CHAPTER – 1
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1.1. INTRODUCTION

Managing Markets and evolving strategies to match the present business environment is an highly challenging task. Success of any company depends on its capability to reinvent their approach to market for identifying new opportunities for survival and growth. Pharmaceutical industry is one of the most dynamic field of business, Where the changing market forces are challenging even the most successful companies to adopt new models of business and to rethink strategies to match with the realities of the market.

Marketing strategies must enable a company to develop responsiveness to the present challenges and to predict the future requirements of the market, for which the company need to prepare in terms of its offers and commitments. Pharmaceutical industry has been changing in a high speed due to globalisation of the markets, consolidation of the world Pharmaceutical industry and increased competitiveness of the industry due to innovations and increased alliance through mergers and acquisitions of the firms are responsible for the high concern of marketing people in this field. Pharmaceutical markets have undergone unpredicted changes, Being research oriented, Knowledge based and Capital intensive industry it calls for high alertness of the policy makers. For marketing products successfully companies need to engage themselves in understanding the latest developments and strategic moves of the competitors, For which they are forced to more focus on research and development for improving the offers and strengthen the sales force to make the offer to reach the target market. Therefore, marketing of pharmaceutical products is challenging field of business, where the success depends on the quality, the people, Technology and Strategies.

Like in any other industry, Pharmaceutical companies have an ultimate goal of achieving customer satisfaction and the resultant benefits in the form of brand loyalty, increased sales, increased market share, high revenue and profits. As it is quoted by Bartlett and Ghosal-success for companies of today and tomorrow will be those one
who would be able at the same time to satisfy local needs, increased global effectiveness and strive for constant innovation and commitment global learning. Thus pharmaceutical industry heavily rely upon the market orientation of the companies and their ability to understand the customers expectations and means to match them with right type of products, communication, delivery and Pricing strategies.

1.2. RATIONALE FOR THE STUDY

Drugs and pharmaceutical industry plays a vital role in the health care management of any country. Pharmaceutical industry is one of the fastest growing industries of the recent times. Rapid growth of this industry requires further attention because even after 50 years of independence, India, with around 15% of the world population, accounts for less than 2% of the global pharmaceutical industry. Health care expenses in India are dismal 0.8% of GDP compared with 12.4% in USA, 6.5% in Japan and 6.2% in the UK, despite higher incidence of disease and malnutrition in India.

The poverty and diseases in India on one hand calls for higher standard of healthcare and pharmaceuticals production and on the other, stultifies the growth of the industry due to poor affordability of an average Indian. Drug and pharmaceutical industry have always found difficulty to provide large quantity of quality products at low prices.

Antibiotic resistance is one of today’s most urgent public health problems, threatening to undermine the effectiveness of infectious diseases treatment in every country of the world. Antibiotic resistance occurs when bacteria change in some way that reduces or eliminates the effectiveness of drugs, chemicals or other agents designed to cure or prevent the infection. Thus the bacteria survive and continue to multiply causing more harm. It is undeniable that antibiotics use contributes to development of resistance.

Antibiotic resistance has become a serious public health concern with economic and social implications throughout the world. Antibiotic resistance leads to higher rates of hospitalization, longer hospital stay, and increase in the cost of treatment and thus increased economic burden on the community.
Antibiotic usage resistance vary from one country to another. It is observed that countries with the highest per capita antibiotic consumption have the highest resistance rates. The economic consequences have greater implications on the already overburdened economy of these countries. There are many factors that could be responsible for the increase in antibiotic resistance in developing countries. The combination of a heavy disease burden, huge population, rapid spread through crowding, poor sanitation and inappropriate use of the available drugs all contribute to this problem. This is further complicated by the availability of antibiotics in open markets without proper prescriptions in majority of these countries. Many a time, the amount of antibiotics given is inadequate to treat serious infections due to poverty or lack of education. Leegaard et.al 2001 of the opinion that giving 1000 doses of an antibiotic to one individual will have considerably less ecological effect on resistance emergence than giving those same 1000 doses to 1000 people.

Infectious diseases, and therefore antibiotic resistance also thrive in conditions of civil unrest, mass migration and unhygienic environmental conditions where large number of people are exposed to infectious diseases with little health care infrastructure. A study by Levy (2001) suggests that combination of antibiotic use and population density correlates more strongly with the prevalence of antibiotic resistance in a population than use of the antibiotic alone.

