Chapter 1
Introduction

1.1. INDIAN PHARMACEUTICAL INDUSTRY

The Indian pharmaceutical industry is one of the top ranked science based industry having extensive capabilities in multifaceted field of drug manufacturing and technology. Indian pharmaceutical industry is meeting almost 75 per cent demand of the country’s pharmaceutical needs by providing wide ranging healthcare products including simple headache pills to sophisticated antibiotics and complex cardiac compounds (Pharma Review, August 2005). It ranks very high in the third world, in terms of technology, quality and range of medicines manufactured. It is playing a key role in promoting and sustaining development in the vital field of medicines.

The Pharmaceutical industry in India is the world's third-largest in terms of volume and stands 14th in terms of value (Kumra, Mitra, & Pasricha, 2010). In 2002, over 20,000 registered drug manufacturers in India sold $9 billion worth of formulations and bulk drugs. 85% of these formulations were sold in India while over 60% of the bulk drugs were exported, mostly to the United States and Russia (Indian Life Sciences Sector statistics, 2010).

The Indian Pharmaceutical sector is highly fragmented with more than 20,000 registered units with severe price competition and government price control. It has expanded drastically in the last two decades. The organized sector of India's pharmaceutical industry consists of 250 to 300 companies, which account for 70 percent of products on the market, with the top 10 firms representing 30 percent. However, the total sector is estimated at nearly 20,000 businesses, some of which

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1 Pharma Review (The Indian Pharma Reference Guide), August 2005.
are extremely small (Dixit N., 2008). These units produce the complete range of pharmaceutical formulations, i.e., medicines ready for consumption by patients and about 350 bulk drugs, i.e., chemicals having therapeutic value and used for production of pharmaceutical formulations (Corporate Catalyst India, 2010). Multinationals represent only 35% of the market, down from 70% thirty years ago. The Indian pharmaceutical industry is poised to grow into an industry of $20 billion in 2015 from the current turnover of $12 billion (Drugs and Pharmaceuticals, 2011).

The five government-owned companies in the Indian public sector are as follows:

1. The Indian Drugs and Pharmaceuticals
2. Hindustan Antibiotics Limited
3. Bengal Chemicals and Pharmaceuticals Limited
4. Bengal Immunity Limited
5. Smith Stanistreet Pharmaceuticals Limited.

Top 20 Publicly Listed Life Science companies in India, (Indian Life Sciences Sector statistics, 2010) as of 2010 are Abbott India Ltd, Ranbaxy, Dr. Reddy's Laboratories, Lupin Ltd, Aurobindo Pharma, Dabur, Sun Pharmaceutical, Cadila Healthcare, Jubilant Lifesciences, Piramal Healthcare, GlaxoSmithKline Pharmaceuticals Ltd, IPCA Laboratories, Wockhardt, Torrent Pharmaceuticals, Sterling Bio, Biocon, Orchid Chemicals & Pharmaceuticals Limited, Alembic, Aventis Pharma, Glenmark Pharmaceuticals. Multinational Pharmaceutical Companies ranked as per active presence of sales, marketing and business in India are Pfizer, GlaxoSmithKline, Sanofi Aventis, Merck, Johnson and Johnson, Amgen, Novartis, Roche, Bristol-Myers Squibb, Wyeth, Eli Lilly, Schering-

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5 Indias pharmaceutical industry, Corporate Catalyst India, 2010
The government started to encourage the growth of drug manufacturing by Indian companies in the early 1960s, and with the Patents Act in 1970. However, economic liberalization in 90s by the former Prime Minister P.V. Narasimha Rao and the then Finance Minister, Dr. Manmohan Singh enabled the industry to become what it is today. This patent act removed composition patents from food and drugs, and though it kept process patents, these were shortened to a period of five to seven years.

The lack of patent protection made the Indian market undesirable to the multinational companies that had dominated the market, and while they streamed out. Indian companies carved a niche in both the Indian and world markets with their expertise in reverse-engineering new processes for manufacturing drugs at low costs. Although some of the larger companies have taken baby steps towards drug innovation, the industry as a whole has been following this business model until the present.

