CHAPTER 2
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For the purpose of research available secondary data source has been exhaustively reviewed. Several books, articles, journals, news letters and research paper have been referred. On the basis of the issues discussed the entire and relevant secondary data and literature reviewed has been presented under six different heading namely- pharmaceutical marketing, Antibiotic resistance, Market strategies, Pricing strategies, Distribution strategies. Promotion strategies and IPR and TRIPS.

2.1. PHARMACEUTICAL MARKETING

For marketing different pharmaceutical products, companies require more and more skilled field force to develop good rapport with their customers (doctor). Moreover, field force should have good product knowledge and unique selling proposition (USP) of their products in comparison with competitor’s products, so as to convince doctors and increase the demand for their products i.e. from Doctor to Retailer to Stockist to carrying and forwarding agent (CFA) to company. In this system, doctors are the core customers and the major thrust is given to build and retain these customers because they are pulling the demand for products. Hence companies also give main emphasis in building and retaining these customers. All efforts are being put for generating secondary sales i.e. from stockist to retailer. Now-a-days the companies are ensuring auto demand with limited availability and maximum liquidation of the products is the main characteristic of this approach. For retaining and developing customers, the companies normally provide gifts like sponsorship for various conferences like RSSDI, FOGSI, APICON, UPCON, etc. For example, Dabur is having Professional Academic and Scientific Services (PASS) activities for promoting its chronic therapy range. The relationship between doctors and representatives has always been good and pharmaceutical companies have provided and still provide the major economical support for customers' continuous medical education. Something needs to be done to find a solution to this problem that takes into account the needs of both pharmaceutical companies and their representatives on one side and physicians on the other for a better professional interaction. Some times they were also mixed with corporate social responsibility
(CSR) activity sponsorship like free health camps, diabetic camps etc. Of late, the pharmaceutical companies also ventured into the rural areas and along with doctors they are also approaching the Routine Medical Practioners (RMP) to bridge the gap between the product and their ultimate customers – the patients.

Over the last couple of years, after patent introduction, pharmaceutical products marketing professionals are slowly changing their strategies. This drift is driven by market forces. Patients' understandings of the disease and disease management have also seen a positive shift. Today, a doctor is subject to a lot of questioning and reasoning by the patients both about the disease and disease management. Hence, we see some of the products in the "direct-to-consumer" mode of sale wherever the regulatory requirements permit. For Indian companies, marketing differentiation coupled with aggressive selling is the key. Even today more than 50% of Indian pharmaceutical market is rural and the "GATT Effect" will not be immediate in rural India. To know the doctor's mind and also to occupy a place there with a brand, the brand manager must be in the market with the doctors and understand the specific needs of the doctors and design promotion. Aggressive sales push at the doctor and retailer level and consistent repeat visits can drive a brand ahead. An old saying is that “Doctors have a very strong memory and hence forget what they do not want to remember”. The challenge to a marketing man today is to ensure that his brand falls in the category of “want to remember” with as many doctors as possible. This is an extremely difficult task, needing a lot of innovative approach. This is precisely the real task of sales personnel in pharmaceutical marketing. Slowly and steadily the industry is growing to beat all the possible hurdles away.

Introduction of new molecules is the most preferred marketing strategy of Indian pharmaceutical companies followed by change in composition of existing medicines and new drug launches, after implementation of product patent in India.

The strategy being followed by Indian pharmaceutical companies, prior to implementation of product patent in India, was to launch their brands of existing molecules patented before 1995. In case of molecules patented between 1995 & 2005, Indian pharmaceutical companies have launched their brands. The MNC's holding patents for molecules discovered during 1995 to 2005 have filed patents under the
Exclusive Marketing Rights (EMR) mailbox provision (Brennan et al 2004). These applications are being scrutinised by Indian Patent Office and if it grants patents to these molecules, then Indian pharmaceutical companies selling their brands of these molecules may have to withdraw their brands or pay some 'royalty' to the MNC pharmaceutical companies. Thus there has been a great change in the marketing strategy of pharmaceutical companies. Before 2005 there was a huge rush of pharmaceutical companies to launch as many brands possible of patented molecules, but now after 2005, patented molecules cannot be copied and hence Indian companies are trying to introduce new molecules. This, they are trying to do so by various means like in licensing, collaborations & joint ventures, purchase of MNC companies etc. Introduction of new molecules is also a preferred strategy because pharma companies in order to enhance their image in the eyes of Doctors want to introduce latest molecules so that they are seen as progressive R&D focused companies.

After introduction of product patent in India, marketing plays vital role for survival of industry in new product regime. After 2005 opened door of marketing for high end product by MNC companies because of patent protected, at the same time more skilled workforce is required to create awareness in the market.

On the other hand governments should take proper control on pricing of pharmaceutical products, so that essential drugs will reach common man easily and also Government has to look at opportunities available after implementation of new patent regime, which will helps driving future growth of industry and the same time new initiatives to be taken to make pharmaceutical companies invest more in R & D. future drivers of industry is only research products.

The increasing prevalence of resistant pathogens is mainly related to either the emergence of new strains or the spread of existing resistant clones. The specific mechanisms of drug resistance are important in determining its likely reversibility. The response to antimicrobial resistance in the medical community has been to use new or alternative antibiotics not previously used against the resistant bacteria. The pharmaceutical industry has responded to the resistance problem by producing newer antibiotics, either as modifications of currently existing compounds or as combinations of compounds that may inhibit or by pass bacterial resistance mechanisms.
Antibiotics are critical in the treatment of bacterial infections. The discovery of penicillin was followed by an extraordinary progress in research related to antibiotics and their extensive use. Drastic improvement in mortality and morbidity due to infectious Diseases (Aryanti et al 2003) during 1980s led to great euphoria and complacency amongst medical fraternity. The result of this was misuse or inappropriate use of antibiotics with emphasis of curative medicine at the cost of disease preventive measures. Excessive use of antibiotics resulted in the emergence of bacterial resistance (Patrick G P et al 2004). The resistant strains had a survival advantage, and under the selective pressure of antibiotics propagated and spread throughout the world.

Antibiotic resistance, a well known phenomenon in nature (B K Bhattacharya et al 2006) assumes significant public health importance when it gets amplified many folds due to human misuse and neglect. In the present age, the threat has become global due to rapid spread of organisms from one part of the world to another. It is no longer a problem of the developing countries alone. Today even after all the advances in therapeutics and the availability of a large number of antibiotics, a person can die in a developed country also due to infection with resistant bacteria (Sean Eric Smith 2000). Antibiotics resistance has become a serious public health concern with economic and social implications throughout the world. These infections lead to higher rates of hospitalization, longer hospital stay, and increase in the cost of treatment and thus increased economic burden on the community (Arti Kapil 2005). The problem is much larger in developing countries (Haritha Saranga et al). 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 antibiotics resistance in developing countries (Anna Merino-Castelló).

