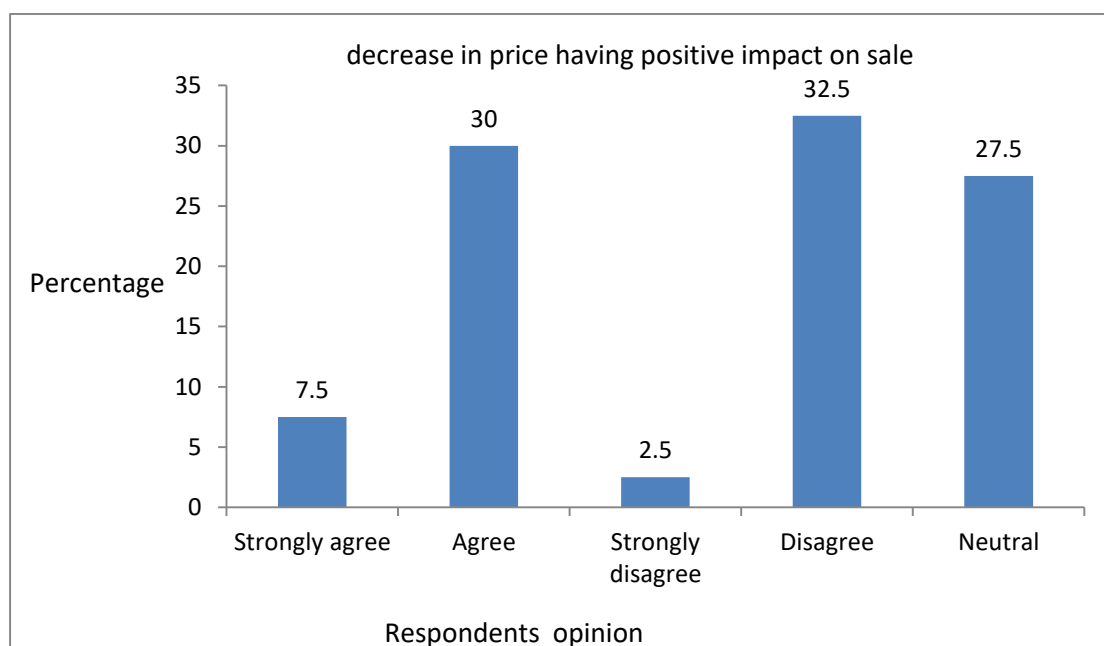
Interpretation –

The above table shows that 27.5% respondents are agree that due to small decrease in price (up to 3%) will gain a 5% extra market share.15 % respondents are agree that due to small decrease in price (up to 3%) will gain a 5-10 % extra market share, 5% respondents are agree that due to small decrease will get 10-15% extra market share and 47.5 % respondents are neural of this opinion.

Q.13-Table 4(m) Small decrease in price having positive impact on sale

S. No	Small decrease in price having positive impact on sale	No. of Respondent	Percentage (%)
1	Strongly Agree	6	7.5
2	Agree	24	30
3	Strongly disagree	2	2.5
4	Disagree	26	32.5
5	Neutral	22	27.5

Graph 4(m) decreases in price having positive impact on sale



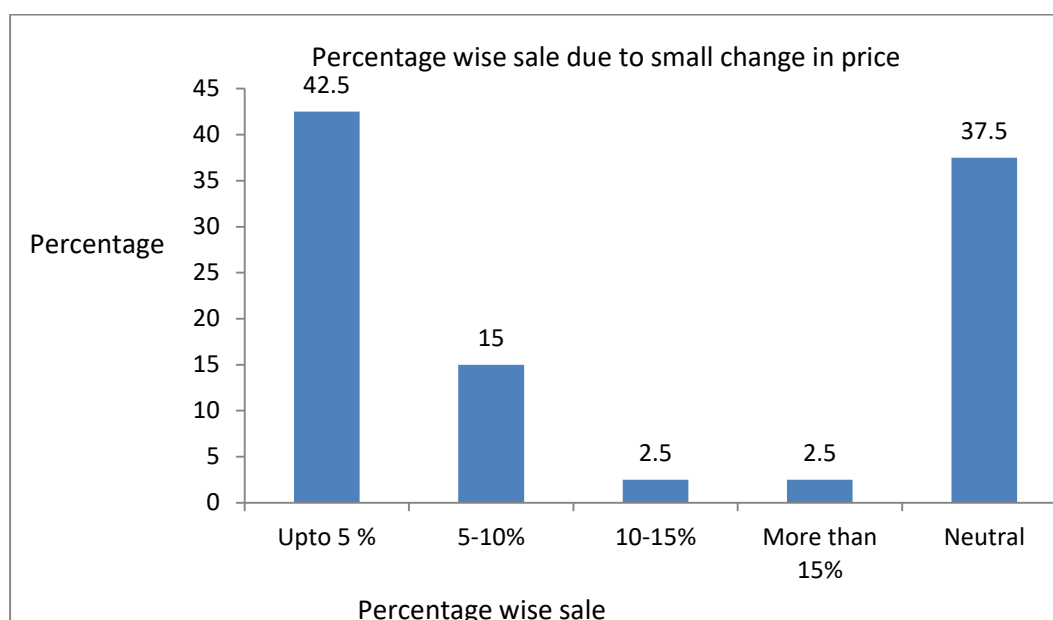
Interpretation –

The above table shows that 7.5 % respondents are “Strongly agree” that small decrease in price (up to 3%) having positive impact on sale. 30% respondents are “Agree” that small decrease in price (up to 3%) having positive impact on sale. 2.5% respondents are “Strongly disagree” that Small decrease in price (up to 3%) having positive impact on sale. 32.5% respondents are “Disagree” that small decrease in price (up to 3%) having positive impact on sale and 27.5 % respondents are Neutral.

Q. 14-Table 4(n). Percentage wise sale increases due to small change in price.

S. No	Percentage wise sale due to small change in price	No. of Respondent	Percentage (%)
1	Up to 5 %	34	42.5
2	5-10 %	12	15
3	10-15 %	2	2.5
4	More than 15 %	2	2.5
5	Neutral	30	37.5

Graph 4(n) Percentage wise sales increases due to small change in price



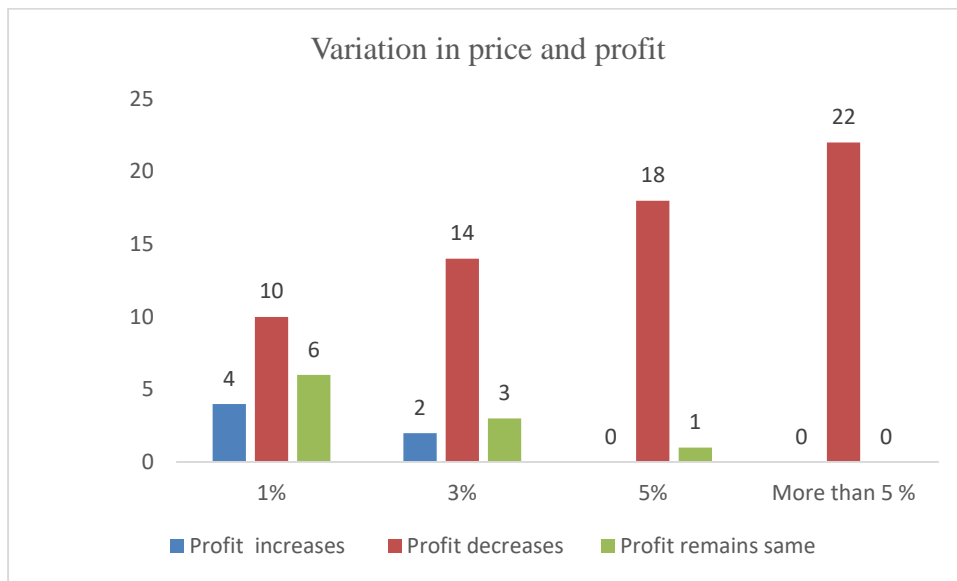
Interpretation-

The above table shows that 42.5 % respondents are agree that up to 5 % sales increases due to small change in price.15% respondents are agree that up to 5-10 % sales increases due to small change in price. 2.5 % respondents are agree that up to 10-15 % sales increases due to small change in price and 37.5 % respondents are neutral regarding this opinion.

Q. 15-Table 4(0) Association between variation in price and profit.

Price decrease by	Profit increases	Profit decreases	Profit remains same
1 %	4	10	6
3 %	2	14	3
5 %	0	18	1
More than 5 %	0	22	0

Graph 4(0) Association between variation in price and profit.



Interpretation-

Price reduction is resulting into decrease in profit margin. Buyers are not ready to buy if there is no requirement, considering the storage issue. This means sale is marginally constant leading to net negative effect on profitability. It was observed that when the price decreases by 1% the profit decreases by 10% , when the price decreases by 3% the profit decreases by 14% , when the price decreases by 5% the profit decreases by 18% , when the price decreases by more than 5% the profit decreases by 22%. Therefore it shows that there is significance association between variation in price and profit.

Q. 16-Table 4(P) Discount offered to trade customers

% of Discount	Number of Customers			
	Up to 25	25-50	50-100	More than 100
Upto 1 %	4	6	8	10
Upto 3 %	1	2	3	4
5 % & above	0	0	0	0
No discount	10	10	10	12

Interpretation-

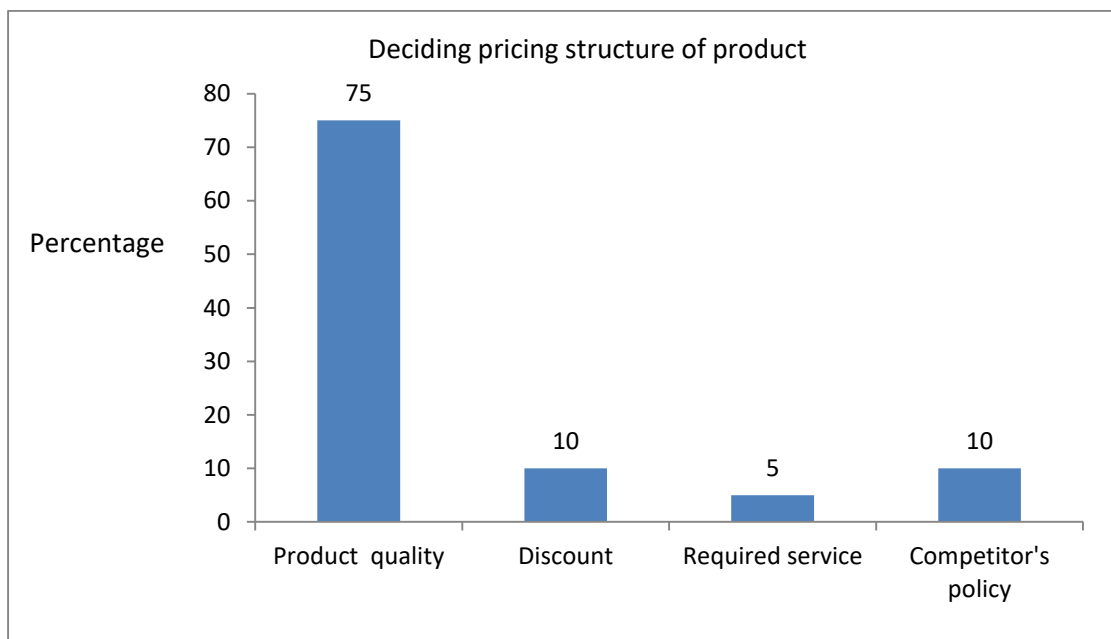
Orders from the customers are small hence companies are not offering trade discount. Loyal customer who are placing bulk orders are less in numbers, indicating need for better marketing strategies particularly for promotion .

It was observed that 42 customers are new customers or placing small order, hence companies are not offering trade discount. The 38 customers are loyal customers & placing bulk and continuous orders, the companies offers the discount , hence it was observed that companies offered 1% discount for most of the customers.