The situations where overuse or abuse of antibiotics is common in clinical practice are many, for example, treatment of non bacterial diseases or of self limiting bacterial diseases; inappropriate antibiotic prophylaxis; errors in genetic choice, route, dosing and duration of therapy or inappropriate combination therapy (Houten 2000). There are various reasons which influence this decision like feeling on insecurity; patient’s expectations; aggressive marketing by pharmaceutical companies; lack of uniformity among physicians to follow antibiotic policy; impact of recent clinical trials and at times lack of knowledge of the microbiological aspects of infectious diseases or the pharmacokinetics of the drug (Houten 2000).

Another pre-disposing factors related to the modalities of treatment are; commercial promotion by the pharmaceutical companies, over the counter sale of antibiotics, under use of microbiological testing and globalisation which stimulates the international circulation of goods and people and plays an important role in increasing antibiotic resistance (Roger et al 2003).
Drug promotion is one of the factors contributing to unnecessary antibiotic use, and inappropriate use of newer, broad-spectrum products, and therefore to antibiotic resistance. Regulation of promotion needs to be taken. An inherent conflict of interest between the legitimate business goals of manufacturers and the social, medical and economic needs of providers and the public to select and use drugs in the most rational way (WHO, 1993).

Due to the selection pressure caused by antibiotic use, a large pool of resistant genes have been created (Cars et al 2004) and this antibiotic resistance places an increased burden on society (Roger et al 2003). Patient infected with drug resistant organisms are more likely to have ineffective therapy, longer duration of hospital stay, need of treatment with broad spectrum antibiotics that are more toxic and more expensive (Cars et al 2004). The cost of care for individual patient also increases due to the need for more costly second line drugs, longer duration of hospital stay, increased need for intensive care and diagnostic testing, higher incidences of complications and expenses incurred by use of isolation precaution. In brief, antibiotic resistance is driving up health care cost, increasing the severity of disease and death rates of some infections. The economic and health costs of resistance, serious enough in the industrialised world, are often more severe in developing countries.

In view of the above, there is enormous scope to pursue research in the area of marketing strategies for anti-infectious market and to identify the marketing strategies that have contributed for the increase in antibiotic resistance.

1.3. PROBLEM STATEMENT

Antibiotic resistance is a serious concern of health care and pharmaceutical industry all over the world. Antibiotic resistance is due to the ineffectiveness of the drugs, which leads to higher rate of hospitalisation, longer stay in hospitals, increase in the use of medicines and cost of treatment. Marketing of drugs is one of the factors contributing for the increase in the use of unnecessary and inappropriate antibiotics, which leads to resistance. Increased cost of health care either leads to more health related problems or burden on the society, which further hamper the growth of economy.
Developing and marketing of antibiotics involves high cost and research efforts by the companies, but their inventions will become generic due to the reengineering and short sighted marketing Strategies of their competitors. Pharmaceutical markets are highly competitive and dynamic in nature, where the survival depends not merely on their technical competence but also on the marketing Strategies used. Hence proper marketing strategies should be adopted by the pharmaceutical companies to market the drugs. This should include an evaluation of the various marketing strategies that sets the future course of action for the pharmaceutical companies.

The present study of “Marketing Strategies of Selected Pharmaceutical Firms in India: A Case Study of Anti-Infective Therapeutics” is an attempt to analyse the views of Marketing Professionals, Marketing Intermediaries and End-Users towards marketing strategies adopted by Pharmaceutical companies in the context of antibiotic resistance.

1.4. OBJECTIVES OF THE STUDY
The main objectives of the present study are
1. To analyse the marketing strategies adopted by selected pharmaceutical companies.
2. To make an assessment of the opinion of marketing professionals towards marketing strategies of pharmaceuticals companies.
3. To examine the views of end users (Doctors, ICU-in-charge, Microbiologists and infection control committee) towards marketing strategies adopted by selected Pharmaceuticals companies.
4. To evaluate the opinions of marketing intermediaries (Channel partners, Dealers, Retailers and C and F agents) on the marketing strategies of pharmaceutical companies selected for the study.
5. To suggest measures for evolving marketing strategies.

1.5. HYPOTHESES

H₁ – Marketing professionals, Market Intermediaries and End Users do not differ significantly in their evaluation of marketing strategies.