The purpose of the paper by Herbert Jack Rotfeld (2005) was to delineate confusions and uncertainties of the issues surrounding those criticisms. Critics assert that all marketing of medical products is abusive, while actual impacts are disputed. The methodology adopted was pulling from past commentaries on pharmaceutical marketing and current criticisms of the practice, to indicate areas of confusion. The findings of the work was that the ills of pharmaceutical marketing are not as great as critics presume, but the practices are not as positive as the companies might wish to assert. With uncertainty on the actual impact of specific practices, the companies are engaging in a certain degree of warfare via ever-increasing budgets of sometimes-questionable value.
The pharmaceutical industry is characterized by high R&D costs and increasing competition. New pharmaceutical products are often provided patent protection to help companies recoup their R&D costs. The end of this period of market exclusivity is a challenging period for these companies. Marketers need to develop creative product, promotional, and pricing strategies for those products nearing patent expiration. Madhu Agrawal et al. (1997) provide an overview to the history of drug patents. Second, discuss the recommendations of the strategies commonly adopted by companies with products facing patent expiration.

The article by Elizabeth Murray et al. (2007) compares and contrasts the main quality standards in the highly regulated pharmaceutical industry with specific focus on Good Clinical Practice (GCP), the standard for designing, conducting, recording and reporting clinical trials involving human participants. Comparison is made to ISO quality standards, which can be applied to all industries and types of organisation. The study is then narrowed to that of contract research organisations (CROs) involved in the conduct of clinical trials. The paper concludes that the ISO 9000 series of quality standards can act as a company-wide framework for quality management within such organisations by helping to direct quality efforts on a long-term basis without any loss of compliance. This study is valuable because comparative analysis in this domain is uncommon.

This study by Madhu Agrawal (1997) traces the history of international pharmaceutical trade and its development since the middle ages to the present. This history is divided into two time periods (1) Middle ages to World War II and (2) World War II to the present. The marketing strategies employed in these different time periods are compared with respect to product, promotion, distribution and pricing policies.

Chris Cousins (2009) in his research publication describes how the patient physician relationship has been compromised by pharmaceutical giants. At one time, a doctor’s primary concern was the health of the patient. During this time, no incentives existed for doctors to prescribe certain medications and the prescription process was adequately assessed by the physician in order to deter potential side effects. Today, thanks to large pharmaceutical companies, a doctor may possess an
ulterior motive other than what is in the best interest of the patient. By influencing medical education, companies control the distribution channel for their product. Using unethical marketing techniques, including misleading direct-to-consumer marketing and condition branding, the pharmaceutical industry creates and maintains a market for their product. The combination of these two influences demonstrates how pharmaceutical companies exploit physicians and patients alike in order to maintain themselves as a dominant force in the American economy.

ICRA’s analysis of the performance of the top 15 (based on revenue) listed domestic pharmaceutical formulation companies (ICRA sample) in 2004-05 and in the first quarter (Q1) of 2005-06 reveals the following broad trends: Overall revenue growth moderate with impact of strong exports growth being diluted by marginal growth in domestic business. Due to significant rise in R&D expenditure; focus increased on both product development and discovery research as industry gets into investment mode. Aggressive fund raising was undertaken to finance infrastructure expansion, acquisitions, and strategic business plans.

The analysis in this report by Subrata Ray et al. (2005) excludes the Indian subsidiaries of multinational pharmaceutical companies as the business dynamics of such subsidiaries are different, being characterised by negligible R&D expenditure, almost exclusive focus on the domestic market, and generally limited investments in manufacturing capacities. For these very reasons, the balance sheet structure and financials of these subsidiaries are significantly different from those of the domestic pharmaceutical companies. This report also leaves out unlisted companies from the analysis because of data constraints.

Gaur et al. (2005) is of the opinion that in India it is necessary being recognized as a sector with potential to grow at par with the information technology sector. Government has setup many task forces comprising of industry stalwarts and experts to give recommendations on the ways IPI can be made world class. It is expected that the boom of business process outsourcing will not leave the pharmaceutical industry untouched. Huge opportunities are expected in the fields of Pharmacogenomics, Bioinformatics and Biotechnology for Indian firms to do contract research as well as manufacturing. The approach should be to climb the ladder of
value chain slowly after gaining experience at each step, something which many Indian firms are already doing. With proper policy initiatives and government incentives, IPI can definitely be expected to become a world class industry similar to Indian IT industry in coming 5-10 years time.

Hema Viswanathan et al. (2002) in their paper have discussed the influential force of the Indian pharmaceutical industry in the World pharmaceutical market. The market for pharmaceuticals in India has immense potential and the decreased price controls and changing patent regulations will soon make conditions in India much more favourable to multinational corporations. Indian drug companies are gearing up their R&D investment. Their thrust will be on exports, especially in the generics market, and licensing of new discoveries to larger multinationals in an effort to fuel expansion and further growth. Although scientific skill and entrepreneurship are already proven ingredients in the success of the Indian pharmaceutical industry, catalysts such as upgrading infrastructure, government support, a more efficient judiciary, a bankruptcy law, and labour reforms will speed future broadened success. It will be interesting to witness the strength of possible strategic alliances and the competition for the top echelons as the Indian pharmaceutical industry braces itself for the future.

The Indian pharmaceutical industry is at the crossroads: on the one hand, opportunities are emerging in the developed markets, while on the other, the domestic market is becoming increasingly challenging following the introduction of the product patent regime. In developed markets, the focus on reducing healthcare costs has been increasing, with the result that there is pressure on the authorities to allow early introduction of low-cost generic drugs. This in turn points to large opportunities for Indian drug manufacturers with approved facilities and sound knowledge of patent/regulatory issues. Besides, the impending expiry of significant drug patents in the near term also offers opportunities for lower-cost Indian generic manufacturers in terms of greater market access. However, even as there are opportunities, the challenges are many: drawing up appropriate distribution strategies, selecting the right products, and anticipating competition, among others. However, with the product patent regime having been introduced this calendar, domestic players to augment their product baskets would need to focus more on R&D and enter into alliances with innovator MNCs (ICRA Rating Feature. Rating Methodology of Pharmaceutical Companies).
Uwe Perlitz (2008) has discussed about India’s pharmaceutical industry on course for globalisation. He states that the pharmaceutical industry is expanding worldwide. For some years now, it has been benefiting from the particular dynamics of the Asian economies as both purchasers and producers. It is not only the markets in China and India that register high growth rates. Annual growth rates are also impressive in Singapore, Malaysia, Thailand and Indonesia. Drivers of growth are the growing population, which at 1.5 bn should exceed that of China already in 2025, as well as the larger number of older people with markedly higher demand for medicines. As a result of the new patent legislation, the country’s pharmaceutical industry is reorienting itself and focussing on self-developed medicines and/or contract research and production for western drugs companies. Despite the positive outlook India will lose market share in the Asian market in future. The winner, first and foremost, will be China, which will remain the No 1, thanks to its expected higher sales growth and volume, as Indian companies' strategic reorientation away from generics to original preparation is still in its infancy. The sooner India manages to close the infrastructure gap, the higher growth will be in the country’s pharmaceutical industry.