1.2. INDUSTRIES AT MADHYA PRADESH

Besides the big players in the Indian pharmaceutical industry, there are many in the SME sector, operating in the Madhya Pradesh state of India. These companies have high potential for production and supply.

Indore, the commercial capital of the State, has witnessed rapid growth in the last 10 years. It is an important business and industrial center. Pithampur, (a well developed industrial area 20 km from Indore) is the third largest industrial belt in Asia and also known as the Detroit of India. Major factories of large companies are also located in Dewas.

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8 Indias pharmaceutical industry, Corporate Catalyst India, 2010 accessed from http://www.cci.in/pdf/surveys_reports/indias_pharmaceutical_industry.pdf retrieved on 12 Jan 2012
The state government’s response to industries is also positive. It provided good amount of finance and basic infrastructure for development of industries. Communication and information technology facilities have also grown at the fast pace. In the last decade, Pithampur, Indore, Dewas and Mandideep have performed as the most dynamic Industrial zone of Madhya Pradesh. Many national and international companies are performing their operations here in addition to small and medium scale industries.

The policy of liberalization, privatization and globalization along with the policies of state government has fueled the growth of industries in Madhya Pradesh. In this regard contributions of MP Audhyogik Kendra Vikas Nigam Ltd, Indore, Madhya Pradesh Trade & Investment Facilitation Centre (TRIFAC), Small Industries Service Institute and various voluntary organizations are really encouraging. Many industrial complexes have been developed by the government to encourage the industrialization. Few such complexes are Electronic Complex, Readymade
Garments Complex, Software Complex, Special Economic Zone, and Herbal Park near Betma etc. Indore is also known as one of the largest producer of pharmaceuticals in Asia.

1.3. PHARMACEUTICAL INDUSTRY AT MADHYA PRADESH

The industrial growth in the state took its impetus after 1994 after the liberalization policy of the central Government. The government also supported the industrial growth by framing the investor friendly policies. The formation of Special Economic Zone (SEZ) in Indore and its pharma focus encouraged the pharmaceutical industry to set up its unit in SEZ. Many pharmaceutical companies of national and international repute established its units in SEZ. But the history of pharmaceutical industry in Indore is more than 100 year old with the birth of Wadnera Industries.

Pharmaceutical industry did not developed sufficiently in pre-independence era in Madhya Pradesh. The major units were operating in the residential areas of Indore. After independence, the first industrial Estate came up in 1954 at pologround in Indore. During 60's another Industrial Estate at Laxmibai Nagar and in 70's Sanwer Road Industrial Area have been developed. Many units running in residential areas have shifted to these Industrial Estates. Government of Madhya Pradesh constructed multiple sheds with basic infrastructure that has attracted entrepreneurs to start their units in these areas.

Concentration of manufacturing activities and related services in a sphere is called an industrial cluster. Pharmaceutical Cluster of Madhya Pradesh is such an industrial cluster where manufacturing units, raw material supplier, packaging and machinery industry, etc., are concentrated in an area. This collective action of the cluster players reduces the production cost, resulting in increased profitability. It is this market demand and support service availability that has given impetus to the growth of pharmaceutical companies of Madhya Pradesh.
1.3.1. LOCATION
Indore being the commercial capital of the state, the pharmaceutical companies of Madhya Pradesh are concentrated in and around it. Dhar holds the second rank in terms of establishment of pharmaceutical companies. The remaining pharmaceutical units are situated in the regions of Bhopal, Ratlam, Ujjain, Khandwa, Dewas, Gwalior, Bhind, Shivpuri, Murena, Katni, Jabalpur, Mandla, Guna, Chhindwara, Sagar, Chhatarpur, Tikamgarh, Rewa, Satna, Sidhi, Shadol, Raisen, Sehore, Vidisha, Mandsaur, Neemuch and Harda.