Q. 17-Table 4(q) Deciding Pricing structure of product

S. No	Pricing structure of product	No. of Respondent	Percentage (%)
1	Product Quality	34	75
2	Discount offer	24	10
3	Required service	10	5
4	Competitor's policy	12	10

Graph 4(q) Deciding pricing structure of product



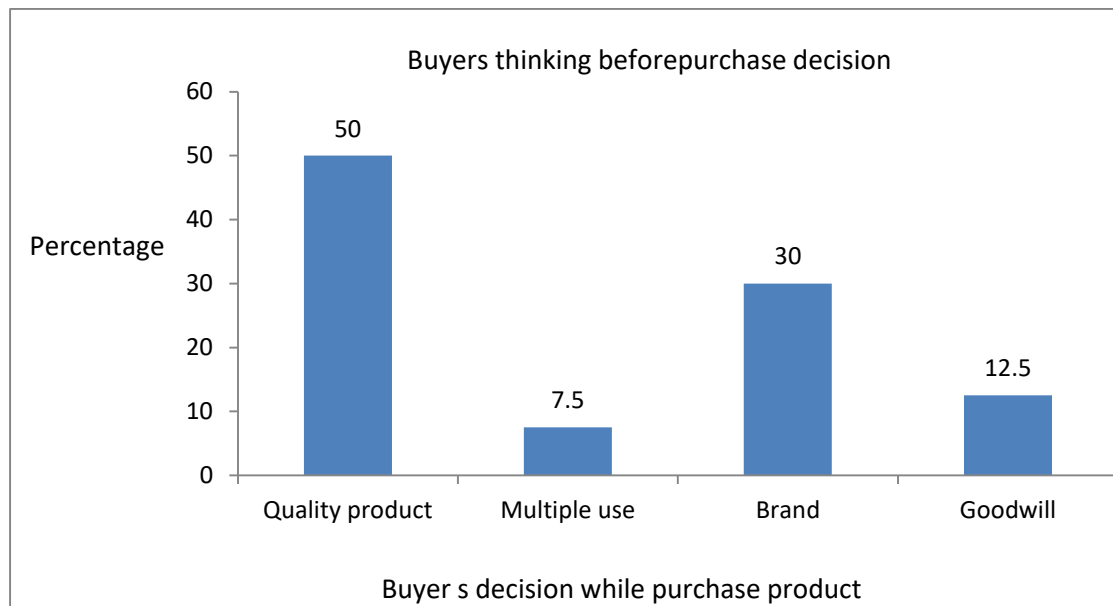
Interpretation –

The above table shows that 75 % respondents are agreed that product quality taken into consideration while deciding product price. 10 % respondents are agreed that discount offer taken into consideration while deciding product price. 5 % respondents are agreed that required service taken into consideration while deciding product price and 10 % respondents are agreed that competitor's policy taken into consideration while deciding product price.

Q. 18-Table 4(r). Attributes thinks buyer while purchasing product-

S. No	Attributes that buyer thinks while take a purchase decision	No. of Respondent	Percentage (%)
1	Quality product	40	50
2	Multiple use	06	7.5
3	Brand	24	30
4	Goodwill	10	12.5

Graph 4(r) Buyers thinking before purchase decision



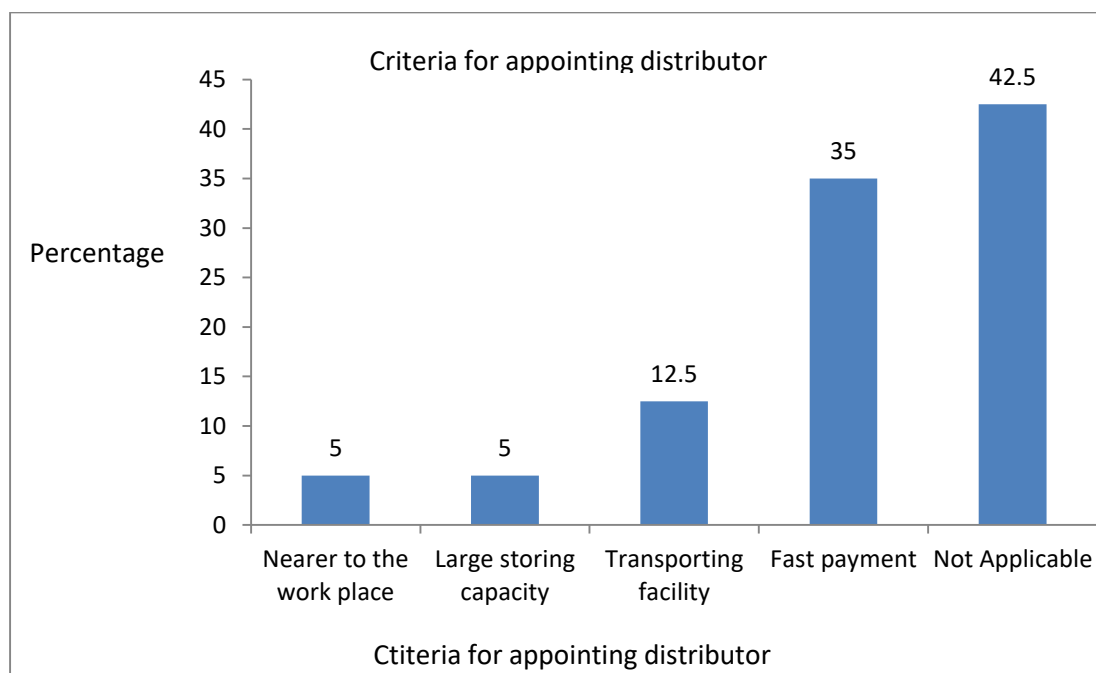
Interpretation –

The above table shows that 50 % respondents are agreed that Product quality is important while buyer take a purchase decision. 7.5 % respondents are agreed that multiple use of product is important while buyer take a purchase decision, 30 % respondents are agreed that Brand is important factor while purchase decision and 12.5 % respondents are agreed that Goodwill is important while buyer take a purchase decision.

Q. 19-Table 4(s). Criteria for appointing distributor

S. No	Criteria for appointing distributor	No. of Respondent	Percentage (%)
1	Nearer to the work place	04	5
2	Large storing capacity	10	5
3	Own transporting facility	04	12.5
4	Fast Payment	28	35
5	Not Applicable	34	42.5

Graph 4(s) Criteria for appointing distributor



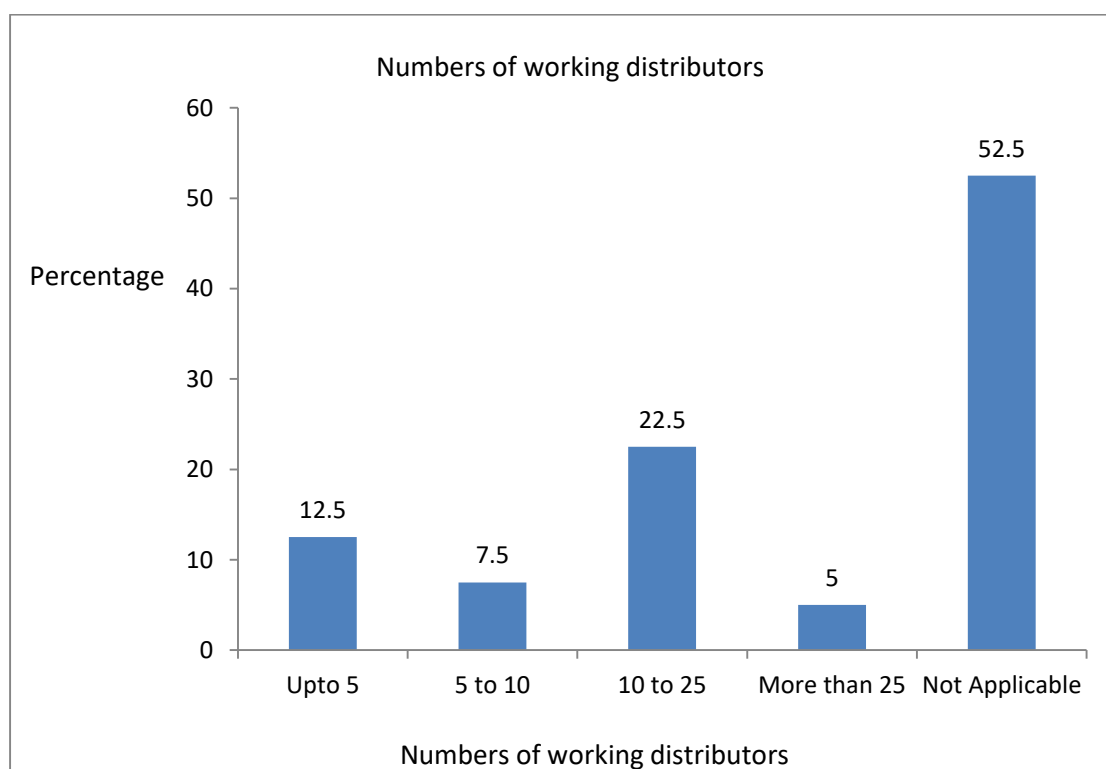
Interpretation –

The above table shows that 5% respondents criteria for appointing distributor is nearer to the work place. 5% respondents criteria for appointing distributor is large storing capacity. 12.5% respondents criteria for appointing distributor is own transporting facility while appointing distributor. 35% respondent's criteria are Fast payment while appointing distributor and 42.5% companies does not have their own distributors.

Q.20-Table 4(t) Numbers of working distributors

S. No	Numbers of working distributors	No. of Respondent	Percentage (%)
1	Up to 5	10	12.5
2	5-10	06	7.5
3	10 -25	18	22.5
4	More than 25	04	5
5	Not Applicable	42	52.5

Graph 4(t) Numbers of working distributors



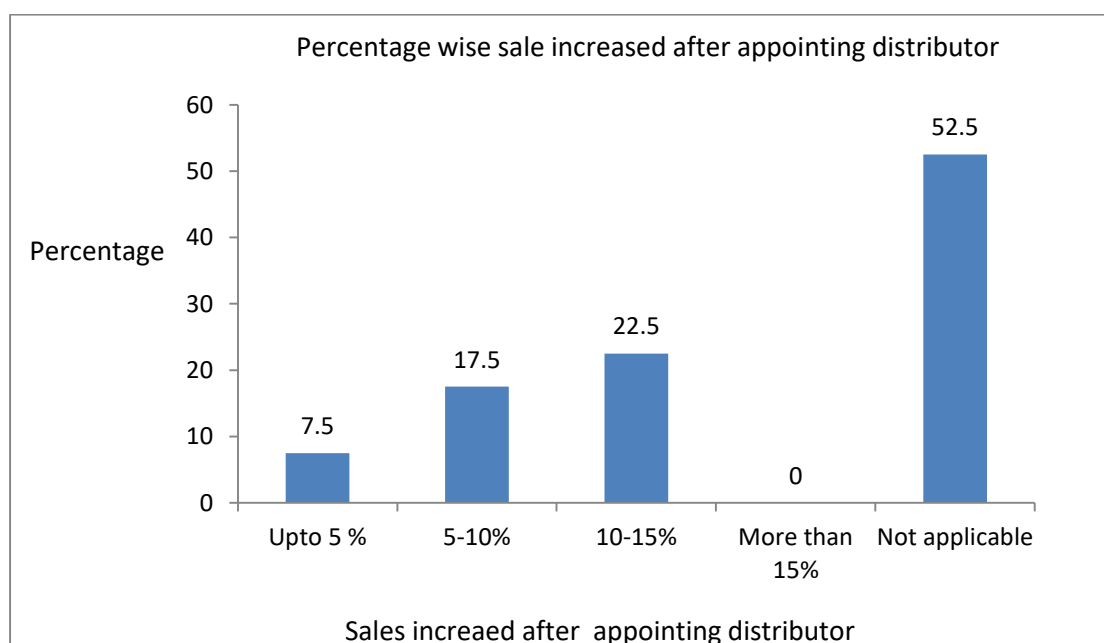
Interpretation –

The above table shows that for 12.5% company having less than 5 nos. of distributors. 7.5 % Company 5 to 10 nos. of distributors. 22.5 % company having 10 to 25 nos. of distributors. 5% company having more than 25 nos. of distributors and 52.5 % company does not have distributor.

Q.21-Table 4(u) Percentage of sale increased by appointing distributor

S. No	% of sale increased by appointing distributors	No. of Respondent	Percentage (%)
1	Up to 5	06	7.5
2	5-10	14	17.5
3	10 -25	18	22.5
4	More than 25	0	0
5	Not Applicable	42	52.5

Graph 4(u) Percentage wise sales increased after appointing distributor



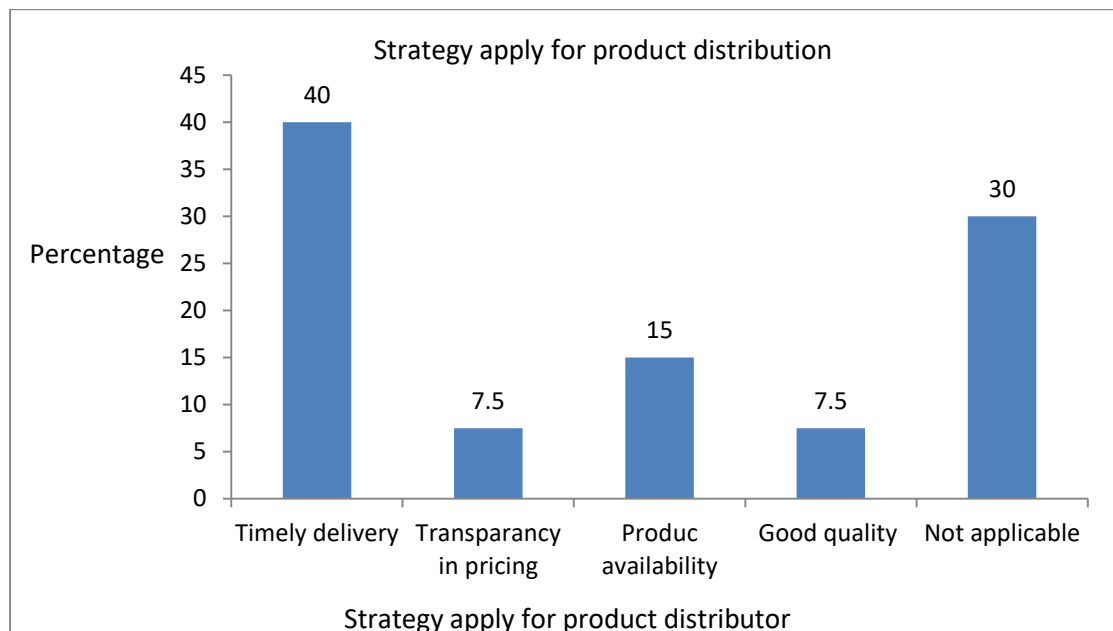
Interpretation –

The above table shows that 7.5 % sale increased by appointing less than 5 distributors. 17.5% sales increased by appointing 5 to 10 distributors. 22.5 % sales increased by appointing 10-25 distributors. No any company having distributor more than 25 and 52.5 % companies does not have distributors.