William Greene (2007) has presented an overview of India’s pharmaceutical industry and its evolution from almost non-existent to one of the world’s leading suppliers of generic drugs. The Indian pharmaceutical industry was allowed to take off when India met its WTO TRIPs obligations and amended its patent laws with the passage and implementation of the Patents (Amendments) Act 2005. When India re-instituted “product” patents, it effectively ended 36 years of protection for Indian companies and terminated legal reverse engineering or copying of patented foreign pharmaceuticals drugs. To meet the short fall in revenues, many of India’s leading pharmaceutical companies turned to foreign acquisitions and exports, especially to the United States. India’s major pharmaceutical companies are positioning themselves to offer generic versions of these drugs and some have predicted that they will capture at least 30% of the U.S. generic replacement market. However, Indian companies face severe price compression in the U.S. for their generic drug market and stiff competition from domestic U.S. generic manufactures and suppliers from other low-cost countries.
Address following questions, what are the trends in the global competitiveness of the Indian pharmaceutical industry? Where does this industry stand when compared to global peers on pharmaceutical value added, productivity, research and development and trade performance? What are the new strategies that Indian pharmaceutical companies are adopting to become global players? These questions are addressed in the paper by Jaya Prakash Pradhan (2006). It is found that strategic government policies were the main factors that transformed the status of the Indian pharmaceutical industry from a mere importer and distributor of drugs and pharmaceuticals to an innovation driven cost effective producer of quality drugs. India emerged as one of the fast growing pharmaceutical industry in the world with growing trade surpluses and exports. However, there are certain limitations that the government policies need to address, like low productivity and R&D intensity. A host of competitive strategies, like Greenfield direct investment, overseas acquisitions, strategic alliances and contract manufacturing have emerged as favourites to Indian pharmaceutical firms recently.

The study by Beena S. (2006) found that coincided with the global trends, the Indian pharmaceutical industry experienced greater consolidation through mergers, acquisitions, alliances as well as sale of assets. Most of the firms used it as a market expansion strategy rather than as a technology enhancer and it is evident from the performance analysis carried out, which shows that there is a significant difference in the marketing expenditure of merging firms compared to the non-merging counterparts during the post merger period. The author concludes by saying that if this industry is able to transfer a part of their improved performance due to consolidation to the consumers in the form of a price reduction and a better quality of drugs, it would be a welcome sign and on the other hand if it lead to increased market power and consequent price rise, then it would deserves special attention.

Pharma industry in India is playing a vital role in the healthcare area of the nation. With the implementation of product patent from the year 2005, there will be a tough competition for the global market share. Pharma companies will have to focus more intensively on R&D activity to survive the competition. As we are moving towards globalisation, there is a need for strategic planning to meet the challenges posed by the product patent era. In the present context with the available expertise,
manpower and skill, the Indian Pharma Industry will fight successfully for the global market share. Abhinav Agrawal et al. (2006) in their article have reviewed the status of Indian pharma industry vis-à-vis Global pharma industry. The probable opportunities and challenges for the Indian Pharma Industry in the post 2005 era have also been discussed.

S. Anitha (2006) in her article revealed that, currently Karnataka pharma market is valued at Rs.1317 crores per annum. According to ORG, 251 companies are in the fray. Karnataka is one of the few states in the country where there is a healthy mix of national as well as regional players in the market. The per capita is sky rocketing due to buoyancy of software and other industries. In this scenario the buying power is bound to go up. This certainly will help the cause of the industry in the state on both short and long term. Also, a spurt of corporate hospitals in Bangalore is virtually making it a healthcare hub to people outside the state and the country, due to which Institutional sales of medicines are bound to go up.

2.2. LITERATURE ON ANTIBIOTIC RESISTANCE

The pharmaceutical industry has got a wide-range of doctors and pharmacists extolling the efficacy of broad-spectrum antibiotics — and the message has filtered down to the end user. Even severe diseases like typhoid, food poisoning and cholera are now treated with any antibiotic available in the market. Vibha Varshney (2006) discusses in her article how an antibiotic works. An antibiotic usually works on specific groups of microbes, differentiated as gram-negative and gram-positive. Antibiotics work in three major ways — some like penicillin affect biosynthetic activity and prevent cell wall formation; tetracyclines affect protein synthesis; and the quinolone group works on the replication of genetic material. Pharmaceutical companies have long been trying to come up with broad-spectrum antibiotics, which work against a wide range of disease-causing bacteria, as against a narrow-spectrum antibiotic, which is effective only against specific families of bacteria. Penicillins like benzyl penicillin, used to treat diseases like pneumonia, have a narrow-spectrum of activity. Companies modified the chemical and came up with semi-synthetic products like amoxycillin and ampicillin that have a broader-spectrum of activity.
Inappropriate use of antibiotics has often been identified as a problem in
effective health care delivery. Effective intervention in these practices is often
difficult because of the paucity of information on determinants of antibiotic use. A
review by Aryanti et al. (2003) provides information from studies on the factors that
influence the use of antibiotics by health providers, dispensers and community
members in low-income countries. The review encompasses physicians practices, the
role of drug dispensers and the drug use practices by community members. If
interventions into antibiotic use are to be effective, future research must focus on the
socio-cultural ‘rationality’ of antibiotic usage, preferably combining quantitative and
qualitative methods. Strategies that lean too heavily on professional education are
unlikely to result in large-scale or long-lasting improvement.

A majority of bacteria in nature are non pathogenic, a large number of them,
live as commensals on their body leading a symbiotic existence. Despite the availability
of a large arsenal of antibiotics, the ability of bacteria to become resistant to
antibacterial agents is amazing. The use of antibiotics is widespread in clinical
medicine, agriculture, aquaculture, veterinary practice, poultry and even in household
products. The major reason for this is the inappropriate use of antibiotics due to a lack
of uniform policy and disregard to hospital infection control practices. Despite
advancement in medical technology for diagnosis and patient care, a person can still die

Antibiotic resistance is currently the greatest challenge to the effective
treatment of infections globally. Resistance adversely affects both clinical and
financial therapeutic outcomes, with effects ranging from the failure of an individual
patient to respond to therapy and the need for expensive and/or toxic alternative drugs
to the social cost of higher morbidity and mortality rates, longer duration of
hospitalization, and the need for changes in empirical therapy. Rekha bisht et al.
(2009) have shown the astonishing effects of antibiotics, the occurrence of resistance
and the considerable resources spent on antibiotics globally that are convincing
reasons for concern about ensuring adequate and proper use of these powerful agents.
Antibiotic resistance is one of today’s most urgent public health problems, threatening to undermine the effectiveness of infectious disease treatment in every country of the world. Specific individual behaviours such as not taking the entire antibiotic regimen and skipping doses contribute to resistance development as does the taking of antibiotics for colds and other illnesses that antibiotics cannot treat.

Antibiotic resistance is as much a societal problem as it is an individual one if mass behaviour change across the population does not occur, the problem of resistance cannot be mitigated at community levels. Although a number of initiatives have been implemented in various parts of the world to elicit behaviour change, results have been mixed, and there is little evidence that trial programmes with positive outcomes serve as models of sustainability. In recent years, several scholars have suggested social marketing as the framework for behaviour change that has the greatest chance of sustained success, but the antibiotic resistance literature provides no specifics for how the principles of social marketing should be applied. Timothy Edgar et al. (2008) have provided an overview of previous communication-based initiatives and offered a detailed approach to social marketing to guide future efforts.

Louis b. rice (2003) reports that to reduce antimicrobial resistance in the intensive care unit, hospitals are developing strategies such as improving infection control, adhering to prescribed formularies, requiring prior approval for using certain antibiotics, setting limits on the duration of antimicrobial therapy, and rotating the use of antimicrobial drugs on a regular schedule. Each strategy has theoretical benefits and limitations, but good data on their efficacy in controlling antimicrobial resistance are limited.