The prime industrial areas of the state are:
   a) **Indore** : Pologround, Sanwer Road, Laxmi Bai Nagar, Pardesipura, Rau.
   b) **Bhopal** : Mandideep and Govindpura
   c) **Dhar** : Pithampur
   d) **Maksi**
   e) **Meghnagar**
   f) **Dewas**

1.3.2. TOTAL NO. OF UNITS
As per the directory of pharmaceutical manufacturing units in India issued by National Pharmaceutical Pricing Authority (NPPA) Government of India, New Delhi, there are 414 pharmaceutical manufacturing units in Madhya Pradesh. Out of these 344 are formulations units and 70 are dealing in bulk drugs. Table 1.1 presents the state-wise number of pharmaceutical manufacturing units in India.
### Table 1.1: State-wise Number of Pharmaceutical Units in India

<table>
<thead>
<tr>
<th>S. No.</th>
<th>State</th>
<th>Number of Manufacturing Units</th>
<th>% Share</th>
<th>Cumulative % Share</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Formulation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Maharashtra</td>
<td>1928</td>
<td>29.7</td>
<td>29.7</td>
</tr>
<tr>
<td>2</td>
<td>Gujarat</td>
<td>1129</td>
<td>14.4</td>
<td>44.2</td>
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<tr>
<td>3</td>
<td>West Bengal</td>
<td>694</td>
<td>7.2</td>
<td>51.3</td>
</tr>
<tr>
<td>4</td>
<td>Andhra Pradesh</td>
<td>528</td>
<td>6.9</td>
<td>58.2</td>
</tr>
<tr>
<td>5</td>
<td>Tamil Nadu</td>
<td>472</td>
<td>5.4</td>
<td>63.6</td>
</tr>
<tr>
<td>6</td>
<td>Madhya Pradesh</td>
<td>344</td>
<td>3.9</td>
<td>67.5</td>
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<tr>
<td>7</td>
<td>Others</td>
<td>3079</td>
<td>32.5</td>
<td>100</td>
</tr>
<tr>
<td>8</td>
<td>Total</td>
<td>8174</td>
<td>100</td>
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</tbody>
</table>

Source: Directory of pharmaceutical manufacturing units, NPPA, Govt. of India, New Delhi

The concentration of pharmaceutical manufacturing units in India is presented in figure 1.2. It is clear from the graph that most of the pharmaceutical manufacturing units are concentrated in Maharashtra, followed by Gujarat, West Bengal, Andhra Pradesh, Tamil Nadu and Madhya Pradesh. Out of total 10563 pharmaceutical manufacturing units in India, 3.9% lies in Madhya Pradesh.

**Figure 1.2: Concentration of Pharmaceutical Units in India**

Source: On the basis of data presented in table 1.1
Out of total 10563 pharmaceutical manufacturers in the country, 8174 or 77.4% manufacture formulation drugs and remaining 22.6% are engaged in manufacturing of bulk drugs. The state-wise distribution of number of formulation and bulk drugs manufacturers is depicted in figure 1.3.

**Figure 1.3: Number of formulation and bulk drugs Manufacturing Units in India**

Source: On the basis of data presented in table 1.1

### 1.4. GROWTH DRIVERS OF INDUSTRY

The pharmaceutical industry of Madhya Pradesh bloomed only after independence. Prior to independence only few pharmaceutical players were existent in the Madhya Pradesh.

Factors contributing to the growth of pharmaceutical industry in Madhya Pradesh are:

- Availability of basic infrastructure facilities.
- Pro-active attitude of authorities.
- Formation of pharma associations
• Active involvement of MP Laghu Udyog Nigam in the area of marketing.
• Availability of quality manpower.
• Availability of machinery and Raw Material Suppliers.
• Availability of Good transportation facilities by Rail, Road and Air.
• Advantage of strategic location surrounded by five states viz. Maharashtra, Gujarat, Rajasthan, Uttar Pradesh and Chhattisgarh.
• Development of Pharma Industries at Gujarat had an advantage in the development of Indore Pharma units.
• Proximity to the markets of adjoining states.
• Establishment of testing laboratories both in private as well as Government sector.
• Availability of Educational Institutions Medical colleges, Pharmacy Collages, Ayurvedic Collages etc.
• Establishment of Dry Port at Pithampur to provide cargo facility.
• Establishment of Dawa Bazar in Indore, where around 1000 wholesale dealers are available.
• Availability of manufacturers/suppliers of Basic Drugs, laboratory chemicals, equipments, packing material and other ancillary units.
• Logistics support
• Development of Special Economic Zone in Indore