Q. 22-Table 4(v). Strategy apply for product distribution

S. No	Strategy apply for product distribution	No. of Respondent	Percentage (%)
1	Timely delivery	32	40
2	Transparency in pricing	06	7.5
3	Product availability	12	15
4	Good quality material	06	7.5
5	Not Applicable	24	30

Graph 4(v) strategy apply for product distribution



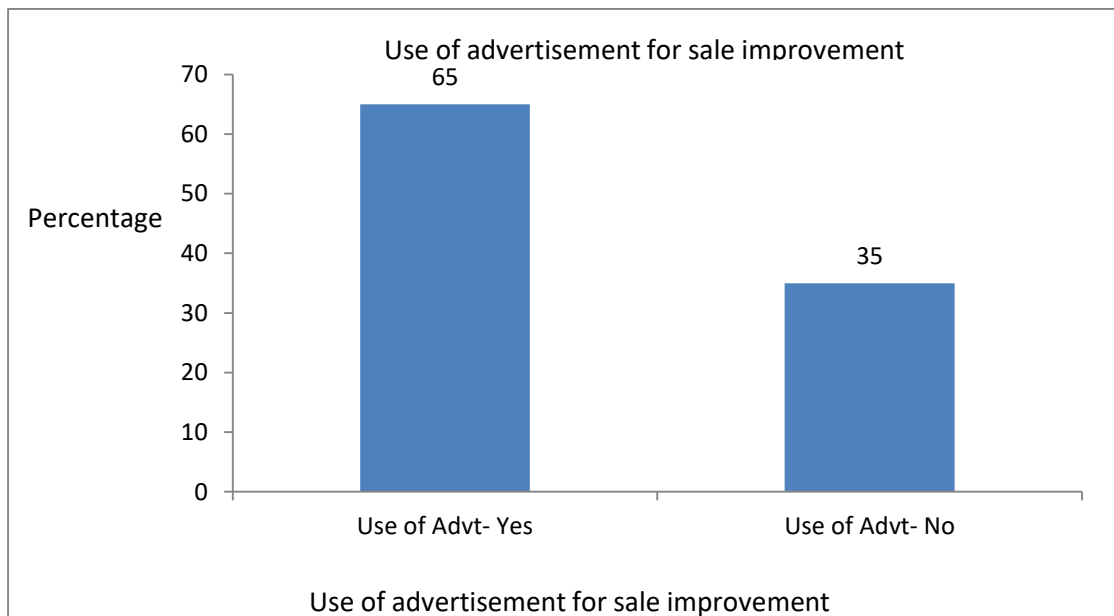
Interpretation-

The above table shows that 40 % respondents are preferred timely delivery for product distribution. 7.5% respondents are preferred price transparency. 15% respondents are preferred Product availability. 7.5% respondents are preferred good quality material and 30 % respondents does not applicable for product distribution.

Q.23-Table 4(w) Use of advertisement for sale improvement-

S. No	Use of advertisement for sale improvement	No. of Respondent	Percentage (%)
1	Use of Advertisement – Yes	56	65
2	Use of Advertisement - No	28	35

Graph 4(w) Use of advertisement for sale improvement



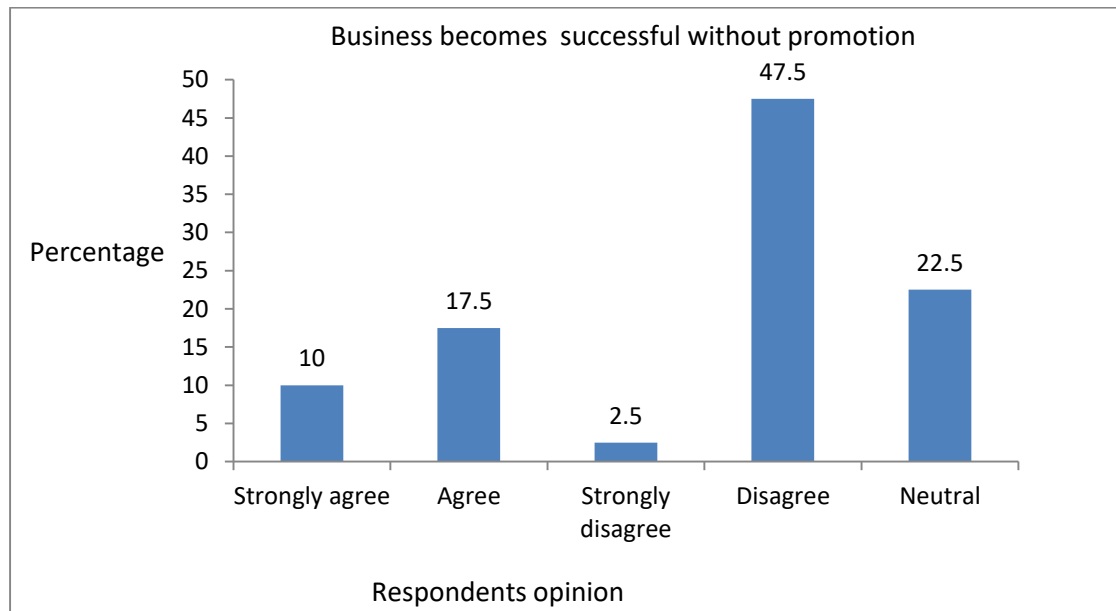
Interpretation –

The above table shows that 65 % companies are used advertisement for improvement in sale and 35% companies are do not use advertisement for improvement in sale.

Q. 24. Table 4(x). Business becomes successful without promotion

S. No	Business be successful without promotion	No. of Respondent	Percentage (%)
1	Strongly Agree	8	10
2	Agree	14	17.5
3	Strongly Disagree	2	2.5
4	Disagree	38	47.5
5	Neutral	18	22.5

Graph 4(x) Business becomes successful without promotion



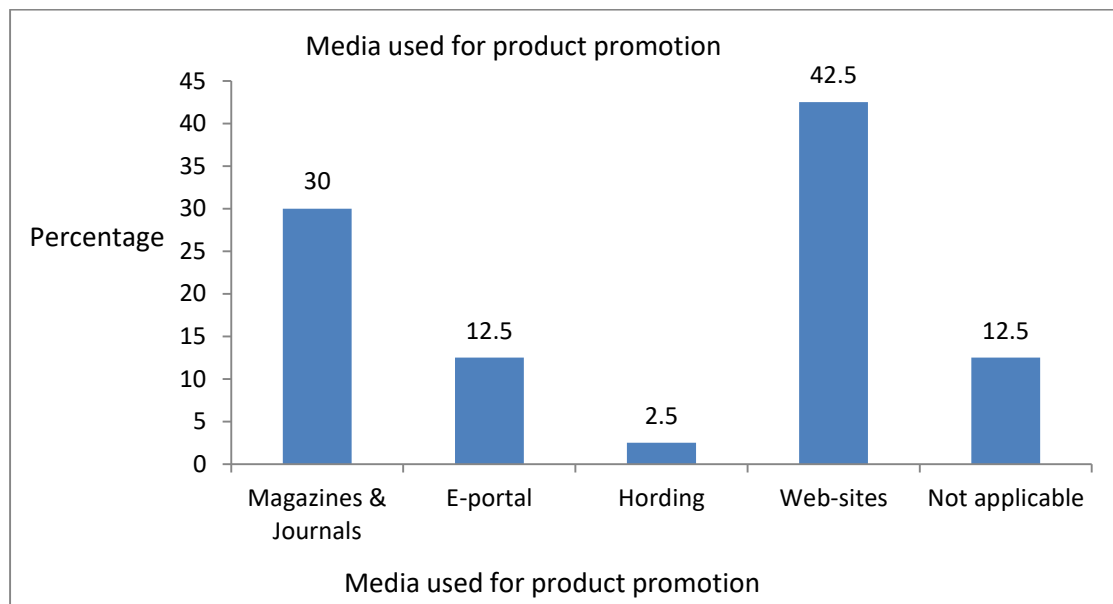
Interpretation-

The above table shows that 10% respondents are “Strongly agree” that business is successful without promotion. 17.5% respondents are “Agree” that business is successful without promotion. 2.5 % respondents are “Strongly disagree” that business is successful without promotion. 47.5% respondents are “Disagree” that business is successful without promotion and 22.5% respondents are Neutral for business promotion.

Q.25-Table 4(y). Media used for product promotion

S. No	Media used for product promotion	No. of Respondent	Percentage (%)
1	Magazines & Journals	24	30
2	E-portal	10	12.5
3	Hording	02	2.5
4	Web- sites	34	42.5
5	Not Applicable	10	12.5

Graph 4(y) Media used for product promotion



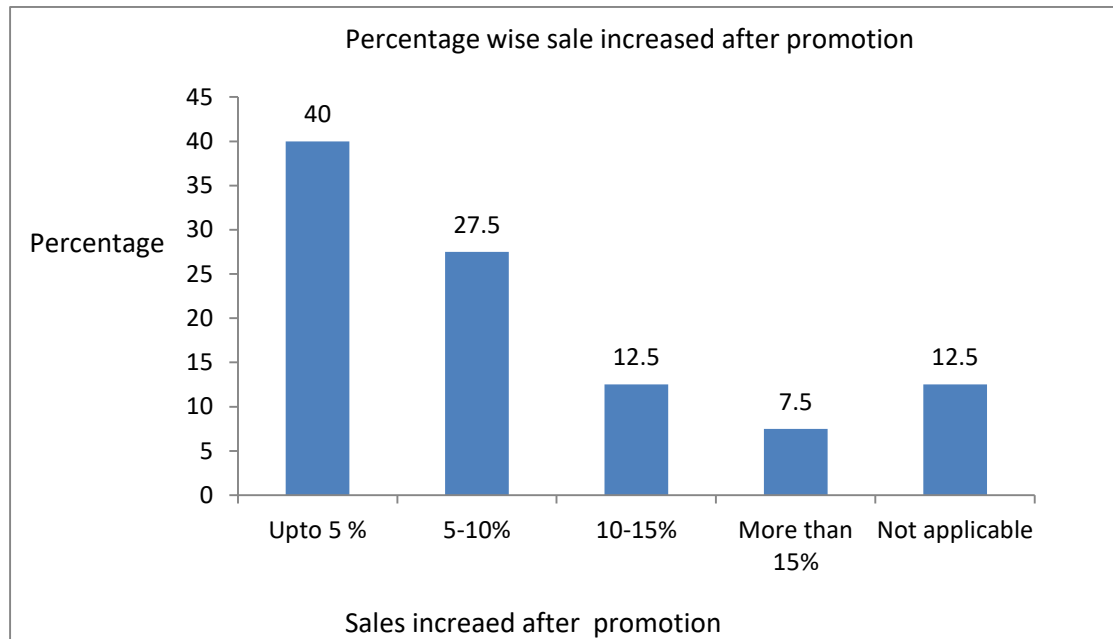
Interpretation-

The above table shows that 30% companies are used Magazines & Journals for product promotion. 12.5% companies are used E-portal for product promotion. 2.5% companies are used Hording for product promotion. 42.5 % companies are used Web-site for product promotion and 12.5 % companies does not used any type of media for product promotion.