During the past century, the excitement of discovering antibiotics as a treatment of infectious diseases has given way to a sense of complacency and acceptance that when faced with antimicrobial resistance there will always be new and better antimicrobial agents to use. Now, with clear indications of a decline in pharmaceutical company interest in anti-infective research, at the same time when multi-drug resistant micro-organisms continue to be reported, it is very important to review the prudent use of the available agents to fight these micro-organisms. While over the counter access to antibiotics is mentioned as an important contributor
towards injudicious antibiotic use in developing nations, as shown in a number of studies, there are many provider, practice and patient characteristics which drive antibiotic overuse in developed nations such as the United States. Recognizing that a thorough review of this subject goes far and beyond the page limitations of a review article, Gaur Aditya H et al. (2006) provide a summary of some of the salient aspects of this global problem with a focus towards readers practicing in developing nations.

The antibiotic era started in the 1940s and changed the profile of infectious diseases and human demography. The burgeoning classes and numbers promised much and elimination of this major cause of human (and animal) morbidity appeared possible. Bacterial antibiotic resistance which was observed soon after antibiotic introduction has been studied extensively by D. Raghunath (2008). Diverse mechanisms have been demonstrated and the genetic basis elucidated. The resilience of the prokaryote ecosystems to antibiotic stress has been realized. The paper presents these subjects briefly to afford an overview. The epidemiology of antibiotic resistance, the role of high antibiotic usage, the implication of the wide use of antibiotics in animals is dealt with and community practices in different countries are described. This article attempts to review the global antimicrobial resistance scene and juxtaposes it to the Indian experience. The prevalence of antibiotic resistance in India and the factors that determine the prevalent high antibiotic resistance rates have been highlighted.

The antibacterial market is set for continued growth to 2010, in spite of the patent expiry of 20 of the 41 top performing products between 1999 and 2010, products that currently represent just over 50% of total current market value. The analysis published by Datamonitor (2002) highlights the need to move from the current model of market dominance by a single drug class to favour a more diversified, and specifically targeted range of therapeutics. The scope of the study was the key epidemiological and sales data for community and hospital use antibiotic products in the seven major markets. In-depth analysis of the leading products from the penicillin, quinolone, cephalosporin, macrolide, carbapenem and important alternative classes, case studies featuring leading global players, including GSK and Bayer’s management of key market events impacting Augmentin and Cipro, using an impacted forecasting model, key product and class forecasts are presented up to 2010. Report highlights: Fluoroquinolones are set to overtake the cephalosporins by 2004, claiming 34% of the $ 32 bn global antibiotics market in 2010, driven by rising
resistance to the cephalosporin’s and patent expiries, and clinician preference for the fluoroquinolones due to their breadth and flexibility of utility. Twenty of the 41 top performing products in the antibiotics market face patent expiry between 1999 and 2010. Datamonitor believes specialization into high value niche sectors offers the best means of securing market capture.

Before the development of the first antimicrobial agents, bacteria already had demonstrated an ability to adapt to stress in the environment, resulting in the development of resistance that often makes the prevailing antibiotic treatment ineffective. The response to antimicrobial resistance in the medical community has been to use new or alternative antibiotics not previously used against the resistant bacteria. The pharmaceutical industry has responded to the resistance problem by producing newer antibiotics, either as modifications of currently existing compounds or as combinations of compounds that may inhibit or bypass the bacterial resistance mechanisms. The development of new antibiotics is a lengthy and costly process. To be successful, the pharmaceutical industry must anticipate the changing needs of the medical community, as well as the dynamic process of antimicrobial resistance. The marketing of new antimicrobial agents must be adaptable to the potential environmental pressures that induce bacterial resistance in order to ensure the longevity of the agents (Bruce S. Lavin 2000).

Recent reports on emergence of a multidrug resistant ‘superbug’ have given the world a warning call against irrational use of antimicrobials. Few examples of most dangerous bugs include MRSA, Klebsiella Penumonia, vancomycin resistant Staphylococcus aureus (VRSA), vancomycin-insensitive Staphylococcus aureus (VISA), and vancomycin-resistant enterococcus (VRE). A new candidate in this family of superbugs is New Delhi metallo-ß-lactamase 1 (NDM-1). This review by Reema Thomas et al. (2011) shades a light on various factors related to physician, pharmacist, government, and patient and also have tried to present the corrective strategies that can be useful to curb this global health issue.

In 1975 the World Health Assembly requested the Director-General to advise Member States on the selection and procurement of essential drugs corresponding to their national health needs. Kshirsagar et al. (1998) have reported the results of a
study of the prescribing patterns and rational drug utilization of medical practitioners of Pune, an industrial city in the west of India, which was undertaken by analysing their prescriptions. The results indicated a lack of rational prescribing practices by a significant number of practitioners.

Markets create resistance, and resistance creates markets. When faced with antibiotic resistance, how should society respond? While many are calling for enhanced non-market solutions through enhanced IP law, this article by Kevin Outterson (2010) suggests that we also consider the needs of the poor, as well as those able to afford patented medicines. As important as these arguments are for most health care goods, they are particularly salient for exhaustible pharmaceutical knowledge. Otherwise, the public domain vanishes.

2.3. MARKETING TACTICS: INTERNATIONAL SCENARIO


Marketing itself is a big business with pharmaceutical companies. In the US, it is a billion-dollar industry. The conflict between public interest and marketing becomes apparent once a drug becomes available in the market. The company wants returns on the product as quickly as possible given the stiff competition, with the company spending at least 20% of sales on pushing its products - twice more than on research and development. The question we should ask is how far these companies should go in encouraging the use of their drugs.

Usually the drug maker is forced into heavy promotion to recoup research and development costs within only six or seven years after a new drug is introduced. In Australia, drug companies spend A$200 million every year just to market their products. The sum represents almost A$10,000 a year spent on attempting to win each of Australia's 21,000 GPs. This is 50% more than allowed by law in the UK for marketing.
In Japan, there are an estimated 43,000 drug salesmen and almost as many wholesaler representatives. An average Japanese doctor receives 450 sales calls a year.

In Britain the pharmaceutical industry also realises the importance of bringing new products to the attention of GPs. As a result, about two million visits are paid by sales representatives, with the average GP receiving some 62 visits a year.

In developing countries, doctors find it hard to resist the hard-sell tactics of multinationals. According to Dr Mediadora Saniel of the Research Institute for Tropical Medicine near Manila, the promotion for medicine, especially antibiotics, is heaviest in developing countries like the Philippines (New Straits Times (Malaysia), 6 February 1996).

Americans spend US$ 700,000 a day on just one type. Ciprofloxacin, in 1989 was the fourth most commonly prescribed antibiotic in the US - with over 5 million prescriptions at a cost of US$ 248 million. Yet, according to clinicians in the US, much of the expenditure is inappropriate. In the first half of 1988, ciprofloxacin was the second most advertised product.

A study (reported in the International Herald Tribune, 3 June 1992) by the University of California revealed that advertisements in medical journals are misleading about the safety and effectiveness of new drugs. Their benefits are often exaggerated or unbalanced. And especially in developing countries, these claims in the promotional literature and advertisements are not regulated and certainly not in the interest of public health. Yet these advertisements and literature are the prime source of information for doctors. Drug companies have also found an effective way to use the credibility of medical journals for their own purposes by sponsoring or subsidising the publication of supplements.