H₂ – There is no significant difference in the opinion of Marketing Professionals in respect of Market, Product, Pricing, Distribution and Promotional strategies.
H₃  – There is no significant difference in the opinions of Marketing Intermediaries in respect of Market, Product, Pricing, Distribution and Promotional strategies.

H₄  – There is no significant difference in the views of End-Users in respect of Market, Product, Pricing, Distribution and Promotional strategies.

1.6. SCOPE OF THE STUDY

Indian Pharmaceutical Industry witnessed an enormous change in production, operations and marketing of pharmaceutical products. Thus, Indian Pharmaceutical Industry has gained an important position in the Indian Economy. Pharmaceutical products are divided into 14 categories. As per the report published by Corporate Catalyst in 2009, Anti-infective Therapeutics, popularly called as Antibiotics, is the largest segment with 16.4% of the total market share in Indian Pharmaceutical Industry. Therefore this study has limited its scope to understand Marketing Strategies in the context of organisations operating in Pharmaceutical Industry with products in Anti-infective Therapeutics (Antibiotics) Segment.

Marketing Strategies of pharmaceutical companies selected for the study is from the view point of the Marketing Intermediaries & End-Users (Doctors) and Marketing Professionals. The major cities in Karnataka ie. Bangalore, Mysore, Mangalore and Belgaum are major hubs for medical facilities and contribute more business in antibiotic segment. Hence, the study has limited itself to understand and describe Marketing Strategies of select pharmaceutical companies operating in Karnataka State with products in Anti-infective Therapeutics Segment of the Indian Pharmaceutical Industry.

1.7. RESEARCH METHODOLOGY

1.7.1. Design and Methods

Keeping in the mind the research objectives of this study, AstraZeneca, Pfizer, GlaxoSmithKlineBeecham, Cipla, Ranbaxy and Microlabs has selected for the study. This is an exploratory cum descriptive research design. Cross-sectional, non-experimental and survey method using personal interaction is used. Personal interaction is limited to administration of questionnaires to collect required data.
1.7.2. Sampling

1.7.2.1. Population

The population of the study: organisations operating in Indian Pharmaceutical Industry. Individuals working as Marketing Professionals in these Pharmaceutical Companies, Marketing Intermediaries and End-Users (Doctors) of Pharmaceutical Industry form the population of the study. Marketing Professionals include corporate managers, Field Managers and sales representatives. Marketing Intermediaries include Carrying & Forwarding agents, wholesalers, and retailers. End-Users include doctors, microbiologists, intensivists and hospital infection committee members.

1.7.2.2. Sampling Technique

Stratified random sampling method was employed for data collection.

Primary data related to three Indian and three multinational pharmaceutical companies has been collected to know the opinions of the respondents towards marketing strategies adopted by anti-infective drug manufacturers. The respondents are Marketing Professionals, Marketing Intermediaries, and End-users.

Following table shows the number of respondent’s chosen from the four cities namely- Mysore, Mangalore, Belgaum and Bangalore in tertiary care Hospitals.

Number of Respondents

<table>
<thead>
<tr>
<th>Category</th>
<th>Mysore</th>
<th>Mangalore</th>
<th>Belgaum</th>
<th>Bangalore</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marketing Professionals</td>
<td>20</td>
<td>20</td>
<td>10</td>
<td>100</td>
<td>150</td>
</tr>
<tr>
<td>Market Intermediaries</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>70</td>
<td>160</td>
</tr>
<tr>
<td>End-users</td>
<td>40</td>
<td>40</td>
<td>30</td>
<td>67</td>
<td>177</td>
</tr>
<tr>
<td>Total</td>
<td>90</td>
<td>90</td>
<td>70</td>
<td>237</td>
<td>487</td>
</tr>
</tbody>
</table>

Source: Primary Data

Data has been collected from 150 Marketing Professionals. Out of them 20 each from Mysore & Mangalore, 10 are from Belgaum and 100 are from Bangalore. These Marketing Professional belong to various pharmaceutical companies like, Astra
Zeneca, Pfizer, GlaxoSmithKlineBeecham, Cipla, Ranbaxy, Microlabs, Biocon, Merck Sharp Doom, Glenmark, Sun Pharma, Abbot, Torrent, Maclodes, German Remedies, Lupin & Mayer and Wochardt.