Q.26-Table 4(z).Percentage wise sale increased after effective promotion

S. No	% wise sale increased after effective promotion	No. of Respondent	Percentage (%)
1	Up to 5 %	32	40
2	5-10 %	22	27.5
3	10-15 %	10	12.5
4	More than 15 %	06	7.5
5	Not Applicable	10	12.5

Graph 4(z) Percentage wise sales increased after promotion



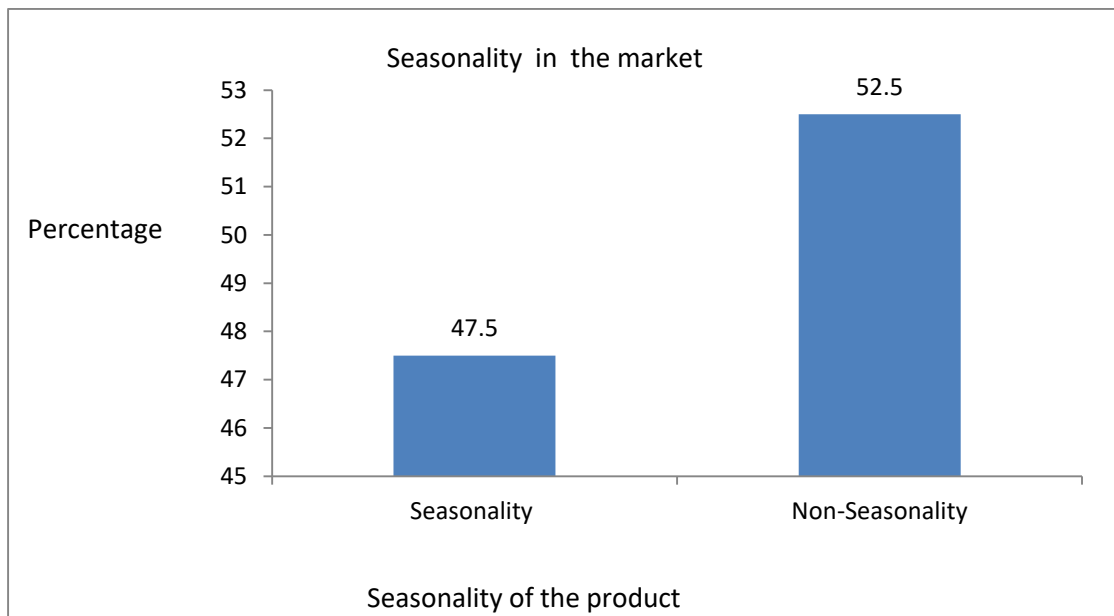
Interpretation-

The above table shows that 40 % company's sale increased less than 5 % by effective promotion. 27.5% companies' sales increased between 5–10% by effective promotion. 12.5% Company's sale increased up to 10-15% by effective promotion. 7.5 % companies' sales increased more than 15% by effective promotion. And 12.5 % companies do not apply any type of promotion.

Q.27-Table 4(aa). Seasonality in the market

S. No	Seasonality in the market	No. of Respondent	Percentage (%)
1	Seasonality – Yes	38	47.5
2	Seasonality - No	42	52.5

Graph 4(aa) Seasonality in the market



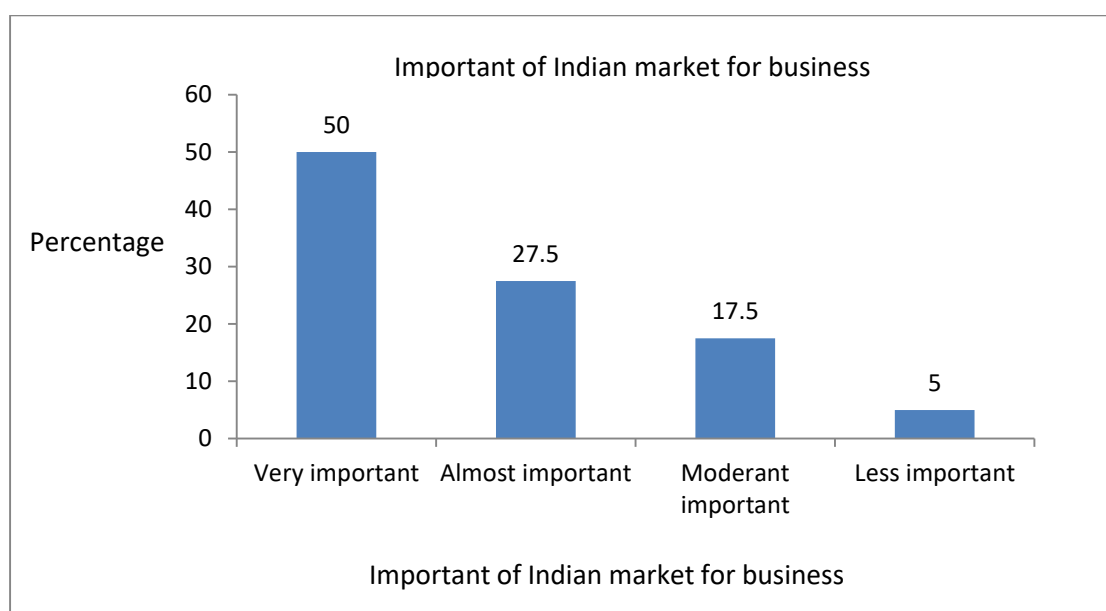
Interpretation-

The above table shows that 47.5 % company's products are seasonable, while 52.5% company's products are not seasonable.

Q.28-Table 4(ab). Important of Indian Market for business

S. No	Important of Indian Market for business	No. of Respondent	Percentage (%)
1	Very important	40	50
2	Almost important	22	27.5
3	Moderate important	14	17.5
4	Little important	04	5

Graph 4(ab) Important of Indian market for business



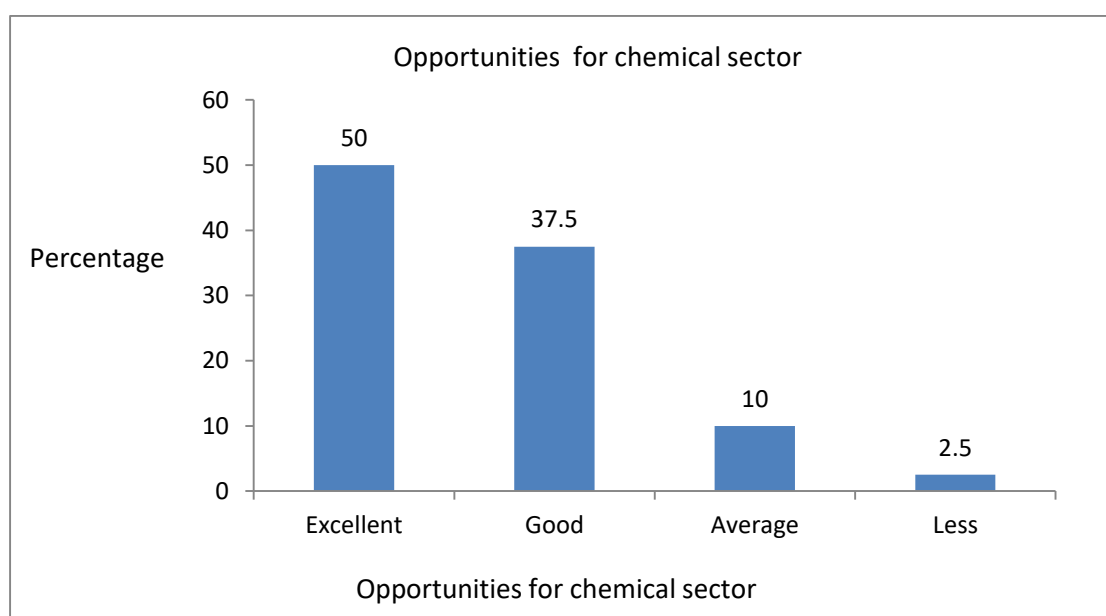
Interpretation –

The above table shows that according to 50 % respondents Indian market for business is very important. According to 27.5 % respondent's Indian market for business is almost important. According to 17.5 % respondent's Indian market for business is Mode rant important and according to 5% respondent's Indian market for business is less important.

Q.29-Table 4(ac). Next five years business opportunities for chemical sector

S. No	Next five years business opportunities for chemical sector	No. of Respondent	Percentage (%)
1	Excellent	40	50
2	Good	30	37.5
3	Average	08	10
4	Less	02	2.5

Graph 4(ac) Opportunities for chemical sector



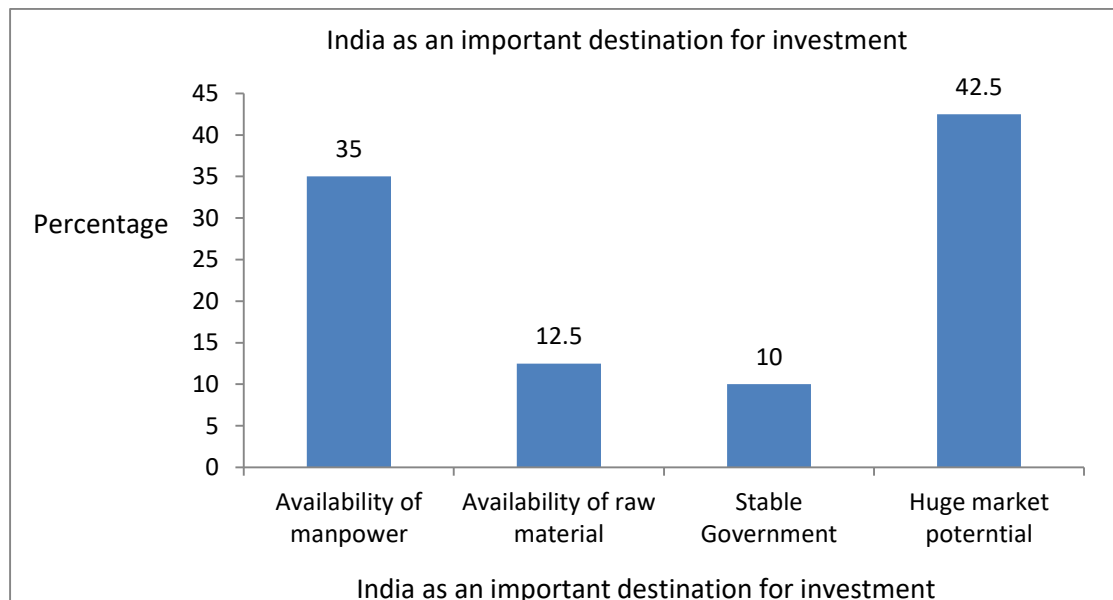
Interpretation-

The above table shows that according to 50% respondent there is excellent opportunities for chemical industries next five years, according to 37.5% respondent there is Good opportunities, according to 10 % respondent there is Average opportunities for chemical industries next five years and 2.5% respondent there is very less opportunities for chemical industries in next five years.

Q.30-Table 4(ad). India as important destination for investment

S. No	India as important destination for investment	No. of Respondent	Percentage (%)
1	Availability of manpower	28	35
2	Availability of material	10	12.5
3	Stable Govt.	08	10
4	Huge market potential	34	42.5

Graph 4(ad) India as an important destination for investment



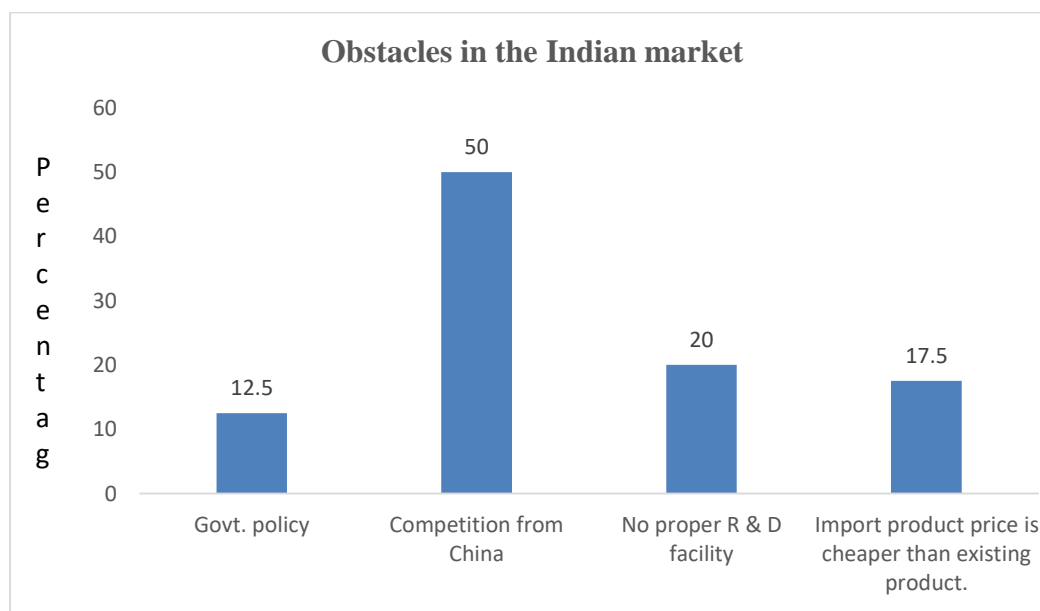
Interpretation-

The above table shows that according to 35 % respondents India as important destination for investment due to Availability of manpower, according to 12.5 % respondents India as important destination for investment due to Availability of raw material, according to 10 % respondents India as important destination for investment due to Stable Government and according to 42.5% respondents India as important destination for investment due to Huge market potential.