A WHO expert committee has suggested that a reserve list of fewer antibiotics like the third-generation cephalosporins, quinolones and vancomycin be set aside for specific indications such as infections caused by organisms resistant to standard drugs and not be available for unrestricted use.
2.3.1. ROLE OF HOSPITALS IN SHARING PROFITS

Drug companies can also work with the complicity of hospitals in a variety of kick-back schemes. For example, the spread of MRSA (methicillin-resistant Saureus) in Japan is directly linked to the longstanding dependence of hospitals there on income from drug prescriptions. Japanese doctors allegedly prescribe three times more antibiotics per patient than their Western counterparts. Not only that, the drugs they use tend to be the expensive, broad-spectrum types like second- and third-generation cephalosporins, which carry a higher profit margin than oral penicillins. The drug companies encourage this practice - as it means more profits for them too.

The reason it worked so well was due to the medical fee system, in which prescriptions were covered by the public health insurance fund. Doctors were paid an official price for drugs regardless of their real cost. At the same time, to encourage doctors to dispense their products, the drug companies offered doctors generous discounts of up to 24% of the drug official prices. Doctors or hospitals could thus pocket the difference. The more drugs a doctor or hospital sells, the higher the profit margin.

Thus it is not surprising that these over prescribed cephalosporins, in the market since the last decade, have now no effect on the MRSA despite their broad antimicrobial spectrum. In a move to shake up this scheme between drug companies and hospitals, the Health Ministry took the step to bar drug manufacturers from directly fixing prices with health institutions, giving wholesalers the right instead.

2.4. MARKETING STRATEGIES

The current shift in the marketing strategy is being worked by multinational pharmaceutical companies. It is now high-end (rather than adaptive) development that is being carried out by leading companies. And, increasingly, other companies are finding themselves competing against, or working with, new innovation-based companies. Saurabh Kumar Saxena has studied the processes and outcomes of globally distributed pharmaceutical companies. This article presents the changing marketing strategies when a pharma company shifts from acute base to chronic therapy base. The author has also given an insight about shift in supply chain process and customer and end-customer perception which is the base of formulation of different marketing strategies.
Analysis of the pharmaceutical industry’s marketing tactics reveals the extent of their influence on patient care and medical research. These tactics can be arranged into five categories according to the potential for harm to patients (from least to most harmful): physicians-targeted promotions, direct-to-consumer advertising, and unethical recruitment of physician’s, researcher’s conflicts of interest, and data manipulation in clinical trials. Drug companies promotions subconsciously influence physician’s prescription patterns. Heavy advertising to consumers results in more prescriptions being written, whether or not the new drug is in the best interests of patients, and therefore strongly correlates with sales increases for the promoted new drug. Pharmaceutical companies manipulate research data to prevent negative data from leaking to the public. Much evidence suggests that the pharmaceutical industry’s economic influence on the medical field is substantial. Despite the threats these activities pose to the reliability of medical care and the integrity of research, the reputation for quality in American healthcare is not yet lost; the continuing quality of American healthcare will depend primarily on the morality of next generation’s scientists and doctors Hoiman Chiu (2005)).

The paper by Joan Buckley (2004) reviews current marketing practices in the pharmaceutical sector and their impact on consumer and doctor behaviour. It identifies negative impacts which include misleading advertising, disease mongering and escalating costs. It argues the need to move from industry self-regulation to an independently monitored code of practice for pharmaceutical marketing.

This survey by Claus Møldrup (2006) documents that ‘no cure, no pay’ drug initiatives are accepted by patients and customers in Denmark and Sweden. At the same time, ‘no cure, no pay’ initiatives appear to be a strong business strategy for influencing the buying intentions of patients and customers. Results like these will motivate most marketing directors to focus more on these types of initiatives. Here it is important to point out that ‘no cure, no pay’ initiatives should not be designed as purely marketing strategies. Obviously, a ‘no cure, no pay’ policy for drugs with poor documentation and little effect will not influence rational pharmacotherapy. If good documentation is available on a drug and one drug is either better than or as good as the drug of first choice, however, a ‘no cure, no pay’ strategy could be used to support a message about product benefits. Misuse as cheap marketing would be of no help to the industry in general in its attempt to lessen tension between the pharmaceutical industry and health authorities over drug marketing.
Through the decades of 1970s and 1980s, the Indian pharmaceutical industry (IPR) reached new heights of process capabilities. At the present juncture, however, the industry is at a watershed, trying to cope with the challenges of globalisation and reforms. It is going through a turbulent phase of adjustment driven by the emerging international economic order of the WTO, especially the TRIPS agreement establishing a new IPR environment. The aim of the paper by Amit Shovon Ray (2010) was to explore the trajectory of learning and innovation in the IPR as it evolved through the various phases of government policy environment and IPR regimes. He concludes that although India has reached impressive heights of technological maturity in pharmaceuticals, it is yet to arrive at the global frontiers of cutting edge drug discovery research. This can only be achieved through sustained technological effort and continued R&D.

2.5. PRICING STRATEGIES

The paper by Anna Merino- Castello (2000) studies the impact of the reference price (RP) system on the price setting strategies of pharmaceutical firms. The RP system is equivalent to setting an additional but avoidable co-payment for those drugs whose price exceeds the reference level. The study finally concludes that, although the social planner succeeds in promoting price competition, it completely fails in raising generic drug usage among the population. Both the implementation of the RP system and the potential entrance of generics constitute a sufficiently credible threat to make branded drug producers decrease price, thus fostering effective competition.

Karen S. Cravens et al. (1995) have shown that the pharmaceutical companies have received a tremendous amount of attention in the media regarding increases in drug prices at rates much in excess of the rate of inflation. It synthesizes the numerous issues affecting drug pricing and the role that the auditor should play in determining a “fair” price and evaluates the role of the auditor with regard to the call from investors for additional information in the annual report and more in-depth analysis of management's ethical and operational practices. The pharmaceutical industry represents a unique area for consideration, given ethical and regulatory pressures and the nature of the drug development and distribution process. The complexities of this process consider the auditor's responsibility to understand unfair pricing practices along with the ability to detect such practices.
A report by **Ames Gross** (1999) describes that if proposed reforms such as relaxing price control and improving patent protection go through, India's pharmaceutical market will offer many opportunities for foreign pharmaceutical companies in the future. Foreign drug manufacturers can also benefit from the industry's efficient process development and modern manufacturing equipment; labour, equipment, and capital cost advantages to manufacturing in India, and a highly skilled labour force with excellent chemical synthesis capabilities. However, there are still major structural obstacles to success in India's pharmaceutical market -- transportation and distribution bottlenecks, corrupt inspectors, and an entrenched bureaucracy. Foreign pharmaceutical companies should therefore make sure that they perform thorough market research for their product, understand the industry's regulations completely, and establish reliable connections in the country to ensure that they remain in the industry for the long run. Only if they are willing to put up with the industry's inefficiencies and maintain a long-term vision can foreign drug companies expect success from the enormous Indian pharmaceutical market.