1.5. RESEARCH BACKGROUND

Health is defined both as cause and effect of economic development. Therefore, the pharmaceutical industry is specifically as an actor that can contribute to economic development. In addition, the pharmaceutical industry provides significant socio-economic benefits to the society through creation of jobs, supply chains, and through community development. The industry also plays an important role in technological innovation, which may reduce costs of economic activity elsewhere in the economy. The complex role of companies in healthcare
is that its products and services are needed by people when they are most vulnerable.

Indian pharmaceutical industry is one of the high performing knowledge based segments of the manufacturing sector. The industry has achieved a global status through firm level strategies, industry initiatives and also with appropriate policy support. In addition to catering to the needs of the domestic demand, the pharmaceutical industry is also engaged in contract manufacturing, contract research, clinical trials, contract R&D, and direct exports to the developed and developing country markets.

Various policies of the Government of India have helped the Indian pharmaceutical industry to consolidate their position in a competitive environment. Prior to 2005, the soft patent regime provided opportunities for this industry to witness significant growth, particularly in generics production and exports. During this time, the industry prepared itself to surge ahead in the global competitive environment by adopting strategies such as increasing R&D activities, patent filings, inorganic growth strategy, contract manufacturing, contract research, co-marketing, co-licensing arrangements, and diversification of markets.

Indian pharmaceutical industry is entering an era in which it is not only going to play a pivotal role in providing generics medicine to the world but also in the process of becoming a global hub for R&D activities, which may be in the area of new drug discovery or different stages of clinical trials. The industry is gaining momentum to face the challenges of new patent regime and increasing competition from low cost manufacturing and R&D destinations like China. Such challenges are helping the industry to modify the business strategies and thereby to retain its competitive position.

Many Indian pharmaceutical companies have adopted the strategy of inorganic growth through mergers and acquisitions (M&A). Such M&A are being concluded with the objective of complimenting the strengths of two entities to get market
access, new technologies and also new products. Indian pharmaceutical industry has also been increasing the R&D expenditure significantly in the recent years. Another noticeable trend in the Indian pharmaceutical industry is that, it has emerged as an attractive destination for sourcing contract research, particularly clinical trials, and also contract manufacturing by many large firms from the developed countries. A well-developed manufacturing base, low cost R&D, large pool of skilled man-power are some of the factors for success of Indian pharmaceutical industry in these segments of business (Prahalathan & Baruah, August 2007). 

Following are the factors or recent trends in the pharmaceutical industry that determine the strategic development of the pharmaceutical companies:

a. **Changing Demographic Trend:** Developed countries have reached the era of demographic transition, where they are increasingly confronting with the phenomenon of ageing population. This has resulted in increasing pressure on the countries’ national healthcare system. Chronic diseases, particularly cardio-vascular diseases, have become more frequent cause of death in these countries. On the other hand, infectious diseases have remained more common cause of death in developing countries. In addition, lifestyle related diseases are going to be common among fast developing countries like India. All these factors would have major influence on the pharmaceutical industry.

b. **Patented Drugs Going Off-Patent:** It has become a major concern for the large pharmaceutical firms that many of the blockbuster drugs will be going off-patent in the coming few years. These drugs are major sources of revenue for major pharmaceutical companies in the world. Production of generics in such products will put considerable pressure on the profit margin of these companies.

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c. **Lowering R&D Productivity:** R&D in pharmaceutical industry is a very expensive and time consuming process, as it involves a number of stages before a drug can be introduced in the market. Moreover, at any stage, the process may have to be abandoned if it is not showing desired results both in terms of effectiveness and safety. Although the R&D expenditure by firms has shown significant increase, R&D productivity has come down. All these factors have led to added pressure on the profit margin of the leading players and thus there is a pressing need to cut down the costs.

d. **Increasing Mergers and Acquisitions:** Mergers and Acquisitions (M&A) have been dominating the pharmaceutical industry. Drive to enhance the size and thereby attaining higher economies of scale has motivated such acquisitions. This trend is expected to continue with many firms joining the race.