Q.31-Table 4(ae). Main current obstacles in the Indian market

S. No	Main current obstacles in the Indian market	No. of Respondent	Percentage (%)
1	Govt. policy	10	12.5
2	Competition from China	40	50
3	No proper R & D facility	16	20
4	Import product price is cheaper than existing product.	14	17.5

Graph 4(ae) Main current obstacles in the Indian market



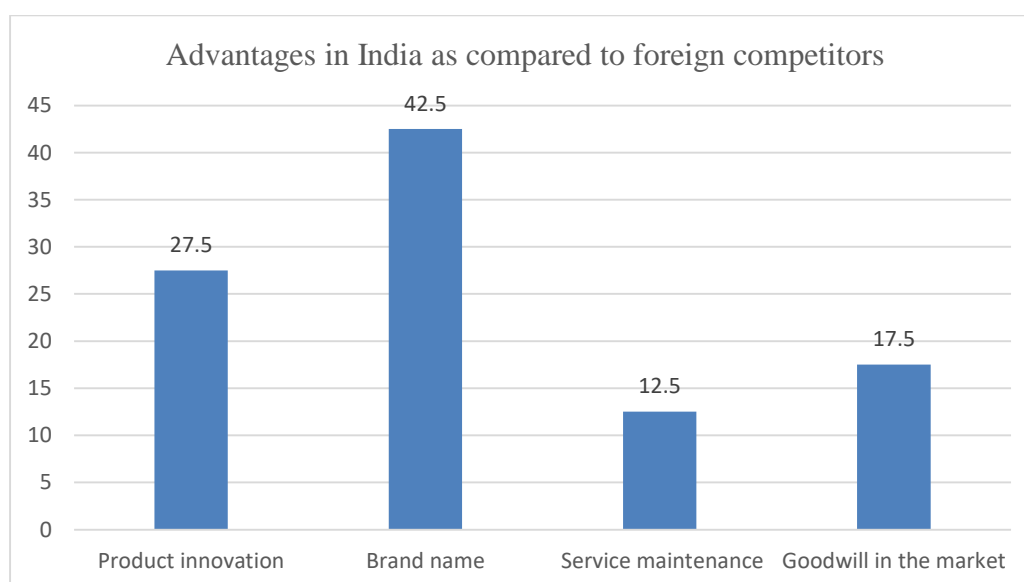
Interpretation-

The above table shows that according to 12.5% respondent Government policy is the main obstacles in the Indian market. According to 50% respondent competition from China is the main obstacles / threat in the Indian market. According to 20% respondent no proper Research & Development facility is the obstacles in Indian market, According to 17.5% respondent import product is cheaper than Indian product.

Q.32-Table 4(af). Main advantages in India as compared to foreign competitors.

S. No	Main advantages in India as compared to foreign competitors	No. of Respondent	Percentage (%)
1	Product innovation	22	27.5
2	Brand name	34	42.5
3	Service / maintenance	10	12.5
4	Goodwill in the market	14	17.5

Graph 4(af) Main advantages in India as compared to foreign competitors



Interpretation-

The above table shows that according to 27.5% respondent Product innovation is the main advantage as compared to foreign competitors. According to 42.5% respondent Brand name is the main advantage as compared to foreign competitors. According to 12.5% after sales service/ maintenance is the main advantage as compared to foreign competitors. According to 17.5% respondent Goodwill in the market is the main advantage as compared to foreign competitors

Chapter No.4.1

Hypothesis Testing

Table No.	Title	Page No
4.1.1	Hypothesis -1	184
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4.1.6	Hypothesis- 6	196

Chapter No.4.1

Hypothesis Testing

In statistics, one utilizes random samples to understand all characteristics of the population from which the sample were obtained. Hypothesis testing has an important role in the application of statistics to real-life problems. The two hypotheses in a statistical test are normally referred to as Null Hypothesis and Alternative Hypothesis.

1. Null Hypothesis (H₀): A statistical hypothesis which is stated for the purpose of possible acceptance is called null hypothesis.

2. Alternative Hypothesis (H₁): Any hypothesis which is complementary to the null hypothesis that it is true.

3. Level of Significance: This is one of the essential concepts of hypothesis testing and is always considered in percentage (normally 5%). Significance level is the maximum value of the probability of rejecting a null hypothesis (H₀) when it is true. Ex- If the significance level to be 5%, it means that the researcher is ready to take 5% risk to reject the null hypothesis when it happens to be true.

4. Degree of Freedom: The degree of freedom can be defined as the number of components in the calculation of a statistics that are free to vary. If size of the given sample is n , then the degree of freedom will be $(n-1)$

The study tests the following hypothesis:

1. There is no significant relationship between years of establishment of company with customer's choice to purchase product.

2. There is no significant relationship between product discount & consumer buying behaviour.

3. There is no significant relationship between the variation in the price and profit.

4. There is no significant relationship between price consideration and impact on sales.

5. There is no significant relationship between number of distributors and increase in sales.

6. There is no significant relationship between promotion type & percentage increase

in sales.

4.1.1. Hypothesis no. 1:

To test this hypothesis researcher has formulated null and alternative hypothesis as follows:

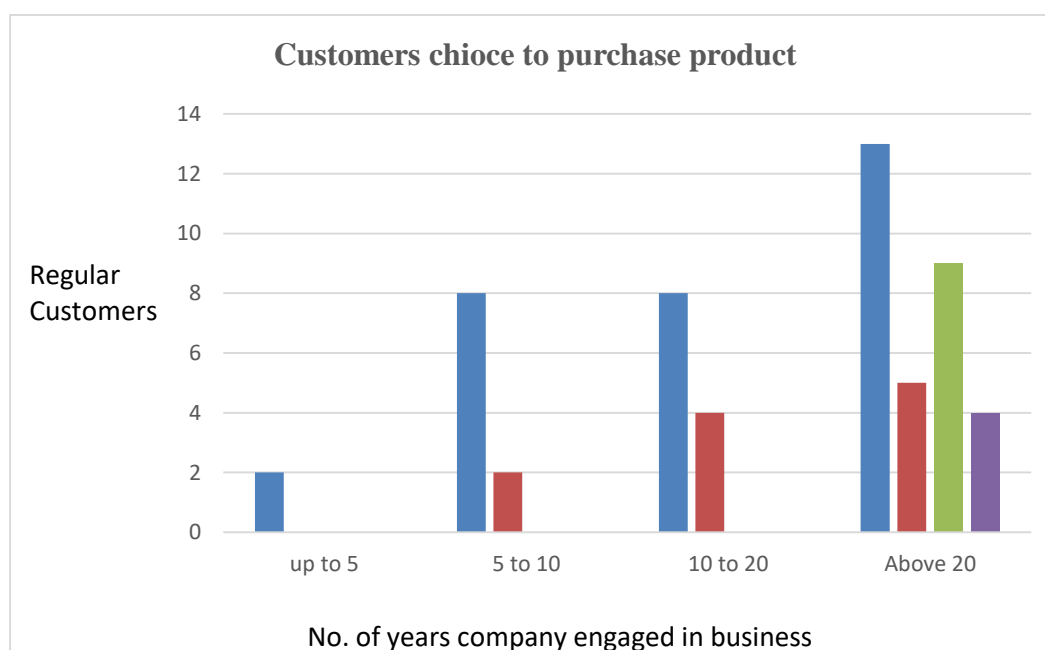
H0: There is no significant association between number of years of establishment of the company and customers choice to purchase product.

H1: There is significant association between number of years of establishment of the company and customers choice to purchase product.

Level of significance: 5 %

The test statistics used for testing this hypothesis is cross tabulation (**Chi-square test**).

Graph 4.1(a) No. of years Company engaged in business



No. of years company engaged in business

Interpretation –

It was observed that 80 % customers are purchased chemical product from the 5-10 years company engaged in business, also 66.7 % customers are purchased chemical product from the 10-15 years company engaged in business and 41.9 % customers are

purchased chemical product from the 15 and above years Company engaged in

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.400 ^a	9	.699
Likelihood Ratio	9.091	9	.429
Linear-by-Linear Association	4.738	1	.030
N of Valid Cases	40		

a. 13 cells (81.3%) have expected count less than 5. The minimum expected count is .10.
business.

Decision rule 1.

The results of the test statistics indicates **to accept null hypothesis** as p value of the chi-square statistics -likelihood ratio- is .429 which is greater than .05. **Therefore we can conclude that statistically there is no significant association between number of years of establishment of the company and customer purchases product.**

Decision rule 2.

For Chi-square test -Table value of 9 is (16.9190) should be greater than calculated value (6.400). The result of the test statistics indicates **to accept null hypothesis**

Hypothesis no. 2:

To test this hypothesis researcher has formulated null and alternative hypothesis as follows:

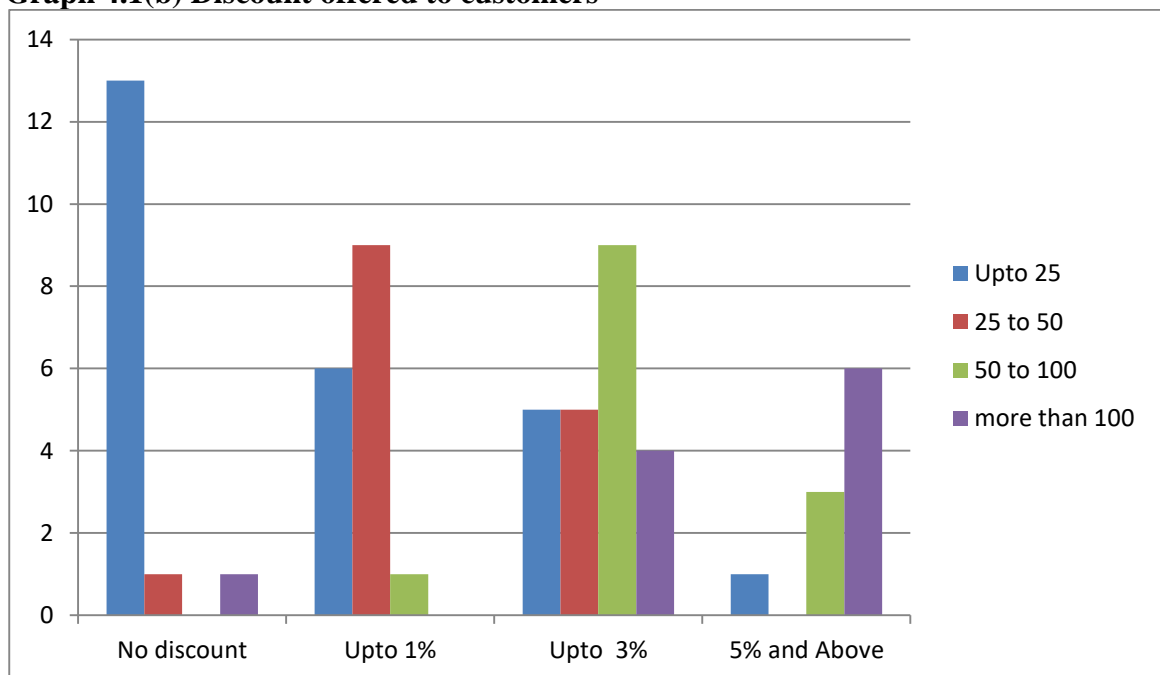
H₀: There is no significant association between product discount and consumer buying behaviour.

H₁: there is significant association between product discount and consumer buying behaviour.

Level of significance: 5 %

The test statistics used for testing this hypothesis is cross tabulation (**Chi-square test**).

Graph 4.1(b) Discount offered to customers



Discount offered to customers

Interpretation –

It was observed that 86.7 % manufacturer are not giving discount to the customer, 37% manufacturer are giving 1% discount up to 25 customer, 21.7% manufacturer are giving 3% discount up to 25 customer and 10% manufacturer are giving 5% and above discount up to 25 customer. **Therefore it shows that there is significant association between product discount and consumer buying behaviour**

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	47.620 ^a	9	.001
Likelihood Ratio	49.122	9	.001
Linear-by-Linear Association	25.895	1	.001
N of Valid Cases	64		

a. 12 cells (75.0%) have expected count less than 5. The minimum expected count is 1.72.

Decision rule 1.