**Fiisun F. Goniil et. al** (2001) investigate whether and how pricing and promotional activities influence prescription choice behaviour using a comprehensive panel of physicians and data on competitive price and promotional activities. The authors find that physicians are characterized by fairly limited price sensitivity, detailing and samples have a mostly informative effect on physicians, and physicians with a relatively large number of medicare or health maintenance organisation patients are less influenced by promotion than other physicians are.

Differential pricing can enhance access to medicines, improve quality of medicines and achieve higher profits for pharmaceutical manufacturers. Pharmaceutical manufacturers would want to become more receptive to differential pricing if the risks of physical arbitrage could be managed collectively together with national governments, international donors and large NGOs. To avoid the problem of formal or informal external referencing, firms could nudge countries to use pharmaco-economic assessments instead of reference pricing. Implementing the recommendations in the paper by **Prashanth Yadav** (2010) would require inputs and collaboration from several parties in addition to those who are recommended to lead each of the specific recommendations. This policy brief on Drug Prices and Affordability discusses the issue of medicine pricing and affordability for the
common people of India. This document gives specific examples of overpricing. A decaying public health system and a market riddled by overpriced, irrational and unscientific medicines aggravate the lack of access and affordability. Several Government of India committee reports have suggested some form of medicine price regulation. As these brief points out, even in the so-called advanced countries of the West, some form of governmental regulation is prevalent.

The study in *Journal of Managed Care Pharmacy*, 2008 provides an alternative explanation for the continued price rigidity of patent-expired brand-name drugs despite the increased market entries of generic competitors facilitated by the 1984 drug price and patent law. According to this alternative explanation, the price rigidity results from product-line extensions that brand-name drug firms introduce for their patent-expiring brand-name drugs. This study provided some support for this alternative explanation using a set of orally administered, single pharmaceutical ingredient, original brand name drugs that had lost their patents between 1987 and 1992.

Secondary research shows that consumer price knowledge and gender has an effect on retail management strategy. Consumer knowledge and expertise of industries prices, products and store location add to the ease at which consumers are able to cherry pick. Cherry picking can be defined as taking the best and leaving the rest and therefore cherry picking is used to portray both buyer and seller behaviour in retailing. This article by Louis van *Scheers et al. (2007)* aims to establish the effect of consumer price knowledge and gender on retail management strategy. Consumers who are branded as cherry pickers are price sensitive shoppers with no brand loyalty but this market segment has been found to be sizable, heterogeneous, and potentially attractive for retailers, contrary to the myth that they are a retailers’ nemesis.

2.6. DISTRIBUTION STRATEGY

An article in *India Today* states that the manufacturers must ensure that their drug reaches customers with uncompromised quality. In India, because manufacturers do not retain control over the multi layered distribution system, the cold-chain management process continues to be difficult and expensive. However, manufacturers are increasingly realizing the importance of an effective distribution system, all the way to the end-customer. Coping with the challenges of streamlining the systems in India will ultimately benefit the patient and the healthcare system.
The pharmaceutical industry is now facing major challenges that have led to the restructure and redesign of strategic processes. The supply chain is one of these strategic processes. In their attempt to build a world class supply chain, companies are facing a number of obstacles that need to be addressed in order to “debottleneck” it. The research by Michel G. Lurquin (1996) investigates ways of streamlining the supply chain by finding and eliminating bottlenecks along the various processes. It introduces original proposals to turn this process to major competitive advantage in terms of cost of goods, service, quality and capital utilization.

2.7. PROMOTION STRATEGY

Promotion and marketing (including advertising, gift giving and support for medically related activities such as travel to meetings) make up a very large part of the activities of drug companies (consuming a quarter to a third of their entire budgets, and totalling more than US$ 11 billion each year in the United States alone). There are no comprehensive figures available, but it is estimated that, of this, about US$ 3 billion is spent on advertising and US$ 5 billion on sales representatives (Kalpana Chaturvedi et al 2006). While expenditure per physician is believed to be over US$ 8000 (F. R. Brennan 2006), drug companies’ promotions subconsciously influence physicians prescription patterns.

Cephalosporins are medicines that kill bacteria or prevent their growth. They are used to treat infections in different parts of the body, including the ears, nose, throat, lungs, sinuses, and skin. Physicians may prescribe these drugs to treat pneumonia, throat infections caused by Streptococci, Staphylococcal infections, tonsillitis, bronchitis, and gonorrhoea. These drugs will not work for colds, flu, and other infections caused by viruses. These medicines are available only with a physician’s prescription. They are sold in tablet, capsule, liquid, and injectable forms. The Cephalosporins are classified as per the generations and currently there will be fourth generation, which are popularly known as next generation Cephalosporins. Despite being one of the leading pharmaceutical organisations in India, CIPLA has found that one of the newly launched products in antibiotics was not generating sales as per the expectations. Hence, basic problem was generation of sales and to understand parameters for brand promotion vis-à-vis competitors. This research paper by Mr. Adwait Lele et al. (2007) narrates the efforts undertaken for exploration of parameters of brand promotion for next generation Cephalosporins and its brand Cefadur CA for Cipla Protec (Division of Cipla Pharmaceutical Ltd.) in the city of Pune. The suggestions given after the study to CIPLA Protec have been implemented by them.
Herbert Jack Rotfeld (2002) has shown the use of brand names in the pharmaceutical industry in comparison with generic versions. He has given a brief history of brand name development and concluded that brand names for pharmaceutical drugs should be banned since this is open to abuse in the area of cost enhancement.

S. K. Verma (2004) reports that the last century has witnessed a phenomenal growth in science and technology including medicine. The noble traditions of medical profession have been virtually washed away by the strong financial and economic reasons. Pharmacy and physician are among the integral components of health care delivery system. Drugs are the basic tools available to a physician in treatment of an illness. Thus, the knowledge about old and newer drugs is a must for a physician. The information about a new drug is mostly provided by the pharmaceutical industry, through its sales representatives, brochures, banners etc. The average cost of developing a new drug is estimated to be $300 million to $600 million (1). The drug companies spend huge amount of money on developing new drugs, as well as they also spend lavishly in sales promotion to earn profits. According to the latest annual report of GlaxoSmithKline Pharmaceutical Ltd., the company spent 20 crore rupees on sales promotion for the year ending 31st Dec. 2001(3). Social scientists describe and the pharmaceutical industry follows the, “norm of reciprocity” i.e., the obligation to help those who have helped you, as one of the fundamental guiding principle of human interactions. It is not surprising, therefore, that pharmaceutical companies rely on this principle of human nature by giving gifts to physicians in hope that they will prescribe their firm’s product in return.

Establishing the pharmaceutical brand position- the advantageous location a product owns in the minds of physicians- is arguably among the most challenging components of marketing campaign development. The essential problem with exposing physicians to complete positioning statements is that they are unable to unravel, and thus understand and appreciate, the meaning of these complex accumulations of ideas and often reject them simply based on the ‘weakest link’ principle. The paper by Richard B. Vanderveer (2007) proposes an eminently simple approach called ‘Customer-Driven Positioning’, which more closely reflects the process by which physicians truly want to engage and learn about a new pharmaceutical product. The paper illustrates where this process should be employed in relation to other qualitative and quantitative research techniques used in promotions development.
There is also evidence that drug company’s support for travel expenses changes the prescribing behaviour of practitioners (Chren MM 1989; Chren MM et al 1994). Among the many studies that have demonstrated such an effect, it has been shown that a physician who accepts money to travel to a symposium is 4.5–10 times more likely to prescribe a company-sponsored drug after such sponsorship than before (even though he or she may believe in advance that prescribing behaviour will not be affected) (Orlowski JP 1992), and is 7.9 times more likely to submit a formulary request for that drug than a physician who does not (Chren MM 1994).