e. **Outsourcing of Pharmaceutical R&D:** Cost of bringing out new molecules is a very high and time-consuming process. As per industry estimates, on an average, out of 10,000 molecules developed in laboratories, only one or two successfully pass all stages of drug development and goes for commercialization. Thus, many international pharmaceutical firms prefer to outsource their R&D activities to developing countries like India. India has become major beneficiaries of this trend due to cost advantages and availability of skilled manpower.

f. **Bio-pharma Convergence:** Biotechnology has emerged as one of the key technologies of this century. Biopharmaceuticals have been projected as potential drugs curing many diseases. Given its potential, most of the global pharmaceutical companies are showing interest in the biopharmaceuticals sector. This trend is likely to continue, as these companies would try to reap the benefit of their sales and marketing capabilities along with technical expertise of biotechnology.
g. **Licensing Activities:** Another trend in pharmaceutical industry is increasing licensing activities, both in-licensing and out-licensing. The current trend is more on out-licensing, with large pharmaceutical companies licensing out their later stage R&D activities, particularly clinical trials. Licensing deals are increasingly being used to increase product portfolio, supplement research effort and strategically enter new markets.

h. **Increasing Marketing Cost:** As the competition amongst the pharmaceutical firms is increasing, many firms have started to get into retail business. In this model, drugs will be sourced directly from the manufacturers providing proximity with the end users. Such a model would provide benefits both to producers (better supply chain management) and consumers (lower price).

i. **Low Emphasis on Clinical Trials:** With an increasing share of generics in total pharmaceutical sales, leading pharmaceutical firms are changing their strategies from traditional blockbuster model to niche market players in the areas such as diabetes, cancer and lipid disorders. Many large firms are adopting strategies with long term investment commitments, scientific advancements, and strategic positioning of their drugs as part of a more comprehensive approach to medical treatment.

j. **Pricing Strategies:** Pricing has never been a key issue in pharmaceutical industry as it is today. Major players in the pharmaceutical industry are increasingly adopting varied pricing strategies in each therapeutic and geographic market, with the objective of optimizing share, revenue and profit.

The Dynamic trends in pharmaceutical industry has been accepted as major deterministic factors for the strategic development of the pharmaceutical companies by both academicians and industrial managers, but less empirical evidences have been found on studies related to marketing strategies of various pharmaceutical companies. Hence, the study will overcome the limitation of previous studies to develop a dynamic and comprehensive model in the pharmaceutical marketing business context.
1.6. RESEARCH QUESTIONS

Pharmaceutical consumption in India is expected to grow substantially over the next five years, driven by a rise in disposable income, an ageing population and improving medical infrastructure (Business Insights, July 2009). Pharmaceutical sales are growing at a faster rate in India due to the rising disposable income, several health insurance schemes, that ensure the sales of branded drugs, and intense competition among top pharmaceutical companies.

The pharmaceutical marketing strategies are different from other businesses. For marketing to physicians, the solution has always been to throw more sales reps at doctors with each new drug launched. The Accenture survey (George & Perrone, 2001) indicated that the skills and motivation of the sales force is the single largest factor (33%) driving sales and marketing performance. Accordingly perhaps, the number of sales reps has been rising rapidly, at 20%, compared with physicians at only 3%. The time each rep spends with a physician is now only 100 – 300 seconds (AstraZeneca 2001). The ‘doctor channel’ is ‘blocked’. Pharmaceutical companies are seeking ways around the doctor channel such as direct-to-customer (DTC) and various forms of the internet delivery.

A number of marketing strategies are being adopted by various pharmaceutical companies. DTC techniques include special purpose internet sites providing information to both physicians and patients about a particular drug. Large pharmaceutical companies are launching their each expected major drug with its own dot.com site. In addition to attracting the attention of doctors, the objective is to alert potential patients to the attributes of the drug and encourage them to seek prescription from their physician.