The results of the test statistics indicates **to reject null hypothesis and accept alternative hypothesis**, as p value of the Chi-square statistics -is 0.001 which is less than 0.05. **Therefore we can conclude that statistically there is significant association between product discount and consumer buying behaviour.**

Decision rule 2

For Chi-square test -Table value of 9 is (16.9190) should be less than calculated value (47.620). The result of the test statistics indicates **to reject null hypothesis**

Hypothesis no. 3:

To test this hypothesis researcher has formulated null and alternative hypothesis as follows:

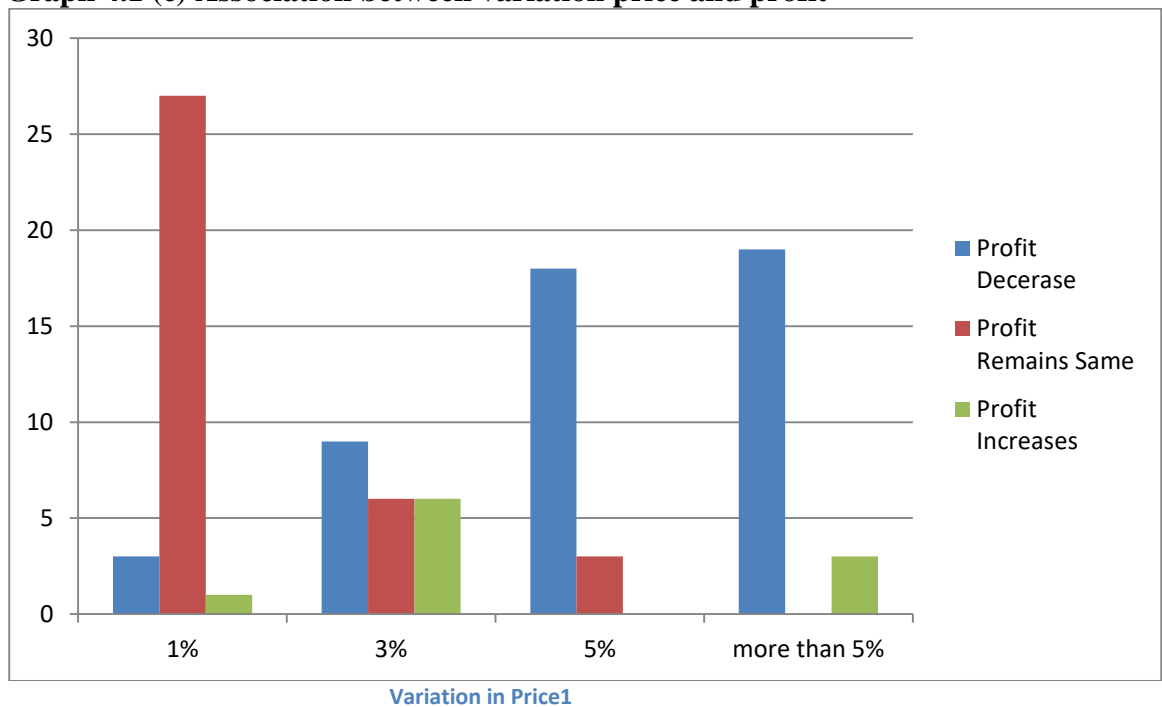
H0: There is no significant relationship between variation in price and profit.

H1: There is significant relationship between variation in price and profit.

Level of significance: 5 %

The test statistics used for testing this hypothesis is cross tabulation (**Chi-square test**).

Graph 4.1 (c) Association between variation price and profit



Interpretation –

It was observed that when the price decreases by the 1% then profit decreases by 9.7%, the price decreases by the 3% then profit decreases by 42.9.7%, the price decreases by the 5% then profit decreases by 85.7% and when the price decreases more than 5% then profit decreases by 86.4%, **Therefore it shows that there is significant association between profit and variation in the price.**

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	62.957 ^a	6	.001
Likelihood Ratio	71.365	6	.001
Linear-by-Linear Association	19.823	1	.001
N of Valid Cases	95		

a. 4 cells (33.3%) have expected count less than 5. The minimum expected count is 2.21.

Decision rule 1-

The results of the test statistics indicates **to reject null hypothesis and accept alternative hypothesis**, as p value of the chi-square statistics -is 0.001 which is less than .05. **Therefore we can conclude that statistically there is significant association between profit and variation in the price.** The figures of the count and expected count indicate that if there is more decrease in price then profit also decreases.

Decision rule 2.

For Chi-square test -Table value of 6 is (12.59) should be less than Calculated value (62.957) The result of the test statistics indicates **to reject null hypothesis and accept alternative .**

Hypothesis no 4.

To test this hypothesis researcher has formulated null and alternative hypothesis as follows:

H0 .There is no significant relationship between price consideration and impact on sales.

H1 .There is no significant relationship between price consideration and impact on sales.

Level of significance: 5 %

The test statistics used for testing this hypothesis is cross tabulation (**Chi-square test**)

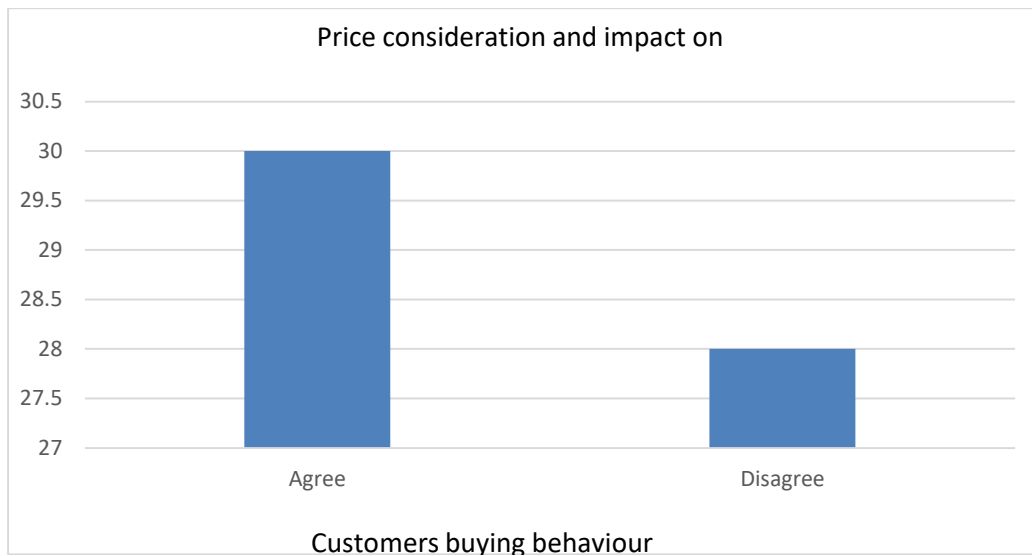
Researcher has tested this hypothesis by taking into account opinion of the respondents on decrease in price and its impact on sale. Out of 29 respondents 15 respondents are of the opinion (agree) that decrease in price has positive impact on the sale.

To test this hypothesis researcher has defined null and alternative hypothesis as follows:

H0: $p = .60$ (60 % people feel that decrease in price has positive impact on the sale)

H1: $p < .60$ (less than 60 % people feel that price has not positive impact on sale)

Graph 4.1(d) Price consideration and impact on sale



Interpretation –

60 % people feel that there is association between price consideration and buying behaviour and 40% people feel that there is no association between price consideration and buying behaviour.

Test Statistics

	Agree disagree
Chi-Square	.828 ^a
Df	1
Asymp. Sig.	.363

a. 0 cells (.0%) have expected frequencies less than 5.
The minimum expected cell frequency is 11.6.

Decision rule

The results of the test statistics indicates to **accept null hypothesis and reject alternative hypothesis**, as p value of the statistics is .363 which is more than .05. **Therefore we can conclude that there is no association between price consideration and impact on sale.**

4.1.4. Hypothesis no.5:

To test this hypothesis researcher has formulated null and alternative hypothesis as follows:

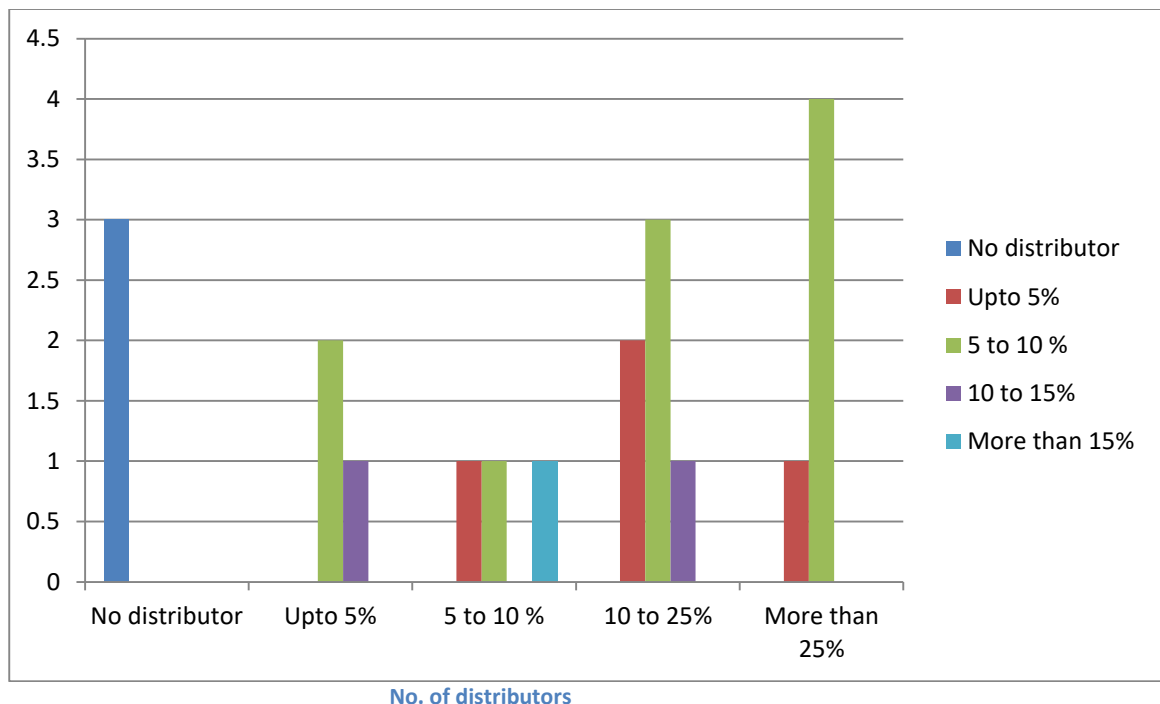
H₀: There is no significant association between number of distributors and percentage increase in sales.

H₁: there is significant association between number of distributors and percentage increase in sales.

Level of significance: 5 %

The test statistics used for testing this hypothesis is cross tabulation (**Chi-square test**).

Graph 4.1(e) Number of distributors and increase in sale



Interpretation –

It was observed that 40% industries have no distributor, and 60% industries have more than 25 distributors. It shows that there is no such increase in sales while appointing a dealer, it indicates that there is no relationship between the number of distributors and increase in sales.

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	30.400 ^a	16	.016
Likelihood Ratio	25.771	16	.057
Linear-by-Linear Association	2.489	1	.115
N of Valid Cases	20		

a.25 cells (100.0%) have expected count less than 5. The minimum expected count is .15.

Decision rule 1.

The results of the test statistics indicates **to accept null hypothesis and reject alternative hypothesis**, as p value of the chi-square statistics -likelihood ratio- is .057 which is greater than .05. Therefore we can conclude that **statistically there is significant association between number of distributors and percentage increase in sale**. Therefore we can conclude that product distribution with or without distributors has association with sale.

Decision rule 2

For Chi-square test -Table value of 16 is (26.2962) should be less than calculated value (30.400). The result of the test statistics indicates **to accept null hypothesis and reject alternative hypothesis**.

4.1.5. Hypothesis no. 6:

We have considered three different types of product promotion (Magazine and journal, e-portal, web sites) to test this hypothesis.

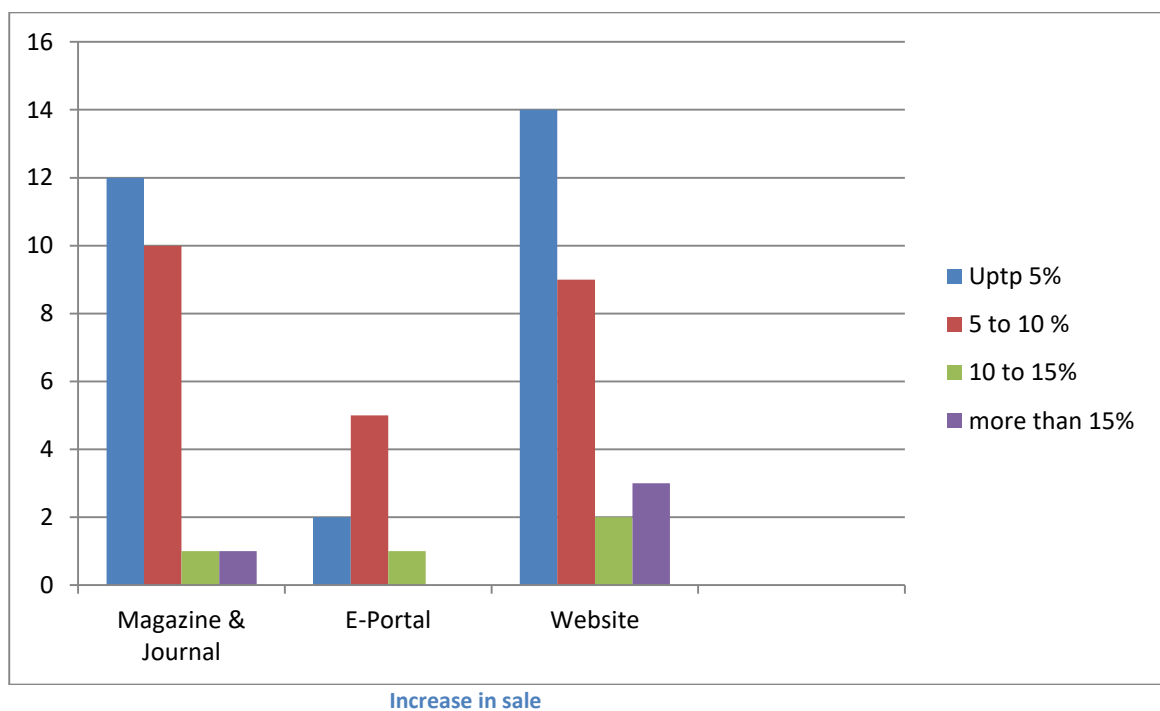
6-a) H₀ -There is no significant association between promotion type (magazine and journal) and percentage increase in sale.