Sponsorship of meetings is an important and difficult issue. There are clearly common interests between professional societies, which are usually responsible for organizing conferences, and the pharmaceutical industry: the former stand to gain substantial funding from the pharmaceutical industry for their meetings and other activities, while, for the latter, unparalleled opportunities are provided to showcase their wares. On the other hand, choices of speakers and topics at meetings may have important implications for pharmaceutical companies, and, if these are subject to influence from outside the professional society, the kinds of impressions that people go away with may be significantly altered. Indeed, sponsorship of conferences has been shown to lead to bias in favour of the sponsoring companies’ drugs (Bowman MA 1996) with increases in prescriptions for sponsors’ drugs in the six months after an event. Similarly, pharmaceutical support for continuing medical education (CME) activities leads to increased prescribing of sponsoring companies’ products (Lichstein PR et al 1992).

Gift giving is another widespread drug-promotion strategy. A study from the University of Toronto showed that, over a period of one year, psychiatry residents and interns attended up to 35 meetings and 70 drug lunches and received up to 75 promotional items and US$800 in gifts (although there was considerable variation) (Hodges B 1995). In another study, of medical students, more than 80% had received at least a book and in some cases much more (Sandberg WS 1997). Although, as with advertising, physicians deny that gifts influence their behaviour. Here, too, there is clear evidence to the contrary (Chren MM 1989).
Company representatives are responsible for much of their drug information. Although physicians often deny it, there is considerable evidence that advertising affects clinical decision-making behaviour (Wazana A 2000). Contact with drug company representatives leads to prescribing of their drugs (Peay MY et al 1988); physicians exposed to advertising are more likely to accept commercial rather than well established scientific views (Lexchin J. 1993); and drug company advertising is associated with an inability of some physicians to identify wrong claims and a propensity to engage in non-rational prescribing behaviour (Haayer F 1982).

Pharmaceutical companies are capitalising on the advent of the internet and the development of new media forms to promote their products. Electronic detailing, interactive websites, email prompts and viral marketing campaigns using social networking sites such as YouTube, MySpace and Facebook are among the tools being used. Such campaigns are targeting both health professionals and the general public. The internet is helping to globalise and to change the nature of pharmaceutical marketing, and thus raises some new challenges for regulators (Melissa Sweet 2009).

A study by Lynda M Maddox (1999) looks at how consumers used a pharmaceutical web site to learn about a particular disease or product. Probes whether visitors used the Web site to decide which drug was right for them and whether they actually planned to request the product from their doctor. Gender and age differences in the use of Web site information have also been examined. Increasing use of the Internet and data that show that direct-to-consumer advertising of prescription drugs empowers the patient to take a more active role in his/her choice of medications makes this article important for marketers as well as regulators.

Greg Finlayson et al. (2005) have reviewed in their paper the issues regarding direct-to-consumer advertising that have been identified in the literature from the perspective of consumers, consumer groups, physicians, the medical profession and the pharmaceutical industry. Literatures from international sources have been reviewed to identify themes relating to direct-to-consumer advertising. They have shown that direct-to-consumer advertising is expressly permitted in only two developed countries (USA and New Zealand). All other countries place various limitations on the practice. The debate surrounds whether or not the advertising provides a public health benefit. This paper identifies and summarizes the issues that are being considered.
Calin Gurau (2005) attempts to investigate the perceived advantages and risks associated with online pharmaceutical transactions, and on this basis, to propose a specific segmentation of consumers. Analyses the marketing procedures applied by pharmaceutical sites to emphasise the specific advantages and to minimise the perception of transactional risks, as well as the segmentation techniques applied online. The results of the study indicate the existence of four main consumer categories. This schematic categorisation needs further development, in order to define more precisely the decision taking process and the online shopping behaviour for each customer segment, as well as the level of post-purchase satisfaction. On the other hand, the paper demonstrated that the marketing approach of various online pharmacies is determined by the transactional model applied.

The pharmaceutical industry is a leader in research and development investment. New treatments need to be communicated to the market, and consumers are increasingly interested in learning about new drugs. Direct to consumer advertising of prescription medicines (DTCA) is a controversial practice where many of the arguments for and against are not supported by strong evidence. The paper by Michael Harker et al. (2007) aims to contribute to a research agenda that is forming in this area. The paper reports on a systematic review that was conducted and applies accepted theoretical models to the DTCA context. The systematic review methodology is widely accepted in the medical sector and is successfully applied here in the marketing field. This paper provides healthcare practitioners with insight into how consumers process DTCA messages and provides guidance into how to assist in this message processing.

Christopher Browe et al. (2007) explore of that how a web-enabled product ID system can be applied to pharmaceutical marketing and consumer relationship management. As a technical paper, it first introduces and describes the product ID system and then explores various marketing applications of this interactive communication tool in the pharmaceutical industry. Finally, it concludes with managerial implications and caveats. The web-based product ID system is able to provide a means for product validation and database marketing, facilitate interactive marketing communication and viral marketing, and collect customer information and
feedback for research activities. The proposed web-based product ID system is an innovative concept that can have important marketing implications in the pharmaceutical industry.

The research by Lynda M. Maddox (1999) looks at how consumers used a pharmaceutical web site to learn about a particular disease or product. Probes whether visitors used the web site to decide which drug was right for them and whether they actually planned to request the product from their doctor. Gender and age differences in the use of Web site information were also examined. Increasing use of the Internet and data that show that direct-to-consumer advertising of prescription drugs empowers the patient to take a more active role in his/her choice of medications makes this article important for marketers as well as regulators.

The internet has become a major part of our lives. Companies have begun using the internet as a viable marketing source. Pharmaceutical companies have not been left behind in this evolution. At the same time, herbal products have gained popularity among health care consumers. It has been observed that there are several herbal product related sites on the web. However, there are several pros and cons of marketing pharmaceuticals and herbal products over the internet. This paper by Ashish Chandra (1999) discusses the various pros and cons of marketing pharmaceuticals over the internet. In particular, the availability of herbal products over the internet and the regulations and standards related to marketing over the internet.

The review by Punnet Manchanda (2005) attempts to synthesize research on the role and effect of detailing in the pharmaceutical industry. In terms of what this research has documented, it is clear that there is a two-sided relationship between physicians and detailers. There is also strong evidence that detailing affects physician (prescription) behaviour in a positive and significant manner. While this relationship is tolerated by physicians and promoted aggressively by detailers, it is clear that it will continue in the foreseeable future. It is therefore important that physicians, firms, and policymakers recognize this reality and take appropriate steps so as to make this relationship as efficient and effective as possible.
The paper by R K Srivastava (2006) studies whether the marketing style, which is typical to Fast Moving Consumer Goods (FMCG), be employed for marketing pharmaceutical products or not. If the stimulus behind buying the FMCG is studied and extrapolated to use it for marketing pharmaceutical products it is quite possible to increase the sales and thus the bottom-line. However, if a marketer assumes (without a proper research to back up) that pharma products can be marketed in a style similar to FMCG it can lead to catastrophic results for the company. It is, thus, important to the bottom-line. However, if a marketer assumes (without a proper research to back up) that pharma products can be marketed in a style similar to FMCG it can lead to catastrophic results for the company. It is thus important to understand if there is a co-relation (from the customer's/buyer's point of view) between the two styles of marketing or not. Hence it is an endeavor of this research paper to solve the mystery.