Increasingly media, including TV advertising, is being used to announce the arrival of new drugs. The challenge of DTC for pharmaceutical companies is that

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10 Business Insights, (July 2009). The top 10 pharma companies in India-Growth strategies, performance and SWOT analysis.
patients need a script from a physician to obtain the drug. They are not (except for OTC drugs) able to buy directly.

Some Internet sites have been established to give physicians the opportunity to call highly qualified sales reps and discuss the drug attributes via live video conference. This so called e-Detailing has been found to be an effective way of raising product awareness amongst doctors, with, for one company, 93% of the calls being doctor initiated (Astra Zeneca, 2001)\(^\text{12}\).

While most of the pharmaceutical companies are successfully employing these new forms of marketing to target various types of customers, the current business and customer trends are continuously creating new challenges as well as opportunities for increasing profitability. The success of these strategies is yet to be tested in country like India. These strategies may have different implications for both domestics and multinational pharmaceutical companies operating in India. Thus looking into the global scenario and recent trends in Indian pharmaceutical industry, we have come up with following research questions:

1. What are the major marketing strategies implemented by pharmaceutical companies of Madhya Pradesh?
2. Is there any difference in marketing strategies of different pharmaceutical companies on the basis of size?
3. Is there any impact of marketing strategies on the sales growth of pharmaceutical companies?
4. What challenges are faced by domestic companies because of global changes in policy formulation?
5. What are the possible threats for domestic pharmaceutical companies due to presence of MNCs in India? How competitions among them affect the strategy formulation?
6. What opportunities exist for domestic players and MNCs in India?

1.7. RATIONALE OF THE STUDY

Indian Pharmaceutical Industry has witnessed a robust growth from US$ 11.4 billion in 2010 to US$ 13 billion in 2011 with a scorching pace of growth of 15%. (Kumra, Mitra, & Pasricha, 2010)\textsuperscript{13} Showing tremendous progress in terms of infrastructure development, technology base creation and a wide range of products, the Indian pharmaceutical industry has established its presence and determination to flourish in the changing environment. Also the upcoming changes in the Indian Pharmaceutical market will create major opportunities for both Indian domestic companies and multinationals. Both multinational and local drug manufacturers could eventually benefit from the market potential of India's population of over one billion. A large market will likely open up as the result of a projected boom in health insurance, an area in which the country is currently woefully underdeveloped. New government initiatives seek to enable the majority of the population to access the life-saving drugs they need, while even greater opportunities may be presented by the rise of the new Indian consumer. This untapped domestic market is also highly attractive to the pharmaceutical MNCs. However decision regarding particular action to address a new growth opportunity is not a matter of choice for pharmaceutical companies. It is a matter of necessity borne out by the need to withstand competitive pressure and maintain market standing.

Over the past five years, the relative performance of the large domestic companies, the mid-sized and small domestic companies and the multinational firms has changed. The mid-sized and small domestic companies have outperformed the market in terms of growth. During this timeframe the large domestic companies have managed to grow with the market. The multinationals appear to have lost some momentum and market share since 2000.\textsuperscript{14}

However the large domestic companies are facing strong competition on both sides. On one hand smaller player can maintain their trajectory if they continue to


\textsuperscript{14} India Pharma 2015 – Unlocking the Potential of the Indian Pharmaceutical Market, Mckinsey Analysis
pioneer market creation. On the other, multinationals can gain their lost share through the launch of patented products depending on the level of regulatory and infrastructural support.

Because of different implications for domestic players and multinational companies, they are likely to differ on strategic issues. Differences also lie in the industry structure and combination of market opportunities for the three groups. Hence domestic companies and multinational firms need to pursue different marketing strategies to achieve desired goals.

The combination of market opportunities and the likely changes in industry structure have different implications for domestic players and multinationals companies. Marketing strategies have to be planned taking into account these implications. Present study highlights marketing strategy issues for both domestic players and multinational companies by classifying them into three broad categories which are mentioned below:

a. Large domestic companies  
b. Small and Mid-sized domestic companies  
c. Multinational companies

A comparative analysis of their marketing strategies will help industry players to incorporate necessary modifications in their present marketing strategies.