H₁ -There is significant association between promotion type (magazine and journal) and percentage increase in sale.

Level of significance: 5 %

The test statistics used for testing this hypothesis is cross tabulation (**Chi-square test**).

Graph 4.1(f) Promotion type and increase in sale



Interpretation –

It is observed that 50 % companies are used web –site for promotion, 25 % companies are used e-portal for promotion and 50% companies are used magazines and journals for promotion, maximum sale gets from web-site

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.571 ^a	3	.206
Likelihood Ratio	4.263	3	.234
Linear-by-Linear Association	3.263	1	.071
N of Valid Cases	35		

- a. 5 cells (62.5%) have expected count less than 5. The minimum expected count is .63.

Decision rule1.

The results of the test statistics indicates **to accept null hypothesis and reject alternative hypothesis**, as p value of the Chi-square statistics is 0.234 which is greater than .05. **Therefore we can conclude that statistically there is no significant association between product promotion type (magazine and journal) and percentage increase in sale.**

Decision rule 2

For Chi-square test -Table value of 3 is (7.8147) should be greater than calculated value (4.571). The result of the test statistics indicates **to accept null hypothesis and reject alternative hypothesis.**

6-b) H0 -There is no significant association between promotion type (e-portal) and percentage increase in sale

H1 -There is no significant association between promotion type (e-portal) and percentage increase in sale

Level of significance: 5 %

The test statistics used for testing this hypothesis is cross tabulation (**Chi-square test**).

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.789 ^a	3	.188
Likelihood Ratio	5.476	3	.140
Linear-by-Linear Association	.023	1	.879
N of Valid Cases	35		

a. 6 cells (75.0%) have expected count less than 5. The minimum expected count is .46.

Decision rule 1–

The results of the test statistics indicates **to accept null hypothesis** as p value of the chi-square statistics is 0.140 which is greater than .05. **Therefore we can conclude that statistically there is no significant association between product promotion type (e-portal) and percentage increase in sale.**

Decision rule 2

For Chi-square test -Table value of 3 is (7.8147) should be greater than calculated value (4.789). The result of the test statistics indicates **to accept null hypothesis**

6-c) H0 -There is no significant association between promotion type (Web-sites) and percentage increase in sale

H1 -There is no significant association between promotion type (Web-sites) and percentage increase in sale

Level of significance: 5 %

The test statistics used for testing this hypothesis is cross tabulation (**Chi-square test**).

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.067 ^a	3	.559
Likelihood Ratio	2.425	3	.489
Linear-by-Linear Association	.265	1	.607
N of Valid Cases	35		

a. 6 cells (75.0%) have expected count less than 5. The minimum expected count is .40.

Decision rule 1.

The results of the test statistics indicates **to accept null hypothesis and reject alternative hypothesis**, as p value of the chi-square statistics is 0.489, which is greater than .05. **Therefore we can conclude that statistically there is no significant association between product promotion type (website) and percentage increase in sale.**

Decision rule 2

For Chi-square test -Table value of 3 is (7.8147) should be greater than calculated value (2.067). The result of the test statistics indicates **to accept null hypothesis**

As no company is using hoarding as promotion type therefore association between hording and product increase in sale cannot be established.

But on the basis of promotion types- 1) magazine and journals 2) e-portals and 3) website it can be concluded that there is no significant association between product promotion type and increase in sale.

Chapter No. 5.1

Findings

S. No	Title	Page No
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Chapter No. 5.1

Findings

5.1 Finding from the research –

The study has produced a number of valuable findings, which have far reaching implications for policy decisions of the chemical companies, both Indian and multinational, in the areas of marketing management in general and promotional strategies in particular, but the outcomes of the study will have a significant effect on all the major speciality chemical firms operating in India. This is because the operational systems of chemical industry firms in India are almost the same, especially with regard to the promotional expenditures they are incurring for improving their sales value, profitability and growth. Chemical industry should increasingly focus on marketing and promotion to achieve more shares in national as well as international chemical trade. The industry may endeavor to concentrate more on use of brand building, export promotion and market development.

Following are the findings from the research which are divided into four parts as Product, Price, Place and Promotion:

A) Product:

1) Based on data analysis of question no. 1 out of 80 chemical units in Pune district, it was found that 60 percent of the Companies are the small scale industries, 30 percent industries are Private Ltd Companies, 10 percent industries are Public Ltd. Companies and no MNC company. Hence it can be seen that majority of the chemical industries are small scale industries.

2) Based on data analysis of question no.2 out of 80 chemical units in Pune district, it was found that 2.5 percent companies are newly established company, 12.5 percent companies are engaged in the chemical business for 5 to 10 years, 32.5 percent companies are engaged in the chemical business for 10 to 15 years and 52.5 percent companies are engaged in the chemical business for more than 15 years. Hence it can be seen that majority of the chemical industries are engaged in the chemical business for more than 15 years.

3) Based on data analysis of question no. 3, out of 80 chemical units 47% companies are manufacture Basic chemicals, 25% companies are manufacture Specialty chemicals and 28% companies are manufacturing Knowledge chemicals. Hence it can be seen that majority of the chemical industries are manufacturing Basic chemicals.

4) Analysis of question no. 5 suggested that, 55 percent companies do not have marketing department, while 45 percent companies have marketing department .Hence it can be seen that most companies do not have Marketing department.

5) Analysis of question no. 6 suggested that, 50 percent company's regular customer are up to 25 who purchase the products, 22.5 percent companies' regular customers is between 25 to 50 who purchase the products. 17.5 percent companies regular customers is between 50 to 100 and 10 percent companies regular customers is more than 100.Hence it can be seen that most up to 25 customers are the regular customers.

6) Analysis of question no. 7 suggested that, 50 percent customers are preferred for good quality product by the manufactures. 27.5 percent customers are preferred for timely delivery, 35 percent customers are preferred for reasonable price and 12.5 percent customers are preferred for easily availability of the product from manufacturer. Hence it can be seen that most of the customers are preferred for good quality product from manufacturer.

7) Analysis of question no. 27 suggested, 35 percent company's products are seasonable, while 65 percent company's products are non-seasonable. Hence it can be seen that most of the company's products are non-seasonable

B) Price:

8) Analysis of question no. 11 suggested that, 7.5 percent respondents are “ Strongly Agree” with Small decrease in price (up to 3 percent) will gain extra market share, 20 percent respondents are “Agree” with small decrease in price (up to 3 percent)will gain extra market share, 2.5 percent respondents are “ Strongly disagree” with Small decrease in price will gain extra market share,42.5 percent respondents are “Disagree” with small decrease in price (up to 3 percent) will gain extra market share and 27.5 percent respondents are Neutral. Hence it can be seen that small decrease in price does not gain extra market share.

9) Analysis of question no. 13 suggested that, 7.5 percent respondents are “Strongly Agree” that Small decrease in price (up to 3 percent) having positive impact on sale. 30 percent respondents are” Agree” that small decrease in price(up to 3 percent) having positive impact on sale, 2.5 percent respondents are “Strongly Disagree” that small decrease in price (up to 3percent) having positive impact on sale. 32.5 percent respondents are “Disagree” that small decrease in price (up to 3 percent) having positive impact on sale and 27.5 percent respondents are “Neutral”, Hence it can be seen that small decrease in price there is no effect on sale.

10) Analysis of question no. 14 suggested that , 42.5 percent respondents are agree that up to 5 percent sales increases due to small change in price.15 percent respondents are agree that up to 5-10 percent sales increases due to small change in price. 2.5 percent respondents are agree that up to 10-15 % sales increases due to small change in price and 37.5 percent respondents are neutral regarding this opinion. Hence it can be seen that sales increases due small change in price.

11) Analysis of question no. 15 suggested that when the price decreases by 1percent the profit decreases by 10 percent , when the price decreases by 3 percent the profit decreases by 14 percent , when the price decreases by 5 percent the profit decreases by 18 percent , when the price decreases by more than 5 percent the profit decreases by 22 percent. Therefore it shows that there is significance association between variation in price and profit.

12) Analysis of question no. 16 suggested that, 42 customers are new customers or placing small order, hence companies are not offering trade discount. The 38 customers are loyal customers & placing bulk and continuous orders, the companies offers the discount, hence it was observed that companies offered 1 percent discount for most of the customers

13) Analysis of question no. 17 suggested that, 75 percent respondents agreed that product quality is taken into consideration while deciding pricing structure of product, 10 percent respondents agreed that discount offered is taken into consideration while deciding pricing structure of product,5 percent respondents agreed that required service is taken into consideration while deciding pricing structure of product and 10 percent respondents agreed that competitor’s policy is taken into consideration while

deciding pricing structure of product. Hence it can be seen that the product quality is taken into consideration while deciding pricing structure of the product.

C) Place :

14) Analysis of question no. 19 suggested that 5 percent companies criteria for appointing distributor is nearer to the market place. 5 percent companies criteria for appointing distributor is large storing capacity, having their own warehouse. 12.5 percent companies criteria for appointing distributor is own transporting facility. 35 percent company's criteria are Fast payment transaction and 42.5 percent companies does not have their own distributors. Hence it can be seen that most of the companies do not have their own distributor.

15) Analysis of question no. 20 suggested that, 5 percent manufacturer prefer the distributors which are nearer to the workplace while appointing distributor, 5 percent manufacturers prefer large storing capacity(warehouse) while appointing distributor. 12.5 percent manufacturer prefer those who having own transporting facility /capacity while appointing distributor, 35 percent prefer fast payment, while 42.5 percent manufacturer do not have their own distributors. Hence it can be seen that most of the manufacturer do not have distributors.

16) Analysis of question no. 21 suggested that 7.5 percent sales increased by appointing less than 5 distributors. 17.5 percent sales increased by appointing 5 to 10 distributors. 22.5 percent sales increased by appointing 10-25 distributors. None of the companies have more than 25 distributor and 52.5 percent companies does not have even one distributor. Hence it can be seen that most of the companies does not have distributors.

17) Analysis of question no. 4 suggested that 15 percent companies are selling within Pune district, 22.5 percent companies are selling within Maharashtra state, 37.5 percent companies are selling within India and 25 percent companies are export oriented. Hence it can be seen that most of the chemical companies business are within India.

D) Promotion:

18) Analysis of question no. 23 suggested that, 65 percent companies have used advertisement for improvement in sales and 35 percent companies have not used advertisement for improvement in sales. Hence it can be seen that most of the chemical companies prefer advertisement for sale improvement.

19) Analysis of question no. 24 suggested that 10 percent respondents are “Strongly Agree” that business is successful without promotion. 17.5 percent respondents are “Agree” that business is successful without promotion. 2.5 percent respondents are “Strongly Disagree” that business is successful without promotion. 47.5 percent respondents are “Disagree” that business is successful without promotion and 22.5 percent respondents are “Neutral” for business promotion. Hence it can be seen that business is successful by using promotion strategy.

20) Analysis of question no. 25 suggested that 30 percent companies have used Magazines & Journals for product promotion, 12.5 percent companies have used E-portal for product promotion, 2.5 percent companies have used Hoardings for product promotion, 42.5 percent companies have used Web-site for product promotion and 12.5 percent companies do not use any type of media for product promotion. Hence it can be seen that most of the companies use Web- sites for promotion.

21) Analysis of question no. 26 suggested that 40 percent company’s sale increased less than 5 percent by effective promotion. 27.5 percent companies’ sales increased between 5–10 percent by effective promotion. 12.5 percent company’s sale increased up to 10-15 percent by effective promotion. 7.5 percent companies’ sales increased more than 15 percent by effective promotion. And 12.5 % companies do not apply any type of promotion. Hence it can be seen that sales increases due to effective promotion.