Data has been collected from 160 Marketing Intermediaries. Out of them 30 each from Mysore, Mangalore & Belgaum and 70 are from Bangalore. These respondents are authorised distributors for the pharmaceutical companies selected for the study and also for other reputed pharmaceutical companies.

Data has been collected from 177 End-Users. Out of them 40 each from Mysore & Mangalore, 30 are from Belgaum and 67 are from Bangalore. End-Users comprises of Physicians, Intensivists and Hospital Infection Control Committee.

For the purpose of collecting data, three separate questionnaires were used for Marketing Professionals, Marketing Intermediaries and End-Users (Doctors) for the survey.

Following are the dimensions and sub-dimensions that are considered while developing the data collection instrument:

1. Market strategies
   - Market entry strategy
   - Market commitment strategy
   - Market de-marketing strategy
   - Pruning of margin market strategy
   - Key market strategy
2. Product strategies
   - Product positioning strategy
   - Product repositioning strategy
   - Product scope strategy
   - New product strategy
   - Diversification strategy
   - Value marketing strategy
3. Pricing strategies  
   - Pricing strategy for new products  
   - Pricing strategy for established products  
   - Price flexibility strategy  
   - Product line pricing strategy  
   - Bundling pricing strategy  
   - Price leadership strategy  

4. Distribution strategies  
   - Channel structure strategy  
   - Distribution scope strategy  

5. Promotion strategies  
   - Promotional expenditure strategy  
   - Promotion mix strategy  
   - Media selection strategies  
   - Personal selling strategies  

1.7.3. Scoring  
   Strategy-wise analysis is done by assigning numerical weightage for each question. The scores of individual questions/statements were cumulated under a particular strategy to get an overall idea regarding that strategy.

   For calculation purpose of expected mean, 75 % of the total assigned value is considered to compare with that of obtained mean.

1.7.4. Statistical Tools Used  
   The Statistical tools used are Frequencies and graphical representation, descriptive statistics like Chi-square test, one sample t-test and f-test, One-way ANOVA and Crosstabs.

   In order to ensure accurate response and eliminate possible vacuum arising out of gap in flow, a feasibility test was conducted with respect to content and communication, questionnaire was administered to small group of fifty respondents in respective categories with the time interval of one month. Form the pilot study following table shown.
Table No. 2: Split half reliabilities for the questionnaires employed

<table>
<thead>
<tr>
<th>Questionnaires</th>
<th>Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Questionnaire for marketing professionals</td>
<td>0.772</td>
</tr>
<tr>
<td>B Questionnaire for market intermediaries</td>
<td>0.753</td>
</tr>
<tr>
<td>C Questionnaire for end users</td>
<td>0.725</td>
</tr>
</tbody>
</table>

Source: Primary Data

The obtained reliabilities for all the three questionnaires were found to be more than 0.7 through split-half reliability technique by SPSS software, which are all highly significant indicating the consistency of the tools. Hence, the tools employed in the present study are highly reliable and valid.

1.8. LIMITATIONS OF THE STUDY

1. The present study covered only six companies operating in Karnataka.
2. Only Anti-Infective Therapeutics (antibiotics) range of products is considered for the study.
3. Four major cities of Karnataka are covered under the study-Bangalore, Mysore, Mangalore and Belgaum mainly from tertiary care hospitals.
4. Only a few major dimensions of marketing strategies are covered for the study.
5. As marketing information are very confidential for pharmaceutical companies. They have revealed only a part of information.

1.9. ORGANISATION OF THESIS

The thesis has been presented in the following sequence in order to provide for a logical flow of the information.

First chapter presents introduction to the study with rational, problem statement, objectives, and hypothesis and research methodology.

The second chapter provides review of related literature to find out the research gaps.
The **third chapter** consists of an overview of Indian Pharmaceutical Industry offers insights with regards to significance, evolution, current scenario, product categories, market share, exports & imports and employment generation. It also provides brief profile of selected pharmaceutical companies choosen for the study.

**Fourth chapter** furnishes analysis and interpretation of primary data collected for the study with the help of statistical tool (SPSS).

The **fifth chapter** presents summary of findings of the study separately with respect to each of respondent category considered for the study.

In the **Sixth and final chapter** conclusion is drawn based on the results of the research and their practical implications are highlighted along with the recommendations and the scope for future research.