1.8. IMPORTANCE OF MARKETING STRATEGIES FOR PHARMACEUTICAL COMPANIES

Global pharmaceutical companies are increasingly under pressure due to a host of factors, including relatively dry pipeline for new drugs, higher R&D costs and increasing pressure from Governments for reduced healthcare costs (Kadakia, Jacob, & Singhai, 2009)\textsuperscript{15}.

The global companies have responded to the dwindling sales and dry product pipelines by acquiring their peers and in the process creating global pharma goliaths. In order to sustain growth, most companies are looking at M&A as the way forward. Innovator companies are increasingly buying out generic companies or entering into strategic alliances to participate in the fast growing generics market.

Leading pharmaceutical companies are also looking at newer areas like biologics and increasing their presence in emerging economies to fuel future growth. Cost competitiveness has become more important than ever and companies are looking at outsourcing all non-critical elements of the value chain.

These global trends have far reaching implications for Indian pharmaceutical companies across the entire value chain. Indian companies need to re-look at their strategies carefully and see how best they can respond to the new scenario.

R&D divisions of Indian pharmaceutical companies have started making the move from reverse engineering to development of new molecules. India is developing its capability in New Chemical Entities and is looking to launch its own patented drugs going forward. Increasing collaboration with global pharmaceutical companies helps in sharing costs and risks, while ensuring better results.

With the increased globalization the Indian pharmaceutical companies have to face more challenges. The Indian pharmaceutical companies have to face competition from both domestic pharmaceutical companies as well as from multinationals. Hence Indian players need to develop their long term strategy, keeping in mind these challenges, in domestic as well as in international markets.

The current environment is challenging, but at the same time it throws up several new opportunities for the Indian pharmaceutical companies. What worked in the past may not necessarily hold them in good stead in the future. Companies which take cognizance of the fundamental changes the industry is going through and re-jig their strategies accordingly will be able to successfully navigate the future.
The industry is stimulating itself for some fundamental changes in the marketplace and is looking at newer ways to drive growth. These global trends will have serious implications for domestic pharmaceutical companies. However with the right marketing strategy, Indian companies can take advantage of these changes. Hence meticulously prepared comprehensive marketing strategy is essential for successfully navigating the future.

1.9. SCOPE OF THE STUDY

The study covers pharmaceutical companies operating in Madhya Pradesh state of India. The data or information required is related to segmentation, targeting, and positioning approach, marketing mix and some specific marketing strategies adopted by pharmaceutical companies in India. The informants are limited to the relevant principle management members of the companies; for instance, the Chief Executive Officer and marketing or sales manager. The pharmaceutical companies are classified into three major categories for comparing their marketing strategies. They are:

1. Large domestic companies
2. Small and mid-sized companies
3. Multinational companies

A marketing strategy is a method by which a firm attempts to reach its target markets. Marketing strategy starts with market research, in which needs and attitudes and competitors' products are assessed and continues through into advertising, promotion, distribution and where applicable, customer servicing, packaging, sales and distribution. Marketing strategy must focus on delivering greater value to customers and the firm at a lower cost. However, quantifying the return on investment from marketing expenditure on activities such as advertising, promotion and distribution is one of the most complex issues facing decision makers.

Although the importance of marketing is growing in the pharmaceutical market, there is relatively little research on marketing strategies specifically in the
pharmaceutical sector of India. Dixit N. (2008)\textsuperscript{16} investigated the change in marketing strategies of pharmaceutical companies under the WTO regime. Similarly (Buckley)\textsuperscript{17} supported the use of direct to consumer advertising in pharmaceutical industry. There are similar findings by various scholars but that too are either restricted to few factors of marketing strategies, or are limited to geographic areas outside of India, for example (Kadakia, Jacob, & Singhai, 2009)\textsuperscript{18}, (Kumra, Mitra, & Pasricha, 2010)\textsuperscript{19}, (Rasmussen, March 2002)\textsuperscript{20}, (Dixit N., 2008)\textsuperscript{21}, (Pandey, July 2010)\textsuperscript{22}, (Lerer, 2002)\textsuperscript{23} etc.