22) Analysis of question no.28 suggested that 50 percent respondent’s Indian market for business is very important. According to 27.5 percent respondent’s Indian market for business is almost important. According to 17.5 percent respondent’s Indian market for business is moderate important and according to 5 percent respondent’s

Indian market for business is less important. Hence it can be seen that Indian market is very important for business.

23) Analysis of question no. 29 suggested that 50 percent respondent said that there are excellent opportunities for chemical industries in next five years. According to 37.5 percent respondent there is Good opportunities. According to 10 percent respondent there is Average opportunities for chemical industries in next five years. And 2.5 percent respondent said that there are very less opportunities for chemical industries in next five years. Hence it can be said that there is excellent opportunities for chemical industries in future.

24) Analysis of question no. 30 suggested that 35 percent respondents viewed India as important destination for investment due to availability of manpower, 12.5 percent respondents opined that India is an important destination for investment due to availability of raw material, 10 percent respondents opined that India is an important destination for investment due to Stable Government, 42.5 percent respondents viewed India as an important destination for investment due to huge market potential. Hence it can be seen that in India huge market potential for investment exists.

Chapter No. 5.2
Suggestions

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Chapter No. 5.2

Suggestions

5.2 Suggestions to the Manufacturer:

For viable promoting in the present focused situation, it is essential to outline an arrangement or it is important for planning better Marketing Mix techniques by chemical organizations. On the premise of discoveries and the data gathered from the optional sources furthermore from the immediate meeting of chose Directors, Managers and officers of the organizations, the accompanying recommendations are given to the maker for enhancing the business, development, benefit and maintainability of Chemical organizations in India. The recommendations are as per the following:

- 1.** Chemical organizations ought to endeavour for ceaselessly enhancing its generation procedures and items by putting assets in innovation advancement. The chemical business ought to attempt process advancement and innovation with the target of decrease in expense of generation.
- 2.** Small scale Chemical organizations needs to concentrate on R&D in one or different territories by setting up of in-house R&D facility or outsourcing the R&D exercises, so that new item advancement and improvement happens.
- 3.** The company should focus on new products development and downstream product to support in the business sector.
- 4.** Manufacturers should urge authorities to reduce tax burden for controlling cost of input.
- 5.** Merger and Acquisition helps in cost reduction as well as reduction in overheads.
- 6.** The company should focus on distributors for timely delivery domestically as well as internationally.
- 7.** Brand building should be taken up as a part of promotional strategy.
- 8.** Chemical organizations will need to expand its promotional expenses to increase, expand the market share, hence the clients to understand that they are getting the right

honour for the products they purchase, and henceforth organizations need to concentrate on advancement.

9. Free samples are very useful in stimulating sales for chemical products which create favourable attitude for small scale chemical company, which is more effective than advertisement. In order to encourage distributors to stock the varieties, discounts, free gifts, joint promotions must be used as strategy.

10. The organization ought to think about the proper media profiles for client scope and match client profiles to media profiles.

Chapter No. 5.3

Conclusion

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Chapter No. 5.3

Conclusion

The boost demand of the chemical products, there is necessary for chemical companies to grow. The Government is ensuring that this demand be met through domestic production.

Increasing local production requires global competitiveness to withstand imports as well as for export surplus, the success factors are availability of feedstock at competitive cost, access to advanced technology, low cost capital, investment in Research and Development and talent development.

For Indian companies marketing mix strategies are important as the Indian economy is now a part of the global economy and Indian companies need to complete globally.

The following are the key conclusions:

1. As per Q. 7 and their results state the, negligence efforts towards increasing Research and Development expenditure, even after a long stay in business. The customers who are quality conscious, hence it is necessary to work on this area.
2. As per Q. 8 and Q. 9 and their results state that, the shape and reshape the business the strategic market planning is essential for choosing the right products, for the growth of markets at the right time.
3. As per Q. 16 and their result state that , customer could be happy for getting price discount, it is possible with significant efforts towards building quality infrastructure in the form of latest technology and equipments.
4. As per Q. 18 and their results emphasized the need for marketing of quality product, which is consistency for customer loyalty and business sustainability.
5. As per Q.19 and Q. 20 and their results states that the need for appointing distributors for increasing sales as well as for timely delivery.
6. As per Q. 23 and Q. 24 and their results state the need for conducting GAP analysis for assessing customer needs and suppliers abilities to cater those, also need to develop communication channel for consistent dialogue which can help improve sales.

7. As per Q. 24 and Q. 25 and their results, the customers can be informed about the nature and type of products, it's uses and benefits , offered price and it's availability in the market place, this can be achieved by developing suitable promotional strategies.

8. As per Q. 25 and Q.26 and their results, sales increase due to various Medias use for the promotion. Personal selling and Web-sites are the effective media for the product promotion.

Evaluation of Marketing Mix order:

Variables are identified for each marketing mix and current practices are evaluated against a scale, mentioned below revealed the order as shown in the table.

(By using measured scale like (0-20 = 1, 21-40 =2, 41-60 = 3 , 61-80 = 4 , 81-100=5

Parameter	Findings	Ref. Q. No	Data Analysis	Score	Total Score
1.Product	Produces more Basic chemicals	3	47%	3	13
	Preferred good quality product.	7	50%	3	
	No proper Marketing strategy	9	55%	3	
	Produces non seasonal product	27	52.5%	4	
2.Promotion	Prefer Advertisement for sales improvement	23	65%	4	12
	Business growth is depend on promotional effort	24	50%	3	
	Web-site use for promotion	25	42.5%	3	
	Focus on effective promotion	26	40%	2	
3.Place	Distributors are nearer to the market place	19	5%	1	9
	Companies with distributor centric approach	20	47.5%	3	
	Focus on timely delivery	22	40 %	2	
	Doing business with in India	30	42.5%	3	
4.Price	Decrease in price is resulting into increase in market share	11	27.5%	2	7
	Decrease in price is resulting into increase in profit margin	13	7.5%	1	
	Discount offered to trade customers for constant orders.	16	47.5%	3	
	Pricing is competition driven	17	10%	1	

On the basis of above results, we conclude that companies could define Marketing mix strategies as follows:

1. The Product score is highest (13) because, product plays vital role in this industry, hence continuous efforts must be undertaken to enhance quality of product. Companies are produced more Basic chemicals by focused on quality product constantly throughout the year but it would be better if companies adopt better marketing strategies.
2. The Promotion score is second highest (12) because, advertisement are considered as effective promotional tool, media is selected for it however to make promotion more effective dedicated efforts are necessary. Attention is required for promoting company's competencies; hence more focus on the advertisement.
3. The Place (distribution) score is lower (9) because, building dedicated marketing channel might prove decisive in encashing growth opportunities across the market, hence manufacturer has to give more focus toward the distribution and distribute the right product at a right time. Majority companies are doing business within India with distributor centric approach but lacking on timely deliveries and identification of distributors nearer to the market place.
4. The Price score is lowest (7) because, buyers are not price sensitive, he prefers only good quality product, and hence if there is any price changes, it should not affect on product sale. Price reductions, discounts are not benefiting companies as this is not competitive market, where in prices are competition driven.

Chapter No.6

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Chapter No. 7

Annexure

7.1 Questionnaire for Manufacturer

“ A Study of Marketing Mix strategies with reference to Chemical Industries in Pune District”.

(Please Tick mark on or more whichever is required)

1. Your company belong to a category of –

- | | | | |
|----------------|--------------------------|--------------------------|--------------------------|
| a) MNC | <input type="checkbox"/> | b) Small scale | <input type="checkbox"/> |
| C) Public ltd. | <input type="checkbox"/> | d) Government undertaken | <input type="checkbox"/> |

2. How many years has your company engaged in Chemical business?

- | | | | |
|----------------|--------------------------|---------------|--------------------------|
| a) 0- 5 years | <input type="checkbox"/> | b) 5-10 years | <input type="checkbox"/> |
| C) 10-15 years | <input type="checkbox"/> | d) 15 & above | <input type="checkbox"/> |

3. Which Segments does your company operate in?

- | | | | |
|------------------------|--------------------------|-------------------------|--------------------------|
| a) Basic Chemicals | <input type="checkbox"/> | b) Speciality Chemicals | <input type="checkbox"/> |
| c) Knowledge Chemicals | <input type="checkbox"/> | | |

4. What is your geographic domain?

- | | | | |
|-------------------|--------------------------|--------------------|--------------------------|
| a) Within city | <input type="checkbox"/> | b) Within state | <input type="checkbox"/> |
| c) Within country | <input type="checkbox"/> | d) internationally | <input type="checkbox"/> |

5. Does your company having separate Marketing department?

- | | | | |
|--------|--------------------------|-------|--------------------------|
| a) Yes | <input type="checkbox"/> | b) No | <input type="checkbox"/> |
|--------|--------------------------|-------|--------------------------|

6 . How many of your regular customers which purchases product continuously?

- | | | | |
|-------------|--------------------------|------------------|--------------------------|
| a) Up to 25 | <input type="checkbox"/> | b) 25-50 | <input type="checkbox"/> |
| c) 50-100 | <input type="checkbox"/> | d) more than 100 | <input type="checkbox"/> |

7. What benefits does customer expect from you?

- | | | | |
|------------------------|--------------------------|------------------------|--------------------------|
| a)Good Quality product | <input type="checkbox"/> | b)Timely delivery | <input type="checkbox"/> |
| c) Reasonable price | <input type="checkbox"/> | d) Easily availability | <input type="checkbox"/> |

8. What are the major external factors that affect on your products?

- a) Elasticity of Demand b) Customer Expectations
 c) Competitions d) Govt. Regulation.

9. Does your organization engage in Strategic Marketing?

- a) yes b) No

10. How often your organization does marketing planning?

- a) Monthly b) Quarterly
 c) Half yearly d) Yearly

11. Do you think that a small decrease in price will gain you extra market share?

- a) Strongly Agree b) Agree
 c) Strongly disagree d) Disagree
 e) Neutral

12. How much percentage you gain extra market share due to small decrease in price?

- a) Up to 5 % b) 5- 10 %
 c) 10-15 % d) more than 15%

13 . Do you think that a small decrease in price will having positive impact on sales?

- a) Strongly Agree b) Agree
 c) Strongly disagree d) Disagree
 e) Neutral

14. How much percentage sale increases by small changes in price?

- a) Up to 5 % b) 5- 10 %
 c) 10-15 % d) more than 15%

15. Is there any change in profit due to small decrease in price?

Price decrease by	Profit increases	Profit decreases	Profit remains same
1 %			
3 %			
5 %			
More than 5 %			

16. What discount should be offered to trade customer?

% of Discount	Number of Customers			
	Up to 25	25-50	50-100	More than 100
Upto 1 %				
Upto 3 %				
5 % & above				
No discount				

17. How do you decide pricing structure of product?

- a) Product quality b) Discount offer
 c) Required Service d) Competitors policy

18. Which of the following attributes that a buyer thinks as important while taking a purchase decision?

- a) Quality product b) Multiple use
 c) Branded product d) Goodwill in the market

19. Which criteria you consider while appointing distributor?

- a) Nearer to the work place b) Large storing capacity
 c) Own transporting facility d) fast payment

20. How many distributors are working for you?

- a) Up to 5 b) 5- 10
 c) 10-25 d) more than 25

21 .How much percentage of sale increased by appointing distributor?

- a) Up to 5 % b) 5- 10 %
 c) 10-15 % d) more than 15%

22 .Which strategy you apply for product distribution?

- a) Timely delivery b) Transparency in pricing
 c) Product availability d) Good condition material

23 .Do you use advertising or direct marketing for improvement in sale of product?

a)Yes b) No

24. Is your business be successful without promotion activities?

a) Strongly Agree b) Agree
c) Strongly Disagree d) Disagree
e) Neutral

25. Which media you currently use for product promotion?

a)Magazines & Journals b)E- portals
c) Hording d) Web sites

26. How much % of sale increased after employing above effective promotional activity?

a) Up to 5 % b) 5- 10 %
c) 10-15 % d) more than 15%

27. Is there any seasonality in the market?

a)Yes b) No

28 .How important is the Indian market for your business?

a) Very important b) Almost important
c) Moderate important d) little important
e) Not so important

29 .Over the next 5 years how do you expect business opportunities in the Chemical sector in India?

a)Excellent opportunities b)Good opportunities
c) Average opportunities d) less opportunities
e) Poor opportunities

30. Why do you think India as important destination for investment?

- a)Availability of manpower b)Availability of raw material
c) Stable Govt. d)Huge market potential

31. What are the main current obstacles preventing you from expanding further in the Indian Market?

- a)Govt. policy b) Competition from China
c)No proper R & D facility d)Import product price is cheaper
than existing product.

32 .What are the main advantages your company have in India compared to foreign competitors?

- a) Product innovation b) Brand name
c) Service maintenance. d) Goodwill in the market

33. Any other suggestions –

.....
.....
.....
.....