Financial sanctions against improper advertising are likely to be regarded by manufacturers as the cost of doing business, and any regulatory body that includes drug industry representatives or individuals receiving financial support from the drug industry cannot be genuinely independent. Moreover, manufacturers are now using promotional strategies that are particularly difficult to regulate. These include providing drugs at lower than the usual cost to ensure their inclusion in managed-care formularies, and using direct-to-consumer advertising to take advantage of the public’s lack of sophistication in interpreting scientific evidence. Martin F. Shapiro (1997) in this paper discuss that the best hope of counteracting the power and influence of the drug industry lies in regulation by government agencies, whose interest is the protection of the public.

In order to survive in this highly competitive global marketplace, it is extremely essential for organisations to have an effective integrated marketing communication plan in place. Having knowledge about the various types of markets that exist in the world, and in particular in Asia which is perhaps the most rapidly growing market, will help achieve this objective. Abhijit Dey et al. (1999) provide us an overview of the role of technology in integrated marketing communications and also how marketing communications should be carried out in the Asian market.
A pharmaceutical sales representative is the key part within the sales of all drugs. In the field of pharma industry, ethical promotion can be described as communication of ethical values to promote their product to the physician. The number of sales representatives has increased dramatically. This then increased the competition to seek time with the physician. With increased competition the practice of gift giving increased to reward the physician for time they give to listen to pharma companies.

The purpose of the study by Roughead EE et al. (1998) was to determine the use of influence techniques by pharmaceutical representatives in their encounters with medical practitioners. The authors identified six influence techniques from the marketing literature which are thought to be commonly used by sales people. These have been termed the principles of reciprocity, friendship/liking, commitment/consistency, social validation, authority, and scarcity. They examined the use of these techniques by analysing audio-recordings of pharmaceutical representatives’ presentations to medical practitioners. RESULTS: Sixteen recordings, detailing 64 medicines, were obtained from seven medical practitioners. Reciprocation was the most commonly observed method of influence. Samples, gifts, printed material, patient information leaflets or invitations were offered in all encounters. Appeals to authority figures, where promotional claims were supported by reference to professors or specialists, specialist groups and specialist hospitals, were recorded. Social validation acts, where reference was made to the peer group were also common. Commitment acts were observed to occur in two ways; the first was as a direct request to use the product detailed and the second was as a series of questions or statements which gradually moved from pre-agreed areas to solicitation of a commitment to prescribe the drug. Influence techniques were found to be commonly used by pharmaceutical representatives when they detailed products to medical practitioners. Medical practitioners may not be aware of the potential effect these techniques can have on their prescribing practices. Knowledge of these techniques must be incorporated into educational programmes designed to provide health professionals with critical appraisal skills.
2.8. IPR AND TRIPS

In 2005, India implemented new intellectual property (IP) laws that recognized product patents on pharmaceuticals. Because India’s 1970 Patent Act only recognizes process patents, Indian drug companies have been free to copy molecules from multinational companies (MNCs), to sell within India and other non patent conforming markets. New laws, such as the Exclusive marketing Rights amendment to the 1970 Patent Act (ratified on April 19, 1999), substantially altered this practice. A study by Sean Eric Smith (2000) discusses what companies are doing to prepare for 2005 and beyond. Although the new patent regime has the potential to reward MNCs at the expense of Indian firms, local companies will likely benefit from strict laws.

The Indian pharmaceutical industry is presently going through a phase of transition and potential consolidation, owing to India’s new TRIPS-compliant intellectual property regime and other rules aimed at enhancing the industry’s credibility nationally and internationally. The research findings by Padmashree Gehl Sampath (2007) have shown that the Indian pharmaceutical sector is a heterogeneous mix of firms with vast differences in innovative capabilities. Second, the paper highlights how the emerging strategies of firms in all three groups, although different, underpin the importance of systemic coordination in the pharmaceutical sector. The analysis links both these findings to policies pursued in the pharmaceutical sector over the past four decades and highlights the role of differential innovation policy in ensuring optimal sectorial performance.

Trade liberalisation and changes in the Intellectual Property Rights (IPR) have fashioned new dynamics in the pharmaceutical industry across the globe. The most common strategic concern that Trade Related Aspects of Intellectual Property Rights (TRIPs) has raised for Indian firms is the perceived need for R&D and technological strength. Indian firms have responded to these changes in novel and complex ways. Employing firm-level case studies, the paper by Kalpana Chaturvedi et al. (2006) examines the contemporary strategic approaches adopted by Indian leaders for integrating new knowledge and capabilities in order to develop innovation competencies for tomorrow and how Indian firms are evolving from reverse engineering outfits catering to domestic market to technologically advanced and sophisticated organisations capable of catering to diverse markets.
Dinesh Abrol (2004) has analyzed the post-TRIPs behavior of domestic and foreign pharmaceutical firms in respect of technology acquisition, knowledge transfer and domestic R&D in India. The paper evaluates the prospects of development of capabilities by domestic firms in a scenario where they have also chosen to enter the markets for generics in developed countries and build relations of subcontracting with multinational corporations in the sphere of R&D and production activities. It suggests that due to the introduction of strong IPRs, pharmaceutical multinationals are now advantageously placed to control knowledge diffusion and integrate the local capabilities of a country like India into their own myopic and narrowly benefiting innovation strategies. The government is asked to intervene with the aim to make the domestic industry undertake technological activities that would allow the Indian pharmaceutical sector to upgrade itself for the benefit of development of therapies for the needs of Indian people in particular and developing countries in general.

The growth of Indian pharmaceutical industry has been characterized by extensive governmental control and absence of strong patent protection. The paper by Sajeev Chandran (2005) gives an overview of pharmaceutical industry in India and the likely impact of product regime on it. The analysis is based on secondary data published elsewhere. It also reviews the existing patent and drug control laws in India and how they have affected the growth and structure of pharmaceutical industry in the country. Also discussed are strategies to meet the new challenges and the opportunities that Trade related Aspects of Intellectual property Rights (TRIPS) Agreement presents to pharmaceutical industry in India.

The Review of literature scrutinized so far revealed that although large amount of research work on pharmaceutical industry has been carried out; most of them appear to have dealt with “patents and post patents implications”. Hardly any work has been undertaken with regards to understanding the views of Marketing Professionals, Marketing Intermediaries and End-Users on marketing strategy in an integrated approach. Therefore the present study is an effort to understand the marketing strategies used by pharmaceutical companies where a very little research work has been done. This study is very unique as it helps in understanding the different opinions of different categories of marketing agents which helps in bridging the gap and knowledge that is needed to sustain antibiotic products for longer duration with proper and judicious usage which in tern facilitates policy makers and academicians in this field.