The study is an attempt at improving our understanding of the pharmaceutical marketing function in some pharmaceutical marketing organizations. It could be argued that the research findings from consumer goods or international marketing studies could be extended to the pharmaceutical marketing. However, there are important differences between pharmaceutical and other products marketing that necessitate the study of pharmaceutical marketing as a separate discipline. It implies that many empirical findings based on some previous study in marketing or strategy literature may not be pertinent in the pharmaceutical marketing contexts.

Hence this study will provide important insight on marketing strategies in different pharmaceutical companies. The managers and researchers should benefit from a deeper understanding of how marketing strategies develops and how it relates and works with the other important aspects of performance and

\textsuperscript{17} Buckley, J. Pharmaceutical marketing - time for change. Electronic Journal of Business Ethics and Organization Studies, 9 (2), 4-11
\textsuperscript{22} Pandey, S. (July 2010). India’s Pharmaceutical Industry on Course for Globalization: A Review. International Journal Of Pharmacy and Life Sciences, 133-140.
\textsuperscript{23} Lerer, L. (2002). Pharmaceutical marketing segmentation in the age of internet. Internal journal of medical marketing, 2 (2), 159-166
profitability in the pharmaceutical companies. Since only pharmaceutical companies operating in Madhya Pradesh are taken for research purpose therefore other pharmaceutical companies operating in India have not been included in the research. They are beyond the scope of this study.

1.10. ORGANIZATION OF THESIS
The thesis is organized in the following chapters:

1. CHAPTER ONE: INTRODUCTION
This chapter describes the general introduction of the pharmaceutical companies in India. Industries, particularly pharmaceutical industries of Madhya Pradesh are also described on the basis of location and concentration of pharmaceutical manufacturing units and number of formulations and bulk drugs units. Growth drivers of pharmaceutical industry in Madhya Pradesh are also dealt with in the same chapter. The chapter also explains the research background, formation of research questions and rationale of the study. Importance of marketing strategies for pharmaceutical companies, in general, and scope of the study area also discussed.

2. CHAPTER TWO: REVIEW OF LITERATURE
Theoretical foundation of subject matter and extensive review of literature related to marketing strategies of pharmaceutical companies has been presented in this chapter. The review begins with the general concept of pharmaceutical market. The chapter describes the review of existing literature on the basis of segmentation, targeting and positioning approach which is popularly known as STP approach and on the basis of marketing mix or four Ps of marketing. The chapter also presents the review on the basis of some general marketing strategy variables which are classified into four categories as aggressiveness, defensiveness, adaptability and specialization. The summary of chapter is also given at the end to find out the research gap.
3. CHAPTER THREE: RESEARCH METHODOLOGY

This chapter explains the research methodology adopted for conducting the research. It describes the objectives framed and subsequent hypothesis formulated on the basis of objectives of the study. The chapter also explains the research design, sampling design, types of data and data collection methods. Definitions of research variables along with their source are also presented. Statistical tools used, hypothesis testing procedure and model specification are given at the end.

4. CHAPTER FOUR: MARKETING STRATEGIES OF PHARMACEUTICAL COMPANIES OF MADHYA PRADESH

This chapter explains the marketing strategies adopted by various pharmaceutical companies of Madhya Pradesh and their comparison. To show the results related to marketing strategies adopted by various pharmaceutical companies of Madhya Pradesh, the graphs are illustrated and results of Chi-square test are presented. The results of comparison of marketing strategies of pharmaceutical companies are also presented in this chapter.

5. CHAPTER FIVE: IMPACT OF MARKETING STRATEGIES ON SALES GROWTH

This chapter describes the results related to impact of marketing strategies on the sales growth of different pharmaceutical companies of Madhya Pradesh. It also describes the challenges faced by different pharmaceutical companies of Madhya Pradesh and various opportunities available to them.

6. CHAPTER SIX: MAJOR FINDINGS AND DISCUSSIONS

Major findings of the study explored on the basis of analysis are presented in this chapter. The discussion of the results that are related to testing of hypothesis is also presented.
7. CHAPTER SEVEN: SUMMARY OF CONCLUSIONS & SUGGESTIONS

This chapter provides a summary of conclusions obtained in the study. The suggestions and limitations are also discussed in this chapter.